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FDIC Resolution Tasks and Approaches: A Comparison of the 1980 to 1994 and 2008 to 2013 Crises

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FDIC Resolution Tasks and Approaches: A Comparison of the 1980 to 1994 and 2008 to 2013 Crises

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Abstract: The FDIC faced banking crises from 1980 to 1994 and from 2008 to 2013. This study compares the FDIC-insured banks that failed and the FDIC's response to those failures during each crisis. It also discusses major trends that influenced the FDIC's response, including industry consolidation, characteristics of failed banks, major banking legislation, and changes in the FDIC's resolution philosophy. The FDIC resolved more than three times as many banks in the lengthier 1980 to 1994 crisis than in the 2008 to 2013 crisis, but total failed bank assets were larger during the 2008 to 2013 period; both the geography and the loan mix of the failed banks also varied substantially. In response to philosophical changes and market conditions, the FDIC sold assets more quickly and relied more heavily on risk-sharing methods during the second crisis. The comparison reveals that the nature of banking crises can vary widely and indicates that the FDIC's resolution strategies are likely to evolve as the agency adapts to changing circumstances.

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1 Introduction

As banks failed during the 1980 to 1994 crisis and the 2008 to 2013 crisis,[2] the FDIC faced the same obligations: provide depositors ready access to their insured deposits, liquidate the failed banks' assets, and resolve the liabilities of the failed banks. In both crises, the FDIC sought to accomplish these tasks as effectively and efficiently as practical, guided by its legal obligations, mission, capacity, and constraints.

The differences between the two crises, and the intervening changes in the banking industry and the FDIC's operating environment and philosophy, resulted in different approaches to bank resolution. The 1980 to 1994 crisis (the first crisis) involved large numbers of failures over many years, and the focus of the crisis shifted geographically. The 2008 to 2013 crisis (the second crisis) arrived more rapidly and had a national scope, with failing banks in smaller numbers but substantially larger asset portfolios. FDIC liquidation operations grew steadily in the first crisis, moving its focus from region to region of the country. In the second crisis, liquidation operations grew more rapidly, but the assets retained from failed banks and FDIC resolution and receivership staffing peaked at substantially lower levels as the FDIC limited the increase in permanent staff to avoid the difficulties of having to downsize after the crisis.

During and after the first crisis, legislation (a) reshaped and streamlined the FDIC's receivership responsibilities, powers, and operations; (b) mandated bank closings once certain capital thresholds were passed; and (c) directed that the FDIC accept the bid at failure that imposed the least cost to the Deposit Insurance Fund (DIF). These statutes led to significant changes in resolution practices and procedures between the crises.

While the causes of the banking crises are beyond the scope of this study, the regional nature of the first crisis, the continuing increase in concentration in the banking industry during and between the crises, and the unexpected loss of liquidity in the second crisis each influenced the characteristics of banks that failed and the FDIC's response. Resolution approaches were adopted, altered, and abandoned in response to the nature of each crisis and the statutory environment. Approaches to bank resolution and asset disposition, at times adopted in haste and with minimal time to prepare, remain the subject of intense review and reflection within the FDIC and among interested observers.

The FDIC attempted to return failed bank assets to the private sector more quickly during the second crisis than in the first. To increase the speed of asset disposition and to increase the appeal of problematic assets to potential buyers in the second crisis, the FDIC adopted strategies that, while achieving the desired goals of speedy sales at higher prices, exposed the DIF fund to long-term contingent liabilities as a result of commitments made as part of the sales to asset acquirers.

This study compares the FDIC's resolution function between the two crises. The analysis omits both systemically important resolutions[3] of FDIC-insured institutions and resolutions of thrift institutions by the Federal Savings and Loan Insurance Corporation (FSLIC) and the Resolution Trust Corporation (RTC).[4] It begins with a discussion of the resolution task the FDIC faced in each crisis and the characteristics of the banks that failed, including bank location, size, condition, and loan composition. The impact of fraud and the extent of liquidity problems are also examined. Second, we describe parts

[2] Throughout the paper, we use the term "bank" to include all FDIC-insured financial institutions, including banks, savings banks and, in the 2008 to 2013 crisis, thrifts. It excludes institutions that the FDIC did not insure, such as investment banks and credit unions, and depository institutions not insured by the FDIC during the first crisis, such as savings and loans.

[3] Continental Illinois (1984), Citibank (2008), and Bank of America (2009) are treated as systemic failures. Because one non-systemic failure (Washington Mutual, or WaMu) made up almost half of the non-systemic failed bank assets during the 2008 to 2013 crisis, it is sometimes excluded from tables and figures. If so, it is noted within the table or figure, and the related discussion follows the treatment in the table or figure. For a discussion of Continental Illinois and the thrift failures during the 1980 to 1994 crisis, see FDIC (1998). For a discussion of Citibank and Bank of America, see FDIC (2017), chapter 3.

[4] The Financial Institutions Reform, Recovery, and Enforcement Act of 1989 (FIRREA) abolished the insolvent FSLIC and created the RTC, effective August 9, 1989. In addition, the FSLIC's assets and liabilities transferred to the FSLIC Resolution Fund (FRF) managed by the FDIC. The RTC Completion Act of 1993 terminated the RTC as of December 31, 1995. All remaining assets and liabilities of the RTC were transferred to the FRF on January 1, 1996. See 2016 Annual *Report, FSLIC Resolution Fund*, January 21, 2010, https://www.fdic.gov/about/strategic/report/2016annualreport/section5-02.html.

of various statutes enacted during and after the first crisis that most influenced the FDIC's resolution processes, including information about the problems the laws sought to address and the solutions that each law provided. These statutes included provisions that improved the FDIC's powers and resolution processes and yet sometimes restricted the FDIC's options.

Next, we review the FDIC's resolution philosophy at the onset of each crisis and how it evolved in response to changes in the financial markets and the statutory landscape. In the second crisis, statutory changes required the FDIC to abandon forbearance and open bank financial assistance[5] for non-systemic banks, and the agency used lessons learned in the first crisis to employ various forms of risk sharing to speed asset disposition and mitigate losses. This is followed by a discussion of the resolution strategies used in each crisis, including the transactions deployed, the amount of failed bank assets held by the FDIC, staff levels, the types and extent of risk-sharing methods used to facilitate asset sales, and the losses suffered by the FDIC from failed bank resolutions. The analysis ends with a few concluding remarks.

2 Characteristics of Failed Banks

Major differences existed in the characteristics of banks that failed during the crises and the way in which they failed. This section examines some of the key differences.

2.1 Location and Size of Bank Failures

Any comparison of the geographic distribution of bank failures between the two crises quickly reveals the effects of industry consolidation on the number of bank failures.[6] Of the 50 states and Puerto Rico, and regardless of the percentage of banks that failed, only 11 states had more failed FDIC-insured depository institutions during the second crisis than during the first crisis.[7]

Table 1 shows that only a few states suffered high levels of bank failures during both crises.[8] Four states (Arizona, California, Oregon, and Nevada) and Puerto Rico suffered double-digit rates of bank failures in both banking crises. Other states had widely different failure rates. Texas suffered a loss of more than 40 percent of its FDIC-insured banks to failure during the first crisis but lost only 1.7 percent of its FDIC-insured banks during the second crisis. Similarly, the neighboring states of Oklahoma, Louisiana, and New Mexico had sharply lower rates of bank failure in the second crisis than the double-digit loss rate that those states had in the first crisis.[9] Georgia had only three failures (0.7 percent of FDIC-insured Georgia institutions at the onset of the crisis) in the first crisis but 87 (24.7 percent) in the second crisis.

The geographic distribution of bank failures in the first crisis generally followed the regional economic downturns from the declines in prices for agricultural products in the mid-1980s (Kansas, Nebraska, and Iowa), the declines in oil and gas prices in the 1980s (Texas and neighboring states), declines in residential and commercial property after overbuilding in New England (Connecticut, Massachusetts, and New Hampshire), and residential home price declines and reductions in the defense industry (California). During the second crisis, the geographic variation was weaker, but there were higher failure rates in California and adjoining states,[10] and in Georgia and Florida. These regional patterns can be seen in Figure 1 (first crisis) and Figure 2 (second crisis).

[5] Open bank assistance occurs when the FDIC provides assistance to a bank without closing the bank charter. When open bank assistance occurs, most or all creditors are paid in full and stockholders retain ownership.

[6] The passage of the Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994 was one contributing factor. It is discussed later in the section on significant resolution statutory changes.

[7] The states were Florida, Georgia, Illinois, Maryland, Michigan, North Carolina, Nevada, Pennsylvania, South Carolina, Washington, and Wisconsin. However, many of these states had only a few failures in both crises. Those that had failure rates above 10 percent in the 2008 to 2013 crisis were Florida, Georgia, Nevada, and Washington.

[8] Failure rates are calculated by dividing the total number of failed banks by the number of banks in existence at the onset of the crisis. Note, however, that there were new banks chartered during the crisis that were excluded from the total column (primarily during the 1980 to 1994 crisis).

[9] For a fuller review of the first crisis, see FDIC (1997).

[10] Nine of the 20 largest bank failures by size were headquartered in California and all failed in 2008 and 2009.

Table 1

Bank Failure Rate by State

State	1980 to 1994			2008 to 2013		
	Failed Banks	Total Banks	Failure Rate (Percent)	Failed Banks	Total Banks	Failure Rate (Percent)
AK	8	14	57.14	0	8	0.00
AL	9	317	2.84	7	160	4.38
AR	11	258	4.26	2	152	1.32
AZ	17	22	77.27	15	57	26.32
CA	87	242	35.95	39	320	12.19
CO	59	307	19.22	9	160	5.63
CT	32	130	24.62	1	56	1.79
DC	5	17	29.41	0	8	0.00
DE	1	20	5.00	0	41	0.00
FL	39	577	6.76	70	321	21.81
GA	3	439	0.68	87	353	24.65
HI	2	9	22.22	0	9	0.00
IA	40	651	6.14	2	393	0.51
ID	1	27	3.70	1	19	5.26
IL	32	1250	2.56	56	675	8.30
IN	10	408	2.45	3	166	1.81
KS	69	616	11.20	9	357	2.52
KY	7	342	2.05	2	207	0.97
LA	70	262	26.72	2	163	1.23
MA	44	167	26.35	1	187	0.53
MD	2	105	1.90	8	97	8.25
ME	2	70	2.86	0	35	0.00
MI	3	371	0.81	13	166	7.83
MN	38	760	5.00	22	446	4.93
MO	41	721	5.69	16	363	4.41
MS	3	182	1.65	2	97	2.06
MT	10	162	6.17	0	79	0.00
NC	2	82	2.44	7	112	6.25

Table 1 (Continued)

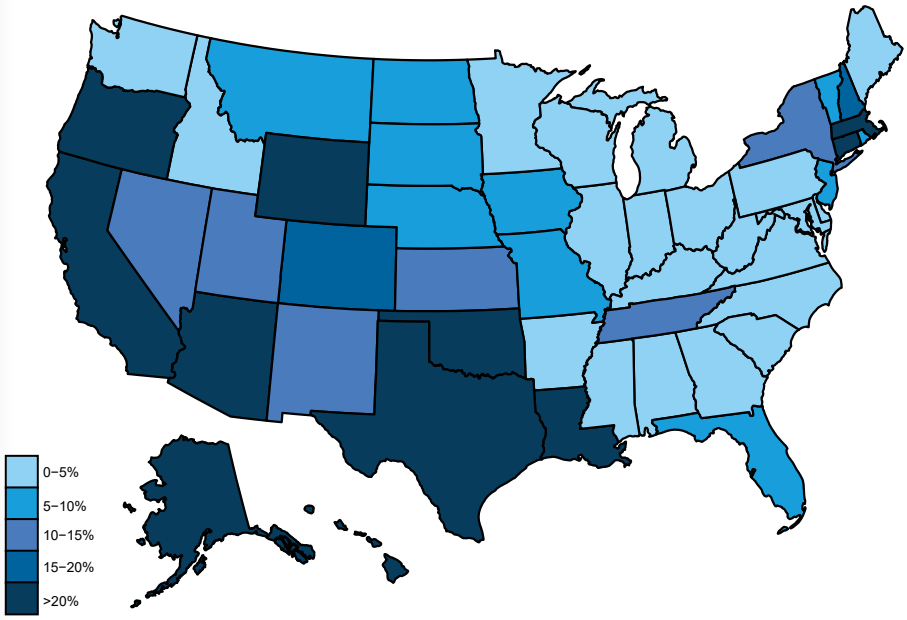
Bank Failure Rate by State

State	1980 to 1994			2008 to 2013		
	Failed Banks	Total Banks	Failure Rate (Percent)	Failed Banks	Total Banks	Failure Rate (Percent)
ND	9	172	5.23	0	97	0.00
NE	33	454	7.27	3	248	1.21
NH	16	104	15.38	0	24	0.00
NJ	14	196	7.14	5	128	3.91
NM	11	86	12.79	3	53	5.66
NV	1	9	11.11	12	45	26.67
NY	34	331	10.27	4	217	1.84
OH	5	407	1.23	4	267	1.50
OK	122	489	24.95	5	261	1.92
OR	17	77	22.08	6	41	14.63
PA	5	376	1.33	6	251	2.39
PR	5	12	41.67	3	10	30.00
RI	2	20	10.00	0	14	0.00
SC	1	85	1.18	9	93	9.68
SD	8	154	5.19	1	90	1.11
TN	36	350	10.29	5	203	2.46
TX	600	1422	42.19	11	661	1.66
UT	11	74	14.86	6	68	8.82
VA	7	233	3.00	4	121	3.31
VT	2	35	5.71	0	16	0.00
WA	4	110	3.64	18	97	18.56
WI	2	634	0.32	8	299	2.68
WV	5	235	2.13	1	69	1.45
WY	20	94	21.28	1	43	2.33
Others	0	1	0.00	0	9	0.00
Total	1,617	14,688	11.0	489	8,632	5.7

Source: FDIC.

Figure 1

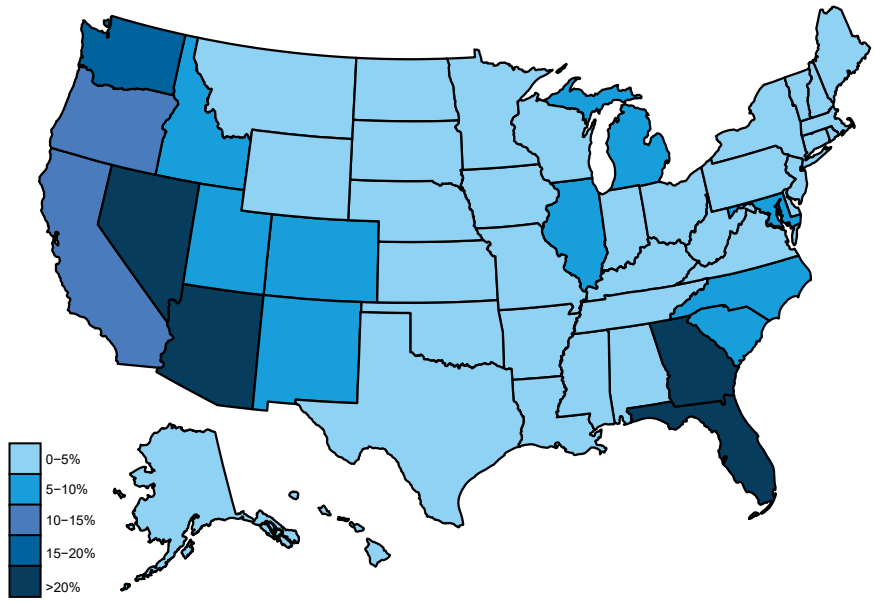
Bank Failure Rate (1980–1994 Crisis)



Source: FDIC.

Figure 2

Bank Failure Rate (2008–2013 Crisis)

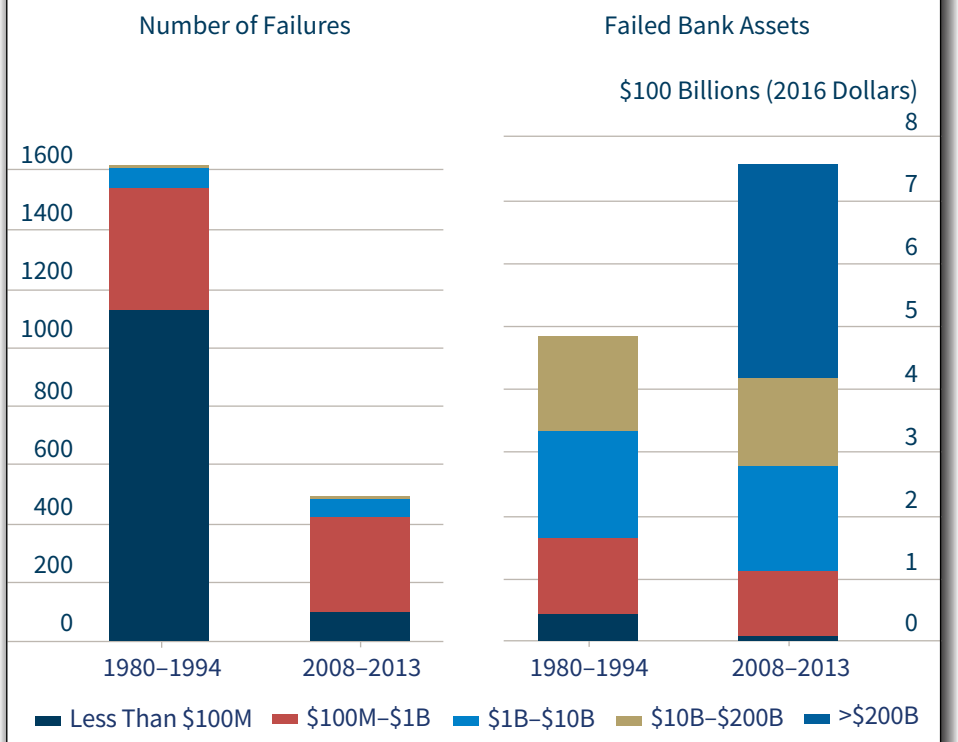


Source: FDIC.

The average size of failed banks increased substantially from the first crisis to the second crisis. The 1,617 non-systemic banks that failed between 1980 and 1994 held $491 billion of assets at failure (in 2016 dollars), an average of $304 million in assets each.[11] During the second crisis, the 489 non-systemic failed banks held assets of $768 billion at failure (in 2016 dollars), an average of approximately $1.6 billion in assets each (Figure 3).[12]

Figure 3

Characteristics of Failures by Crisis and Bank Asset Size Class



Source: FDIC.

Of the 1,617 banks that failed from 1980 to 1994, 1,129 (70 percent) held less than $100 million in assets (in 2016 dollars). The next-largest asset size class, banks holding between $100 million and $1 billion in assets, constituted 26 percent of all failed banks. Banks holding $1 billion or more in assets made up 4.6 percent of the failed banks. In contrast, of the 489 bank failures during the 2008 to 2013 crisis, only 99 banks (20 percent) held less than $100 million in assets. Banks of $1 billion or more in assets comprised 14.9 percent of failures. During both crises, the assets held by banks with more than $1 billion in assets made up the bulk of failed bank assets: 66 percent for the first crisis and 85 percent for the second crisis.[13]

The large reduction in the number of small bank failures between the two crises is consistent with trends that reduced the number of insured depository institutions and increased the concentration of assets in the banking system. Figures 4 and 5 show consolidation trends in the banking industry (especially for banks with less than $100 million in assets) from 1984 to 2013.[14]

[11] To remove the distortion caused by inflation between 1980 and 2013, most of the figures and tables in this document adjust the dollar amounts for inflation. Inflation adjustment is indicated in each table or graph that uses it. All figures cited in the text follow the treatment in the related table or figure.

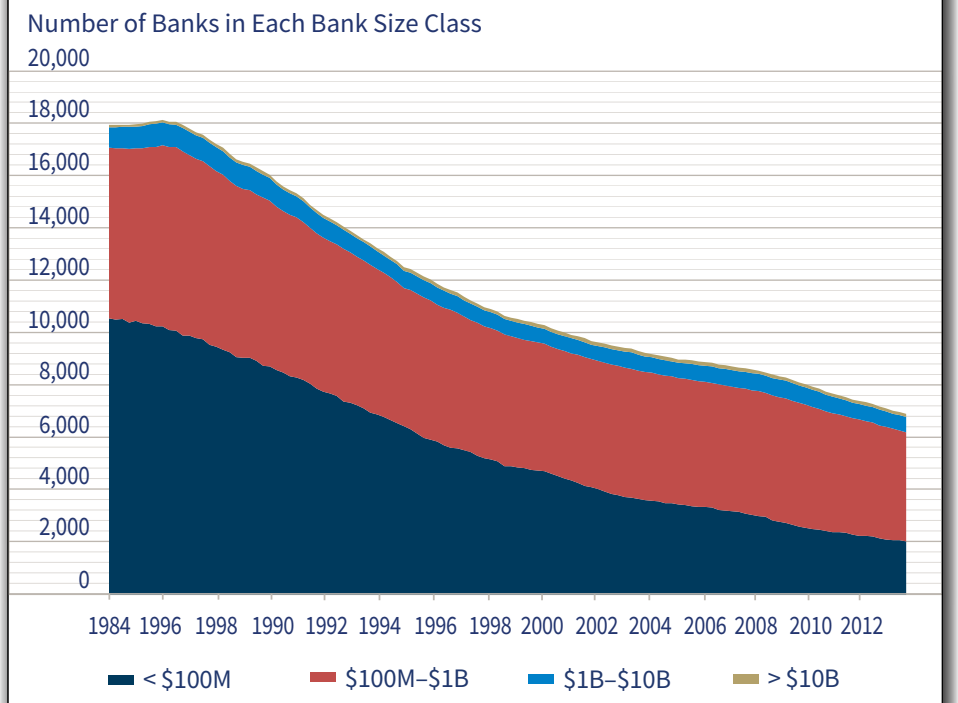
[12] If WaMu had been excluded, average assets for failed banks would have been $865 million.

[13] If WaMu is excluded from the 2008 to 2013 crisis, the share is 73 percent.

[14] The years 1980 to 1983 were omitted because data are not available for all FDIC-insured institutions before 1984.

Figure 4

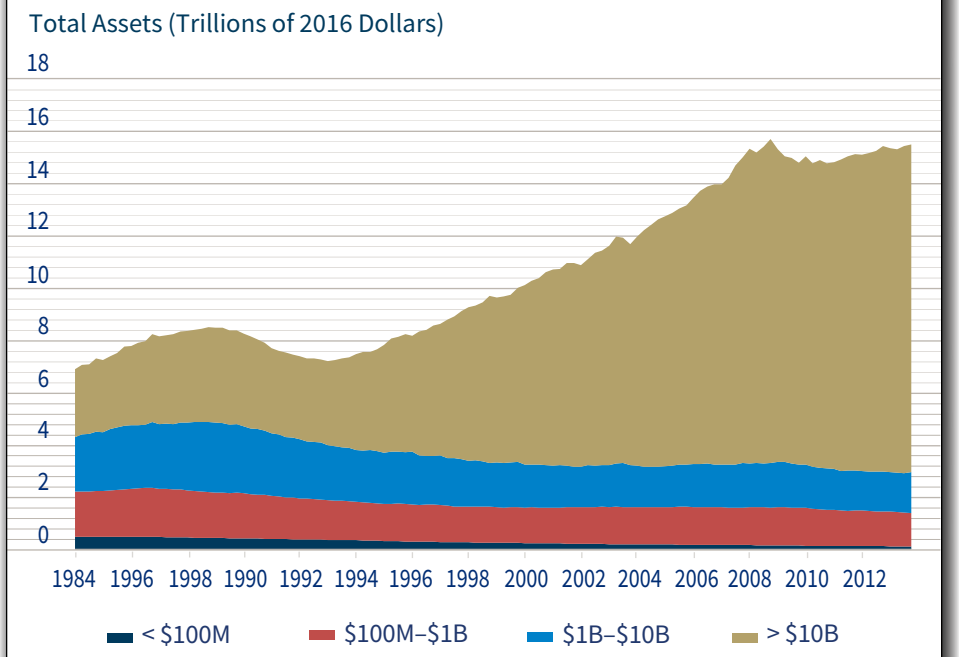
FDIC-Insured Banks by Bank Asset Size Class



Source: FDIC.
Note: 2016 dollars.

Figure 5

FDIC-Insured Banking Assets by Bank Asset Size Class

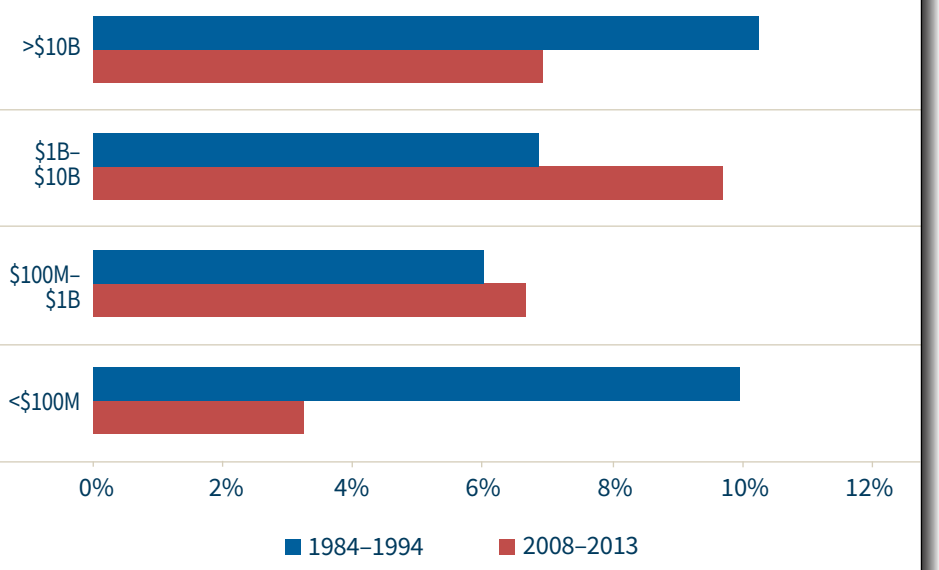


Source: FDIC.

However, industry consolidation does not fully explain the large shift in the composition of failed banks. From 1984 to 1994, banks in all bank asset size classes suffered; of all the insured banks in 1984, more than 6 percent in all four asset size classes failed. However, the failure rates were highest, approximately 10 percent, among the smallest banks (under $100 million in assets) and the largest banks (over $10 billion in assets) (Figure 6).

Figure 6

Bank Failure Rates by Bank Asset Size Class



Source: FDIC.
Note: 2016 dollars.

During the second crisis, banks in the smallest bank asset size class suffered relatively few failures, with a failure rate of 3.3 percent. Banks with assets between $100 million and $1 billion and banks with more than $10 billion in assets suffered failure rates in excess of 6 percent. The bank asset size class holding between $1 billion and $10 billion in assets suffered the highest failure rate (nearly 10 percent).

2.2 Liquidity Pressure and Fraud

During the second crisis, failed banks faced more acute liquidity problems than during the first crisis. These liquidity issues affected bank assets, traditional bank deposits, and substitutes for traditional bank deposits.

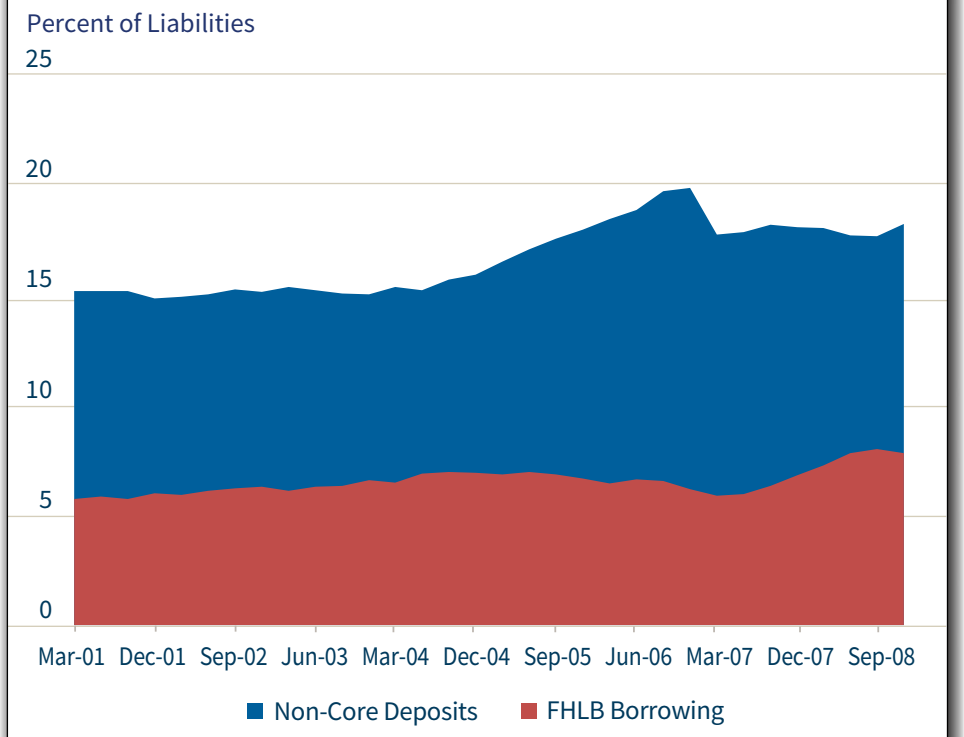
In the decade prior to 2007, bank asset growth exceeded the growth in traditional retail deposit accounts. Therefore, banks increasingly turned to other funding sources.[15] From 2001 to the beginning of the second crisis, the percentage of bank funding provided by non-core deposits and Federal Home Loan Bank (FHLB) borrowing increased from approximately 21 percent to more than 26 percent (Figure 7).[16]

[15] See McIntyre and Martino (2008).

[16] Non-core deposits are defined as jumbo time deposits (that is, time deposits that exceed the insurance limit) plus estimated fully insured brokered deposits. Note that these figures may not fully capture the extent of nontraditional deposits held at the banks because of evolving deposit collection methods (such as internet) and changing customer preferences (fewer time deposits, more savings, and MMDA accounts).

Figure 7

Non-Core Funding at FDIC-Insured Institutions With Assets Below $1 Billion



Source: FDIC.

At the onset of the second crisis, the financial services industry—both banks and nonbanks—suffered a major liquidity crunch.[17] At banks, the shift to less liquid assets and less traditional deposits for funding during the period between the two crises brought about unexpected problems for many community banks if creditors experienced financial distress or thought that the banks might experience financial distress. As banks found access to liquidity restricted, unexpected demands, such as public depositors demanding additional collateral for public funds, placed new strains on bank liquidity while the cost of that liquidity was rising. Uninsured depositors withdrew funds to reduce exposure.[18] Unanticipated demands on lending and interbank financial arrangements, such as draws on loan commitments, repurchase demands on securitized assets, margin calls in the derivatives market, and the withdrawal of funds from wholesale short-term financing arrangements, added to the demands on a bank's liquidity.[19] Troubled banks were especially vulnerable to these market forces; Cooke et al (2015) found that banks with a "liquidity mismatch" were more likely to fail.[20] Troubled banks suffering a decline in capital ratings faced restrictions in the interest rates that they could offer and on their usage of brokered deposits (absent a waiver from the FDIC).[21] As a bank's condition declined, the FHLBs no longer accepted a general pledge of collateral but required troubled banks to

[17] A full discussion of these problems is beyond the scope of this paper. For additional information, see Financial Crisis Inquiry Commission (2010), especially chapter 20.

[18] Numerous authors have confirmed this phenomenon. See, for example, Park and Peristiani (1998) and McDill and Maechler (2003).

[19] Strahan (2012).

[20] Cooke et al. (2015). The authors developed liquidity mismatch measure by subtracting liquidity-weighted assets from liquidity-weighted liabilities and dividing the result by total assets. Failed banks in 2008 and 2009 were found to have on average twice the liquidity mismatch of banks that did not fail.

[21] 12 C.F.R. § 337.6(c)(3)(i). The FDIC recently proposed changes to the interest rate and brokered deposit regulations to address technology changes and the evolving practices in collecting deposits. See Unsafe and Unsound Banking Practices: Brokered Deposits and Interest Rate Restrictions, 84 Fed. Reg. 2366 (Feb. 6, 2019); Interest Rate Restrictions on Institutions That Are Less Than Well Capitalized, 84 Fed. Reg. 54044 (Oct. 9, 2019); and Unsafe and Unsound Banking Practices: Brokered Deposits Restrictions, 85 Fed. Reg. 7453 (Feb. 10, 2020).

deliver physical possession of collateral. The FHLBs could also place additional restrictions on borrowing by troubled banks or demand additional collateral.[22]

The liquidity pressures influenced the characteristics of the banks that failed and the FDIC's resolution process. Table 2 provides selected financial condition indicators shortly before the banks failed.[23]

Table 2

Bank Condition Indicators Reported Shortly Before Failure

	1980 to 1994			2008 to 2013			
	Mean	Median	Weighted Mean *	Mean	Median	Weighted Mean *	Weighted Mean no WaMu *
CAMELS Ratings							
Liquidity	3.50	4	3.64	4.41	5	3.84	4.52
Assets	4.22	5	4.00	4.89	5	4.01	4.83
Composite	4.44	5	4.68	4.92	5	4.02	4.84
Ratios and Indicators							
Cash and Treas/Agency Secs to Assets	19.4%	17.4%	17.1%	17.5%	16.4%	11.1%	15.3%
Loans to Assets	64.3%	66.3%	65.1%	70.8%	71.2%	75.0%	72.1%
Noncurrent Loans and OREO to Assets	12.9%	11.6%	14.4%	16.8%	15.2%	9.6%	14.3%
Loan Loss Reserve to Noncurrent Loans	63.2%	39.7%	56.1%	36.9%	29.5%	55.9%	33.1%
Capital to Assets	–0.5%	0.5%	–0.8%	1.3%	1.4%	4.7%	2.1%

* Weighted by assets.

Source: FDIC.

Note: CAMELS ratings for all banks, and the ratios and indicators for Savings Banks, were excluded prior to 1984 because. of missing data. WaMu is Washington Mutual, Treas is Treasury, Secs is Securities, and ORE is Other Real Estate.

The top panel reports statistics on CAMELS ratings. Banking regulators assign CAMELS ratings based on evaluations of a bank's managerial, operational, financial, and compliance performance. The six components of the ratings are capital adequacy, asset quality, management capability, earnings quantity and quality, the adequacy of liquidity, and sensitivity to market risk (CAMELS).[24] The rating scale ranges from 1 to 5, with a rating of 1 for the strongest banks and 5 for the weakest. The mean CAMELS rating for liquidity was 3.5 for failed banks during the 1984 to 1994 crisis. It was 4.4—almost a full point worse —for the 2008 to 2013 crisis. Cash and U.S. Treasury and Agency securities comprised a smaller share of assets during the 2008 to 2013 crisis (11.1 percent for the 2008 to 2013 crisis; 17.4 percent for the 1980 to 1994 crisis).[25] Loans comprised a much larger share of assets (75 percent for 2008 to 2013 crisis; 65 percent for the 1980 to 1994 crisis). Usage of nontraditional funding sources increased. Capital was higher (4.6 percent for the 2008 to 2013 crisis; –0.8 percent for the 1980 to 1994 crisis).

[22] *Lending and Collateral Q & A*, Federal Home Loan Bank System, March 28, 2017.

[23] CAMELS ratings for all banks, and the ratios and indicators for savings banks, were excluded prior to 1984 because of missing data.

[24] The last component of the CAMELS rating, sensitivity to risk, was added in 1996.

[25] The figure for the 2008 to 2013 crisis comes from the weighted average column, which provides a picture of the overall portfolio of failed bank assets. The figure cited includes WaMu. Excluding WaMu, the ratio was 15.3 percent for the 2008 to 2013 crisis.

The higher capital ratio during the second crisis may have been influenced by both the Prompt Corrective Action (PCA)[26] provisions introduced by the FDIC Improvement Act of 1991 (FDICIA) and liquidity problems at failing banks.[27] Under the PCA provisions, Congress required that banks with a leverage ratio of 2 percent or less be closed within 90 days.[28]

These differences influenced the task at hand for the resolution staff. Liquidity failures often occur quickly, allowing less time for failure preparations and marketing. FHLB advances and nontraditional deposits are less appealing to potential acquirers, thus reducing the franchise value of the banks and increasing the marketing challenges.[29] It is easier to sell Treasury and Agency securities than loans, especially noncurrent loans.

Bank fraud was a contributing factor at many bank failures in the first crisis but was less often a major contributor to failure in the second crisis.[30] A 1994 report by the General Accounting Office (GAO)[31] indicated that FDIC investigators found insider fraud to be a major cause of failure in 26 percent of a sample of 286 banks that failed from 1990 to 1991, and found insider problems (fraud, noncriminal abuses, and loan losses on insider loans) to be present in 61 percent.[32] A study by the Office of the Comptroller of the Currency (OCC) found that insider abuse, such as self-dealing, inappropriate transactions with affiliates, or unauthorized transactions involving bank management, was a significant factor leading to failure in 35 percent of failed banks.[33] While it is difficult to determine how many banks failed because of insider fraud and abuse in either crisis, it seems likely that it was more prevalent during the first crisis than during the second.

The sorts of bank fraud (self-dealing, insider abuse, undocumented loans to principals) found often in failed banks during the first crisis (although present during the second crisis) were not as often a significant factor in bank failure.[34] A GAO report from January of 2013 identified nonperforming commercial real estate (CRE) loans, weak underwriting, riskier funding sources, and inadequate management as causes of failure during the second crisis but did not identify fraud as a significant contributing factor.[35] Another study of bank failures during the second crisis identified as causes of failure an imbalance of risk versus return, excessive reliance on volatile funding sources, and poor understanding and management of risks, but likewise did not identify fraud as a contributing factor.[36]

2.3 Loan Mix and Failures From Single-Family Loans

Banks closed during the first crisis failed because of losses in one or more segments of their loan portfolios, but in general an unexpectedly high default rate in the single-family residential (SFR) loan portfolio of banks was not the principal cause of failure. If failed banks during the first crisis held SFR loans, the FDIC suffered minimal losses in resolving them. Figures for the

[26] 12 U.S.C. §1831o (West Supp. 1992), added by Pub. L. No. 102-242, § 131, 105 Stat. 2236, 2253 (1991).

[27] Excluding WaMu, the equity of failed banks during the 2008 to 2013 crisis was only 2.1 percent.

[28] The PCA requirements are discussed in more detail in Section 3.4.

[29] Several observers have noted a positive relationship between FHLB advances and the FDIC's bank failure costs, and recommended changes. See, for example, *Hearing on Merging of the Deposit Insurance Funds Before the House Banking Subcommittee on Financial Institutions and Consumer Credit,* 106th Cong. (February 16, 2000) (statement of Gregory A. Baer, Assistant Secretary for Financial Institutions, The Department of Treasury) and *Hearing on Viewpoints of the FDIC and Select Industry Experts on Deposit Insurance Reform Before the Committee on Financial Services Subcommittee on Financial Institutions and Consumer Credit*, 107th Cong. (October 17, 2001) (statement of Richard S. Carnell). See Bennett et al. (2005) for additional discussion. Some acquirers of failed banks have expressed preferences for traditional deposits over certain types of nontraditional deposits. For additional information, see FDIC (2011) and FDIC (2017), p. 190. Because of the liens and prepayment penalties tied to FHLB advances, the FDIC almost always passes these advances to acquirers.

[30] Fraud was more frequently present within failed banks during the earlier crisis. See O'Keefe (1993) for discussion.

[31] Pub. L. No. 108-271, § 8(b), substituted "Government Accountability Office" for "General Accounting Office."

[32] U.S. General Accounting Office, *Bank Insider Activities: Insider Problems and Violations Indicate Broader Management Deficiencies* (GAO/GGD-94-88, March 1994).

[33] OCC, *Bank Failure: An Evaluation of the Factors Contributing to the Failure of National Banks,* June 1988, p. 9, https://www.occ.gov/publications/publications-by-type/other-publications-reports/pub-other-bank-failure.pdf. The study examined 171 banks that failed from 1979 to 1987.

[34] For example, see "'Dead' GA. Banker Gets 30 Years for Fraud, Embezzlement," *Crimesider*, October 28, 2014, http://www.cbsnews.com/news/dead-georgia-investment-banker-gets-30-years-for-fraud-embezzlement/.

[35] Government Accountability Office, "Financial Institutions: Causes and Consequences of Recent Bank Failures," GAO, 13-71, http://www.gao.gov/products/GAO-13-71.

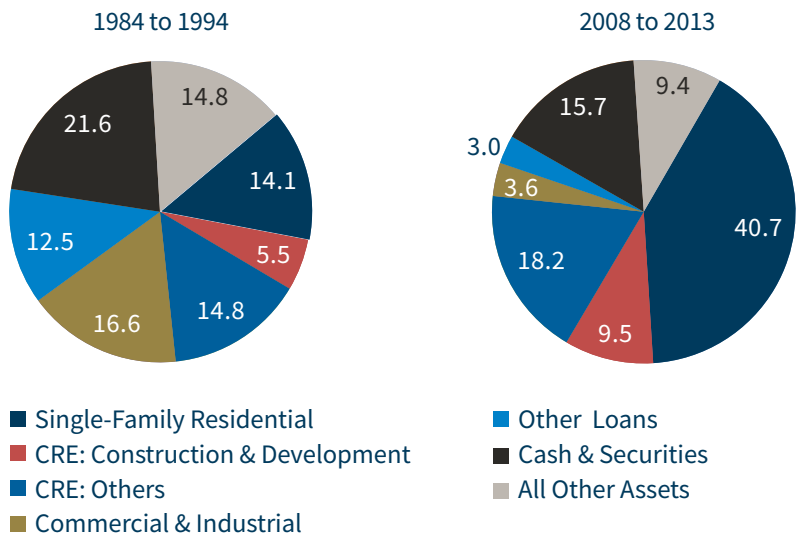
[36] Fuchs and Bosch (2009).

FDIC SFR loan portfolio's performance during the first crisis are not available, but the RTC's records from 1989 to 1995 show loss rates on SFR loans of 3.9 percent compared with an RTC average loss rate of 20.9 percent for other types of loans.[37]

During the second crisis, both the volume of SFR loans and the associated losses proved much more significant. Figure 8 compares the composition of assets held by failed banks in the two crises. From 1984 to 1994, SFR loans constituted 14.1 percent of all failed bank assets. In the 2008 to 2013 crisis, SFR loan concentrations were much higher, at 40.7 percent. In addition, some of the failed banks had significant exposures to single-family loans through residential mortgage-backed securities.

Figure 8

Failed Bank Asset Concentration (Percent)



Source: FDIC.
Note: CRE is commercial real estate.

After 2007, the increase of SFR loan defaults relative to all loan defaults was greatest among banks with more than $10 billion in assets.[38] Of the 489 bank failures in the 2008 to 2013 crisis, five banks—IndyMac Bank, FSB (IndyMac), Washington Mutual Bank (WaMu), Downey Savings and Loan Association (Downey), BankUnited, FSB (BankUnited), and AmTrust Bank (AmTrust)—held more than $10 billion in assets and specialized in originating, servicing, and acquiring SFR loans.[39] These banks dealt in all types of SFR loans, including adjustable-rate mortgages (ARMs) and alternative A-paper (Alt-A) mortgages.[40] Asset holdings for each of these five banks were dominated by SFR loans (Table 3). In comparison, SFR loans comprised only 17 percent of assets at the other 484 closed banks during the 2008 to 2013 crisis. These five banks also held more than half of the non-systemic failed bank assets ($416 billion of $757 billion). Even excluding WaMu, the remaining four SFR banks held approximately $48.4 billion in SFR loans, compared with $56.3 billion for the other 484 failed banks.

[37] Calculated from RTC, *Statistical Abstract* (1995), p. 18.

[38] Davison (2020).

[39] For additional discussion about problems with single-family lending that led into the 2008 to 2013 crisis, see FDIC (2017), chapter 1.

[40] These are other types of home mortgages that were graded as below "prime" for investors.

Table 3				
Single-Family Asset Concentration of Selected Failed Banks				
Failed Bank	**Assets at Failure**			**SFR to Total Failed Bank Assets (Percent)**
	SFR Assets ($ Billions)	**Total Assets ($ Billions)**	**SFR to Total Assets (Percent)**	
Washington Mutual	203.1	340.6	59.6	26.8
IndyMac	18.1	34.1	53.0	2.4
BankUnited	10.6	14.5	72.9	1.4
Downey	12.2	14.1	86.1	1.6
AmTrust	7.5	12.6	59.3	1.0
All Others (484 banks)	56.3	340.7	16.5	7.4
Total	307.7	756.6	40.7	40.7

Source: FDIC.
Note: SFR is single-family residential.

The five banks with significant SFR loan concentrations failed early in the 2008 to 2013 crisis. Of these, IndyMac failed first, on July 11, 2008. WaMu failed on September 25, 2008, and Downey on November 21, 2008. BankUnited failed on May 21, 2009. AmTrust, the last to fail, closed on December 4, 2009. After AmTrust's failure, regulators would close another 331 banks before the end of 2013.

WaMu's failure caused no loss to the DIF, but the other four SFR bank failures caused significant losses to the DIF. Estimated losses from these five bank failures total approximately $19.4 billion, or roughly 27 percent of total losses to the DIF from all bank failures during the 2008 to 2013 crisis. Excluding WaMu, the loss rate for these banks was higher than for the remaining 484 banks (29 percent versus 17 percent).[41]

To mitigate losses to the FDIC and to reduce the harm of foreclosures to borrowers and affected neighborhoods, the FDIC adopted various loan modification programs where the acquiring banks modified loans to borrowers that met the required criteria. The FDIC introduced its first programs at IndyMac after it failed and was temporarily placed under FDIC conservatorship before it was resolved. Four of these five banks (all except WaMu) were resolved using strategies that required asset buyers to offer loan modification programs in the years immediately following failure. The FDIC also placed such requirements on the acquirers of 284 smaller banks.[42]

There were other differences in loan mix across the two crises. In both crises, CRE loans and construction and development (C&D) loans were associated with bank failure.[43] However, the failed banks during the second crisis were more heavily concentrated in commercial real estate lending—especially in C&D lending—than was the case in the first crisis. In the earlier crisis, many bank failures were related to serious downturns in the energy and agricultural sectors, and those banks had heavier concentrations of commercial and industrial (C&I) loans—another asset class that sometimes has high loss rates. Table 4 shows the concentration levels for various loan types for the two crises. The top panel shows percentages within each asset concentration category, and the bottom panel shows the number of banks within each category. The left-most column shows banks that held less than 10 percent of assets in each listed asset class (very low concentration), and the right-most column shows banks with more than half of assets held in each asset class (very high concentration).

[41] Including WaMu, the loss rate for large single-family lenders was only 5 percent.

[42] The requirements lasted for ten years and were part of the loss share agreements that covered SFR loans. The four largest portfolios of SFR loans covered by FDIC loss share are those that originated with IndyMac, Downey, Bank United, and AmTrust.

[43] Cole and White (2012).

Table 4

Asset Class Concentration

Asset Class	Period	Percentage of Failed Banks					
		Asset Class to Total Failed Bank Assets (%)					
		0–10	10–20	20–30	30–40	40–50	> 50
SFR	1980–94	45.0	28.7	13.8	4.2	2.1	6.4
	2008–13	32.2	26.0	19.9	9.0	4.1	8.8
CRE: C&D	1980–94	81.3	11.9	4.2	2.0	0.4	0.2
	2008–13	15.6	18.4	19.1	18.7	13.9	14.3
CRE: Others	1980–94	63.8	26.3	7.3	1.6	0.7	0.4
	2008–13	8.6	17.4	28.7	23.0	12.3	10.0
C&I	1980–94	12.4	18.1	22.7	20.5	12.6	13.7
	2008–13	50.4	29.9	13.7	4.3	1.0	0.6
Asset Class	**Period**	**Number of Failed Banks**					
		Asset Class to Total Failed Bank Assets (%)					
		0–10	**10–20**	**20–30**	**30–40**	**40–50**	**> 50**
SFR	1980–94	668	423	199	58	28	90
	2008–13	157	127	97	45	20	43
CRE: C&D	1980–94	1,174	186	65	30	6	5
	2008–13	76	90	94	91	68	70
CRE: Others	1980–94	921	402	105	23	10	5
	2008–13	42	85	140	113	60	49
C&I	1980–94	174	262	327	307	193	203
	2008–13	246	146	68	21	5	3

Source: FDIC.

Note: FDIC-insured savings banks that failed prior to 1984 are omitted because of missing data. SFR is single-family residential, CRE is commercial real estate, C&D is construction and development, and C&I is commercial and industrial.

As expected, a higher share of failed banks had heavy concentrations in single-family loans during the second crisis: SFR loans comprised at least 50 percent of the loan portfolio at 8.8 percent of failed banks compared with only 6.4 percent of failed banks in the 1980 to 1994 crisis. The difference in C&D loans is striking: during the first crisis, more than 80 percent of the failed banks had less than 10 percent of assets held in C&D lending, whereas 66 percent of the failed banks during the second crisis had C&D loan exposures that exceeded 20 percent of total assets. Exposures to other CRE loans (multifamily, retail, office buildings, hotels) were also higher in the second crisis, and exposures to C&I lending were much lower. C&I loans comprised 40 percent or more of total assets at less than 2 percent of banks in the second crisis and 26 percent of banks in the first crisis.

3 Significant Statutory Changes to Resolution Authority

Congress passed several statutes relevant to banks, bank regulation, and failed bank resolution from 1980 to 2013. This section describes parts of six statutes that resulted in significant changes to the FDIC's resolution options and processes for non-systemic failed banks.[44]

3.1 Garn St. Germain Act of 1982 (Garn St. Germain)

Garn St. Germain introduced Net Worth Certificates, a form of capital forbearance available to certain savings banks insured by the FDIC.[45] This program was designed for savings institutions that were solvent, had weak capital positions, had asset portfolios that were performing, and had management that was viewed by bank supervisors as sound. The institutions were losing money because they held long-term mortgages with low interest rates funded by short-term deposits with higher interest rates. Many observers believed that interest rates on deposits would decline, thus allowing the institutions to return to good health.

3.2 Competitive Equality Banking Act of 1987 (CEBA)

CEBA[46] authorized the FDIC to form and manage temporary "bridge banks" to aid in resolving failed banks.[47] When a bridge bank is formed, the FDIC charters a de novo bank (that is, a bridge bank) that is run by the FDIC briefly until the FDIC executes a final resolution strategy. CEBA also extended the Net Worth Certificate Program authorized in 1982 and allowed small agricultural banks to amortize loan losses over time (an accounting forbearance).[48]

3.3 Financial Institutions Reform, Recovery, and Enforcement Act of 1989 (FIRREA)

FIRREA established a comprehensive scheme granting the FDIC exclusive initial jurisdiction to resolve and dispose of all claims against a receivership,[49] with judicial review allowed only after the FDIC had determined which claims were allowed.[50] As receiver, the FDIC could transfer assets of the failed bank free of interference or oversight by any court,[51] with the assets protected while in the hands of the FDIC from judicial seizure or execution[52] and free of most forms of taxation.[53] The FDIC could enforce any bank agreement or contract even if the contract provided for termination upon appointment of a receiver,[54] while the FDIC could repudiate contracts and leases that it determined, in its sole judgment, to be burdensome.[55] FIRREA codified previous cases barring the enforcement of claims or the assertion of rights against the FDIC based on unwritten agreements.[56] Finally, FIRREA established that the FDIC could operate as receiver once appointed without having to receive authorization, oversight, or review from a state or local court.[57]

[44] This is by no means an exhaustive review of the statutes; sections of the statutes not directly related to bank resolution or receiverships have been omitted from the discussion. In addition, other statutes influenced the FDIC's resolution and receivership options to a lesser degree.

[45] 12 U.S.C. § 1823(i), repealed by Pub. L. No. 97-320, Title II, § 206, Oct. 15, 1982, 96 Stat. 1496.

[46] Pub. L. No. 100-86, Aug. 10, 1987, 101 Stat. 552.

[47] 12 U.S.C. § 1821(n).

[48] Pub. L. No. 100-86, Section 509, amending 12 U.S.C. § 1729, repealed by Pub. L. No. 101-73, Title IV, § 407, August 9, 1989, 103 Stat. 363.

[49] 12 U.S.C. § 1821(d)(3)–(13).

[50] 12 U.S.C. § 1821(d)(13)(D).

[51] 12 U.S.C. § 1821(d)(2)G)(i)(II).

[52] 12 U.S.C. § 1821(d)(13)(C).

[53] 12 U.S.C. § 1825(b)(2).

[54] 12 U.S.C. § 1821(e)(13)(A).

[55] 12 U.S.C. § 1821(e)(1). The FDIC would have to pay compensation in some cases.

[56] 12 U.S.C. § 1821(d)(9)(A).

[57] 12 U.S.C. § 1821(c)(2)(C) and (c)(3)(C). Several protections remain in place, but they typically result in the FDIC having to pay compensation rather than the FDIC being unable to administer the receivership.

The adoption of FIRREA simplified the FDIC's receivership duties and allowed for more uniform receivership procedures. It reduced time spent in court and the associated costs.[58] FIRREA also included provisions that disallowed accounting forbearance to avoid failure.[59] Such provisions had been used regularly before FIRREA was passed.

3.4 Federal Deposit Insurance Corporation Improvement Act of 1991 (FDICIA)

FDICIA barred certain practices that were judged to have increased the cost of resolution of failed insured depository institutions during the 1980s. Regulatory agencies often could not close banks before the book value of capital fell below zero. Further, some regulators had hesitated to close banks even after the institutions were insolvent, hoping that the insolvent institutions would "grow out" of the problems or that improving economic conditions would restore the institution's health. To address these issues, FDICIA introduced PCA, which defined requirements for capitalization and imposed increasingly strict restrictions and penalties on banks as capital fell below statutory thresholds. When banks became critically undercapitalized (defined as tangible equity 2 percent or less of total assets), they were required to be closed within 90 days of the notice, with few exceptions.[60] The FDIC was also given authority to close a bank and appoint itself as receiver in limited circumstances. Despite the brevity of the 90-day time limit, the PCA provisions may have, on average, increased the time available for the FDIC to prepare for failure. Before FDICIA, the FDIC often had little time to prepare for failure because the chartering authority would not close the bank until the failing bank's condition was so poor that any franchise value had disappeared and the bank had to be closed immediately.

FDICIA also introduced the least cost test (LCT). Prior to FDICIA, the FDIC could accept any failed bank bid so long as it was less costly than a payout of the failed bank's insured deposits. The LCT mandates that the resolution bid accepted must be the least costly of all the available bids—even bids that do not conform to the FDIC's recommended resolution structure.[61] Compared with the pre-FDICIA time period, the FDIC's analysis of bids is now more complete, because every bid, even nonconforming bids, is subject to the LCT analysis and comparison. In addition, FDICIA effectively prohibited the use of open bank assistance without a systemic risk determination, thereby substantially limiting its use.[62]

[58] The FDIC operates in two capacities. The FDIC when it acts as an appointed receiver of a failed depository institution is referred to as the receiver. See 12 U.S.C. § 1819, § 1821(c). The FDIC in its corporate capacity administers the federal deposit insurance fund, a pool of assets used to guarantee the safety of federally insured deposits. *Bullion Services Inc. v. Valley State Bank*, 50 F.3d 705, 708 (9th Cir.1995). The FDIC when acting as a receiver has broad authority to "take over the assets ... and conduct all business of the institution," "collect all obligations and money due the institution," and "preserve and conserve the assets and property of such institution." 12 U.S.C. § 1821(d)(2)(B)(i), (ii), (iv). The FDIC as receiver may also "transfer any asset or liability of the institution in default ... without any approval, assignment, or consent ... ." 12 U.S.C. § 1821(d)(2)(G)(i)(II). Finally, the FDIC as receiver may "exercise ... such incidental powers as shall be necessary to carry out such powers," and "take any action authorized by this Chapter" which the FDIC as receiver "determines is in the best interests of the depository institution, its depositors, or the [FDIC]." 12 U.S.C. § 1821(d)(2)(J)(i), (ii), *Sahni v. FDIC*, 83 F.3d 1054, 1058 (9th Cir. 1996).

[59] Regulators were no longer allowed to permit banks to use accounting methods that were less stringent than Generally Accepted Accounting Principles (GAAP) in terms of capital reporting. See *United States v. Winstar Corp.,* 518 U.S. 839, 844-859, 116 S.Ct. 2432, 2440–2448, 135 L.Ed.2d 964 (1996) for a summary of the shifts in treatment of regulatory goodwill and capital credits.

[60] See 12 U.S.C. § 1831o, 12 C.F.R. § 324.401 ***et seq***. The FDIC is permitted to extend the time frame up to 270 days if it determines that it would reduce the cost of resolution. This exception has never been used.

[61] See 12 U.S.C. § 1823(c)(4), 12 C.F.R. § 360.1. In addition, the cost of the bid must be lower than the cost of a payout. There are two exceptions. First, the FDIC is always permitted to pay out the deposits of a failed bank. Second, under extremely limited conditions, the FDIC can invoke an exception if the least cost failure could threaten the U.S. financial system. In addition, the FDIC is not required to consider a bid if it is unable to estimate its cost or if the resulting institution is viewed as unsafe and unsound.

[62] See 12 U.S.C. § 1823(c)(1). The FDIC also required several approvals before a systemic risk exception could be granted. 12 U.S.C. § 1823(a)(4)(G). The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (Dodd-Frank) included provisions that further restricted the FDIC's use of the systemic risk exception and open bank assistance.

3.5 The National Depositor Preference Amendment (Omnibus Budget Reconciliation Act of 1993)

The National Depositor Preference Amendment established the primacy of the claims of domestic depositors over all other classes of creditors.[63] Before this amendment was adopted, there had been a hodgepodge of state priority schemes, many of which placed deposit claims in the same priority class as general creditors. The National Depositor Preference Amendment imposed a uniform nationwide schedule of priority:

1. Secured claims (up to the value of the perfected collateral)
2. Administrative expenses of the receivership
3. Domestic deposit liabilities
4. General liabilities (including foreign deposits[64] and unsecured borrowing)
5. Subordinated obligations
6. Obligations to stockholders[65]

The National Depositor Preference Amendment allowed the FDIC to administer satisfaction of deposit and other claims uniformly, with no special requirements or varying obligations imposed on receiverships of banks chartered in specific states. In addition, since most non-deposit claims were valueless due to the priority of deposit claims, many claimants with a subordinate (that is, lower) claim status than domestic deposits elected not to pursue their claims, which reduced the FDIC's cost of administering non-deposit claims. Because some of these claims were associated with active litigation at bank failure, legal expenses were also reduced. Although the benefits associated with administering the receivership were clear, some researchers questioned whether this legislative change would result in a substantial shift in losses from the FDIC to other creditors because many creditors exited failing banks before failure (especially those that were likely to lose money if the bank failed).[66]

3.6 Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994

This act,[67] plus several changes in various state laws that preceded it, provided more flexibility to the ownership structure for banks and removed barriers to interstate and branch banking. Before its enactment, many states set restrictions on interstate banking and the number or location of branches held by a single bank, and the restrictions influenced both the size and number of banks in the industry. Because of pressure from bank owners, many states had already moved away from these types of restrictions. This act required states to eliminate almost all such restrictions unless they opted out.[68] It contributed to industry consolidation and thus contributed to the increase in the size of failed banks between the first crisis and the second crisis. The act allowed banks to consolidate operations and pursue geographic diversification through acquisitions, and it exposed formerly sheltered banks to larger and more diverse competitors.[69]

[63] Secured claimants are permitted to be paid ahead of deposit claimants to the extent that the collateral satisfies the claim, provided that the lien on the collateral is perfected under applicable law. See 12 U.S.C. § 1821(d)(5)(D)(ii).

[64] On September 13, 2013, the FDIC clarified that certain foreign deposits payable in the United States will be in the depositor creditor class but are not insured deposits. See "Deposit Insurance Regulations; Definition of Insured Deposit," *Federal Register* 78, no. 178 (September 13, 2013): 56583–56589.

[65] 12 U.S.C. § 1821(d)(11)(A).

[66] See Marino and Bennett (1999).

[67] Pub. L. No. 103-328, Sept. 29, 1994, 108 Stat. 2338, codified as 12 U.S.C. §§ 43, 215a-1, 1831u, 1835a.

[68] States were given multiple options for opting in early or opting out. At this point, all states have opted in. For more information, see Johnson and Rice (2007).

[69] Jones and Critchfield (2005).

4 The FDIC's Failed Bank Asset Disposition Philosophy

This section discusses the FDIC's asset disposition philosophy during each crisis. In both cases, the FDIC's views and anticipated strategies were shaped by its experience before the crisis, and its viewpoints and related strategies changed as the crises played out. This review of the FDIC's evolving strategies is followed by a brief section about changes in the FDIC's information technology infrastructure during the period between the crises, which also influenced the FDIC's practices in the second crisis.

There are natural tradeoffs when the FDIC considers its options for the disposal of the assets of failed institutions. The FDIC can sell assets quickly despite the downward pressure on asset values that such a distressed sale could entail. Or the FDIC can sell assets gradually, which would ideally mitigate the risk that a sale would trigger large price drops and potentially undermine a local economy or put significant downward pressure on the price of an asset class.[70] In practice, the FDIC's choices fall along a continuum between a quick sale and longer-term ownership. Another tradeoff relates to risk retention: buyers usually pay higher asset prices if the FDIC retains some or all of the risk associated with the assets, but consequently the FDIC retains the risk of declining asset prices. In addition, risk retention by the FDIC may reduce or distort the incentives of the buyers to minimize asset losses, and the risk retention strategies could be subject to poor contract design or administration that might increase asset losses or operating costs.

Likewise, there are tradeoffs associated with the treatment of creditors at failing banks. Imposing losses on uninsured depositors and other unprotected creditors when banks fail can reduce the FDIC's losses at failure (because other creditors absorb some of the losses at the bank), can encourage unprotected creditors at banks to exert discipline on banks that take excessive risks, and may encourage banks to limit risk-taking in response to creditor concerns. However, if the FDIC imposes such losses during crisis periods, then depositors and other creditors at other financial institutions may panic and thus harm both the banking system and the general economy. In addition, in most cases, resolution methods that impose losses on uninsured depositors and other creditors are operationally more complex for the FDIC to execute.

4.1 Viewpoints and Anticipated Strategies at the Onset of the 1980 to 1994 Crisis

From 1943 to 1979, the average number of bank failures per year was only five, and the total of assets of failed banks per year averaged merely $1.1 billion (in 2016 dollars). Thus, FDIC staff began the first crisis with no recent crisis experience to draw from in crafting its resolution and receivership strategies. Even so, the FDIC tried to improve its resolution processes in the years preceding the first crisis. In the mid-1960s, the FDIC's preferences shifted from payouts to Purchase and Assumption (P&A) agreements, where another bank acquires some or all of the assets and then assumes the deposits and sometimes other liabilities.[71] As the crisis began, P&A agreements were viewed as generally more efficient than payouts and less disruptive to the depositors and local community.[72] All P&As at that time passed both insured and uninsured deposits to the acquirer. Often, the FDIC offered P&A bidders a short-term option to purchase the failing banks' loans at book value—an offer that was more often declined than accepted. The FDIC attributed those declinations to the poor quality of the loans, the limited information available to bidders, and the tight timelines for resolution.[73]

For assets retained in receiverships (that is, not sold to an acquiring bank when the bank was resolved), the FDIC focused on recovering as much of the total book value of the assets as possible and placed less emphasis on the cost of holding the assets. Thus, assets tended not to be sold during recessions, and asset holding periods were often long.[74] FDIC staff levels and receivership asset balances reflected this philosophy. As of year-end 1979, the FDIC's Division of Liquidation had 432 employees, and $5 billion (in 2016 dollars) in failed bank assets remained to be liquidated.

[70] Bovenzi (2015), p. 48.

[71] For more information about the resolution options used by the FDIC, see FDIC (2014) or FDIC (1998), especially chapter 3.

[72] FDIC (1984), p. 86.

[73] FDIC (1977), pp. 9–10. Other reasons included loans with below-market interest rates and better lending opportunities elsewhere.

[74] Seidman (1993), pp. 99–100.

At the onset of the crisis, as interest rates soared to record highs, the FDIC anticipated an increased workload and planned to accommodate it. The introduction to its 1980 Annual Report stated, "The FDIC plans to intensify its efforts to find new ways to meet its burgeoning workload and increased statutory responsibilities in an era of employment ceilings and limited resources."[75]

4.2 Evolution of Viewpoints During the 1980 to 1994 Crisis

The 1980 to 1994 crisis involved a series of regional recessions, major legislative changes, and significant changes within the banking industry. Not surprisingly, the FDIC's viewpoints changed a great deal over this tumultuous 15-year period.[76]

The viewpoints expressed in the previous section prevailed early in the crisis. As the number of failures increased, the volume of assets remaining to be liquidated also increased and the cash in the Bank Insurance Fund (BIF)[77] that was available for failures declined. These factors highlighted the costs of holding assets in receivership. And, after L. William Seidman became Chairman in 1985, the FDIC placed a stronger emphasis on selling assets retained in receiverships more quickly.[78] The FDIC also sought to increase the volume of assets sold to acquirers at resolution amid concerns that the value of assets may decline once they are placed in government hands.[79] The FDIC adopted bid evaluation procedures that favored passing assets to acquirers in 1986 and introduced a new whole-bank P&A approach in 1988.[80] Throughout the crisis—and indeed through both crises—the FDIC continued to prefer P&A agreements (as opposed to payouts) for resolving closed banks.[81]

The FDIC also believed that it was sometimes more cost-effective (that is, less costly to the BIF) to judiciously assist distressed banks to avoid failure rather than closing them. For example, many savings banks had funded long-term mortgages with low interest rates using short-term deposits. When interest rates spiked in the late 1970s and early 1980s, these institutions suffered losses that might have been reversed if interest rates dropped—provided that the institutions were well managed.[82] Congressional views and related legislation (and thus the FDIC's scope, and sometimes its mandate, for the use of such assistance) changed markedly during the crisis: Garn St. Germain (1982) and CEBA (1987) expanded the FDIC's ability to use such methods, whereas FIRREA (1989) and FDICIA (1991) restricted their use.

Early in the crisis, the FDIC recommended that it be granted bridge bank authority, and Congress authorized it in 1987. The bridge bank structure allows the FDIC to close a failing bank and temporarily run the bank as an operating institution while it devises and executes a strategy for final resolution. Where failure occurred quickly, this authority improved the FDIC's resolution options because it enabled the FDIC to choose options that defer some of its resolution tasks until after the bank failed.[83] As it exercised the new authority later in the crisis, the FDIC found that it effectively facilitated the resolution of larger failures, and FDIC staff viewed it as the preferred tool when failure occurred at a large or complex bank too quickly to arrange a P&A and if the bank still had franchise value.[84]

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[75] FDIC Annual Report (1980), p. 6. It is unlikely that the FDIC anticipated the extent of the future crisis. The paragraph indicated that most of the changes were anticipated in the examination function, which made up 70 percent of its budget that year. By 1985, direct receivership expenses (excluding overhead) comprised 65 percent of its budget. (The source for the details in this footnote is Historical FDIC Expenses, FDIC Division of Finance.)

[76] This section draws heavily from chapter 3 and chapter 12 of FDIC (1998). Chapter 3 discusses the evolution of resolution methods used by the FDIC during this period. Chapter 12 discusses methods used to sell assets retained in receiverships.

[77] At that time, the FDIC insured banks and savings banks through the BIF but did not insure thrifts. On July 1, 1995, the FDIC began resolving insolvent thrifts through the Savings Association Insurance Fund (SAIF). On March 31, 2006, the SAIF and the BIF were merged into the DIF.

[78] Seidman (1993), pp. 99–102.

[79] Potential reasons for this viewpoint include: (a) borrowers may be less inclined to pay loans if they are held by the government, especially if there are no longer prospects for future borrowing; (b) government staff may be paid less or have weaker incentives to diligently pursue high asset prices (fewer sales bonuses, etc.); (c) political influence may reduce recoveries; and (d) government requires more extensive oversight and reporting, which adds costs.

[80] See FDIC (1998), pp. 86–90 and FDIC, "FDIC Chairman Unveils New Approach to Handling Bank Failures," news release no. PR-79-88, April 18, 1988, for additional discussion.

[81] However, the scope for acting on its preference was reduced after the LCT was introduced in 1992.

[82] See FDIC (1986).

[83] Without a bridge bank option, the FDIC must either execute a payout (where the franchise value of the bank is lost) or have enough time to identify potential acquirers and market the failing bank before the failure.

[84] That is, the value of the bank as an operating company exceeded the value of the individual assets minus liabilities. For a discussion of these options in the context of large bank failures before the 2008 to 2013 crisis, see Marino and Shibut (2006).

Through most of the crisis, the FDIC avoided sales methods that involved retaining risk after the assets were sold. That began to change as the crisis peaked. In 1991, the FDIC introduced a P&A agreement where the FDIC would share in the future credit losses of selected troubled asset portfolios sold to the acquirer. This P&A agreement, known as "loss share," was viewed as a means to reduce costs and improve credit availability for the failed bank's borrowers.[85] Near the end of the crisis, the FDIC used risk-sharing methods for a limited amount of assets retained in receiverships.[86]

4.3 Viewpoints and Anticipated Strategies at the Onset of the 2008 to 2013 Crisis

In 2007, the FDIC's resolution staff had an average FDIC tenure of 21 years. Many staff members had vivid memories of the previous crisis and the lessons that they had learned from it.[87] Senior FDIC staff believed that a quick sale was advantageous to the FDIC because of its effect on long-term financial stability and operational simplicity.[88] First, it allowed markets to recover quickly after the potential short-run drop in asset prices. Managing large volumes of assets for an extended period theoretically could mitigate short-term asset-price volatility, but it would extend the period of market disruption.[89] Second, because troubled assets are difficult to manage, the receivership asset values might deteriorate even as the overall asset markets improve.[90] Through quicker asset sales, the FDIC could reduce its influence on financial markets and increase the role of the private sector in determining market prices.[91] Removing the FDIC as the primary custodian of a large volume of banking assets is also operationally simpler for the FDIC. As an asset manager, the FDIC must devote substantial resources to servicing and liquidating assets. By minimizing its role as an asset manager, the FDIC reduces its need for a large infrastructure to maintain and manage assets before disposition.

The FDIC also found that serving as an asset manager can increase the odds of experiencing political pressure. In the first crisis, the FDIC was the subject of congressional hearings where its handling of troubled assets was criticized and "better treatment" of borrowers was sought.[92] John Bovenzi, the highest-level career executive who had served at the FDIC during both crises, explained that the job of asset servicing "never produces many friends" but that it instead "assured screams of protest by the borrowers to their elected officials."[93] By removing itself from the business of servicing assets, the FDIC could focus its resources on resolving the more immediate concerns that arise during a banking crisis, such as the payment of deposit insurance claims and the resolution of failed institutions.[94]

One of the most painful lessons the FDIC learned after the first crisis was the high human capital cost of downsizing when a permanent workforce is hired for temporary work. The FDIC's workload is countercyclical, and the FDIC requires more resources, including staff, when institutions are failing and assets are being liquidated than when the banking industry is in an extended period of stability. As of year-end 1992, the FDIC's resolution divisions had 6,757 employees, 1,754 (24 percent) of whom were permanent. In addition, the FDIC was required to absorb the remaining staff at the RTC as it wound down its operations; the RTC had 7,382 staff as of year-end 1992, almost all of whom performed resolution and receivership tasks.[95]

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[85] See FDIC, "FDIC Approves Assumption of Deposits of Southeast Bank N.A., Miami and Southeast Bank of West Florida, Pensacola," press release no. PR-137-91, September 19, 1991.

[86] See FDIC (1998), chapters 7, 16, and 17.

[87] The experience of the FSLIC and RTC was also considered. Some FDIC employees shifted to the RTC during its tenure, and (by law) all RTC employees were given jobs at the FDIC when the RTC closed. In addition, a task force was formed to review FDIC and RTC differences and adopt best practices. See FDIC (1995).

[88] See Bovenzi (2015), pp. 59–60.

[89] Bovenzi (2015), p. 48.

[90] There are also costs associated with holding assets, such as loan servicing and management fees.

[91] Economists have also raised concerns related to government control of banking assets, such as reduced efficiency. See Clarke et al. (2003) and Shirley and Walsh (2000) for a discussion of the theoretical and empirical evidence. Also note that sale prices are likely to be lower when assets are sold quickly during distress periods. See Shleifer and Vishny (2011) for additional discussion.

[92] Bovenzi (2015), p. 164. See also Seidman (1993).

[93] Seidman (1993), p. 210.

[94] The FDIC did not escape criticism in the second crisis. For example, a number of criticisms about the FDIC's resolution process were raised at a field hearing in 2011. See *H.R. Field Hearings for the Committee on Financial Services titled Potential Mixed Messages: Is Guidance from Washington Implemented by Federal Bank Examiners?* 112th Congress (2011).

[95] FDIC 1992 Annual Report and internal FDIC sources.

Resolution activity slowed quickly after that: from 1995 to 2007, there were on average only five resolutions per year, with the average total of assets of failed banks per year of $1.4 billion (in 2016 dollars); no failures occurred from July 2004 through January 2007. The more aggressive asset disposition philosophy resulted in only $1 billion (in 2016 dollars) in failed bank assets remaining to be liquidated as of year-end 2007. Although the problem bank list grew to 76 banks in 2007,[96] it was still low by historical standards and there was no expectation of a looming, large-scale crisis. Therefore, while the FDIC continued to consider readiness to meet its resolution and receivership responsibilities in its planning, the FDIC increasingly focused on being a responsible steward of the DIF by controlling its operating expenses and reducing its budget to reflect the reduced workload.[97] To reduce staff, the FDIC imposed a hiring freeze, stopped renewing temporary employment contracts, offered buyouts, and carried out layoffs. By year-end 2007, the FDIC had cut its resolution staff to 218, or only 3 percent of its 1992 staff level.

By reducing the number of employees to this level, there was a risk that the FDIC could be initially understaffed if a large number of institutions failed in a short time. But the FDIC accepted this risk since the probability of such an event appeared remote, the FDIC had external pressure to reduce its staffing levels based on its current workload,[98] and the FDIC believed its staffing levels were sufficient to handle the most likely scenarios of increased resolution-related work. In addition, lowered staffing levels saved money in years with modest resolution activity levels and addressed concerns about keeping the resolution staff engaged.

At the onset of the crisis, senior staff at the FDIC viewed structured asset sale transactions as the most effective vehicles for liquidating assets quickly when a large volume of assets was available for sale, because of the potential for a greater recovery. Structured transactions include securitizations and limited liability corporations (LLCs).[99] Both of these sales methods, which had performed well in the first crisis, involve sharing risk with asset buyers. Therefore, senior management anticipated that securitizations and LLCs would be the key sales methods used for receivership assets during crisis periods; they viewed auctions, combined asset sale and management contracts,[100] and loss share as useful options that would probably not be widely used during periods with high levels of activity. During the period between the two crises, the FDIC sold 39 percent of failed bank assets to acquirers at failure, and the remaining assets were usually sold quickly through auctions. The volume of assets sold was too small to merit the use of securitizations or LLCs.

Another strategy used during the first crisis that senior FDIC staff planned to use in the future was the bridge bank structure. Because the FDIC had found that the bridge bank structure effectively facilitated the resolution of larger failures, senior FDIC staff anticipated that bridge banks would continue to be a valuable tool for the FDIC and would be the preferred method for resolving the failure of larger and more complex insured depository institutions.[101]

4.4 Evolution of Viewpoints During the 2008 to 2013 Crisis

Once again, the FDIC adapted its viewpoints and strategies during the 2008 to 2013 crisis. The changes in the FDIC's general philosophy about asset disposition were relatively modest, especially given the extent of the depth of the crisis and its effects on the economy.

[96] FDIC, *Quarterly Banking Profile* (2007). Although this was an increase from 2006, it was less than one-tenth of the 1992 figure (863 institutions).

[97] The 2006 FDIC Annual Report stated that "[T]he Corporation seeks to operate in a consistently efficient and cost-effective manner in order to fulfill its fiduciary responsibilities," and "[T]he FDIC has had an extraordinary record of controlling its operating expenses over the past five years." See also Bovenzi (2015), chapter 9.

[98] See Bair (2007).

[99] The LLC was co-owned by the FDIC and an outside investor, with accompanying agreements that described the responsibilities of both parties. The FDIC transferred troubled assets, usually nonperforming loans and other real estate owned (ORE), from its receiverships into the LLC. It retained partial ownership of the LLC and sold the remaining ownership to investors. The investors managed and sold the assets. The FDIC and the investor shared the funds recovered from the assets (net of expenses). See FDIC (1998), chapter 17 for a more detailed description. Example contracts can be found at https://www.fdic.gov/buying/historical/structured/index.html.

[100] During the first crisis, a third-party contractor often would be responsible for both servicing and liquidating a pool of retained assets. For additional information about asset sale and management contracts used during the first crisis, see FDIC (1998), chapter 14.

[101] FDIC (1998), p. 186. See also Bair (2007) and Marino and Shibut (2006).

Early in the crisis, the market's appetite for purchasing failed bank assets nosedived. During the first nine months of 2008, the FDIC resolved 11 small and midsized institutions and the acquirers purchased only 8.5 percent of the assets.[102] Buyer interest in failed bank assets retained in receiverships was similarly weak. In addition, the previously robust market for securitized assets evaporated. Consequently, the FDIC had to quickly reconsider its marketing strategies if it wanted to achieve its goals of selling assets promptly. Given market conditions, the losses associated with asset sales without risk sharing were exceedingly high. But the combination of the viewpoints expressed above, low staff levels, and rapidly increasing numbers of potential bank failures continued to support a strategy that would dispose of as many assets as possible at failure. Although opinions varied about the best strategy early in the crisis, it did not take long for the FDIC to shift to whole-bank P&As—with virtually all of the failed bank's assets passing to the assuming institution—coupled with loss share coverage for the transferred loans and real estate assets, as its primary asset disposition strategy.[103]

As the markets normalized, the pace of bank failures slowed, and staff levels increased, the FDIC gradually shifted to strategies it had viewed as optimal during the period between the first and second crisis. The FDIC began reducing the scope of loss share coverage it offered to bidders at resolution in 2011, and it executed its last loss share resolution in September 2013.

4.5 Information Technology Improvements and Bank Resolutions

During the period between the two crises, the FDIC initiated several new computer systems that could be used for resolution activity. In 2005, the FDIC updated its general ledger. The new ledger is an enterprise-wide, integrated financial system that provides accounting, reporting, and management data to support the financial management needs of the FDIC. In 2007, the FDIC implemented a new franchise marketing and asset management tool called Communication, Capability, Challenge, and Control (4C), which replaced several outdated systems. The intent of 4C was to allow the FDIC to more efficiently market financial institution franchises, manage and sell the assets of failed institutions, and easily report on these activities.[104] The FDIC also began development of a new insurance determination system called the Claims Administration System (CAS) in 2007.[105] CAS was intended to determine the insurance status of depositors if a failure occurs, "minimize the potential for FDIC losses, reduce any spillover effects that could lead to systemic risks, [and] preserve franchise value."[106] CAS was also designed to manage receivership claims after resolution. It was implemented in 2010.

During the first crisis, the FDIC's franchise marketing staff prepared confidential summaries for each potential failing bank. The summaries, called "information packages," were 40 to 50 pages long and included a summary balance sheet, asset and liability schedules, limited organizational charts, income statements, deposit data, interest yield, cost data, and fee income. Preparation of each information package required five to ten specialists working on site for three to four weeks.

The information package was typically hand-delivered to potential bidders at a confidential bidders meeting held near the headquarters of the failing bank. Potential bidders would have to travel to that location if they wanted to learn details about the institution. The limited data available in the information package and the need to commit significant bank resources to even inquire about the attractiveness of the failed bank's franchise and assets discouraged potential acquirers from participating in the review and bidding.

Beginning in 2000, improvements to technology allowed the FDIC to simplify and improve its collection and dissemination of critical failing bank data. Upon notice of a potential bank failure, FDIC staff downloaded detailed data on site and then loaded the data in a secure location at the FDIC for processing. Detailed data from the failing bank and summaries developed

[102] These figures exclude WaMu (with $300 billion in assets) and IndyMac (which failed in July 2008 but was not resolved until 2009).

[103] See FDIC (2017), chapter 6.

[104] 2007 FDIC Annual Report.

[105] Ibid.

[106] 2006 FDIC Annual Report. ("The FDIC is taking advantage of the hiatus in resolution activity by modernizing the way it determines the insurance status of depositors in the event of failure by streamlining its business processes and modernizing the internal systems used to facilitate a deposit insurance determination through improved use of current technology.")

by FDIC staff were provided to prospective bidders and select FDIC staff through a secure web portal called a Virtual Data Room (VDR). VDRs are electronically accessed data depositories that provide qualified potential bidders that have executed a confidentiality agreement with access to financial data on the institution, legal documents, information on the due diligence process, bidding procedures, and descriptions of the resolution transactions being offered.[107] This process provided several benefits: Prospective franchise bidders could receive substantially more data about potential failed banks, the data format was easier to use, and prospective bidders did not have to travel to learn details about the bank. Costs and risks associated with the bidding process dropped. In addition, increased availability of bank data allowed the FDIC to prepare more effectively for failure.

The FDIC instituted similar improvements to its process for selling assets held in its receiverships. In 2003, the FDIC adopted an online secure sales system for these assets that expanded the available information and reduced transaction costs for interested buyers. During the second crisis, the FDIC routinely posted up-to-date information about prospective asset sales on its public website. In addition, the FDIC enhanced its publication of information on closed transactions for franchise sales and receivership asset sales.

5 Resolution Transactions and Results

In this section, we compare the resolution transactions used for each crisis, examine the speed of asset disposition and the resulting volume of assets held by the FDIC during each crisis, and review the FDIC's risk retention and loss rates.

5.1 Resolution Approaches and Asset Disposition

During the 1980 to 1994 crisis, the FDIC used several approaches to resolve failed banks.[108] In a P&A agreement without loss share (P&A without LS), the assuming institution purchases assets and assumes certain liabilities, including deposits, with little or no recourse to the FDIC. In a P&A agreement with loss share (P&A with LS), the assuming institution purchases assets and assumes certain defined liabilities (primarily deposits and secured liabilities), with some assets covered by a loss share agreement. The acquiring bank assumed all domestic deposits for P&As prior to 1992; after 1992, they sometimes assumed only the insured deposits. In an insured deposit transfer (IDT), the assuming institution purchases certain assets and assumes only the insured deposits.[109] In a payout (PO), there is no assuming institution and the insured deposits are paid directly to depositors. In a Deposit Insurance National Bank (DINB), there is likewise no assuming institution; the FDIC charters a bank to hold the insured deposits for a limited time to permit the depositors to access the deposit accounts, allowing for a less disruptive transfer of depositor funds. In both a PO and a DINB, the FDIC retains all failed bank assets. Finally, in an assistance agreement (AA), the FDIC contracts to provide financial assistance to facilitate a merger of the troubled bank with a healthy bank. Unlike the other transactions, the AA is a form of open bank assistance and the troubled bank is not placed into receivership as part of the transaction. Figure 9 shows the number of each of these resolution approaches used in the two crises.

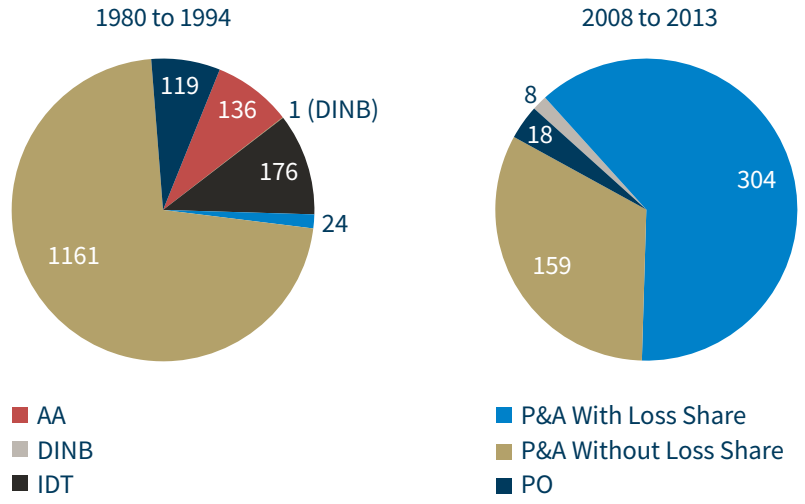
[107] FDIC *Resolution Handbook* (2014), p. 11.

[108] For more information about the resolution options used by the FDIC, see FDIC (2014) or FDIC (1998), especially chapter 3.

[109] The FDIC stopped using the IDT transaction after it introduced the P&A transaction, in which only insured deposits were assumed by the acquiring bank. In addition, for P&A transactions from 1992 forward, the FDIC would sometimes pay out brokered deposits directly rather than passing them to the acquiring bank.

Figure 9

Number of Bank Failures



Source: FDIC.
Note: AA is Assistance Agreement, P&A is Purchase and Assumption, IDT is Insured Deposit Transfer, DINB is Deposit Insurance National Bank, and PO is Payout.

During the second crisis, the FDIC used a smaller set of resolution approaches: the P&A with LS, the P&A without LS, the PO, and the DINB. AAs and IDTs were not used. After FDICIA was passed, AAs were not permitted except under extremely limited circumstances. In 1992, the FDIC introduced a form of a P&A that passed only insured deposits to assuming institutions and abandoned the IDT transaction. The FDIC used loss share agreements much more often in the second crisis (304 receiverships, or 62 percent of non-systemic resolutions, compared with 24, or 1.5 percent, during the first crisis). There were 8 DINBs and 18 POs.

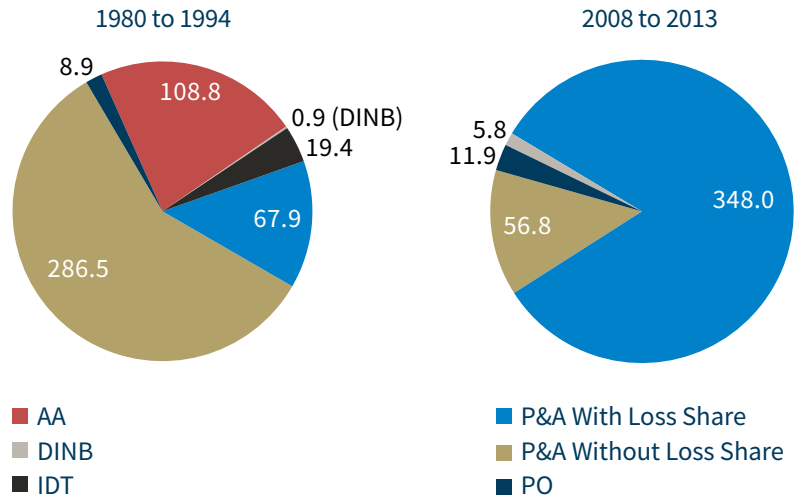
There were arguably additional "failures" of FDIC-insured institutions during the first crisis where the FDIC did not render direct financial assistance. During that crisis, the FDIC had varying degrees of authority to permit certain forms of accounting or capital forbearance that might allow troubled banks to avoid failure if their problems were deemed temporary and bank management was sound. In total, 363 FDIC-insured institutions received forbearance under these programs, and 77 (21.2 percent) subsequently failed. The remaining 286 institutions are excluded from the failure statistics reported elsewhere in this study.[110]

Figure 10 reports the value of failed bank assets that passed through each of the resolution approaches during the two crises. During both crises, banks resolved using loss share were, on average, larger than other failed banks. In the first crisis, banks resolved using assistance agreements were also larger on average. Payouts and DINBs were mainly used for smaller institutions in both crises.

[110] See FDIC (1998), chapter 3, RTC (1989), and FDIC (1997), chapter 6.

Figure 10

Failed Bank Assets (Billions of 2016 Dollars)



Source: FDIC.
Note: Data for 2008 to 2013 exclude the Washington Mutual (WaMu) failure. If WaMu had been included, assets for P&A without loss share would have increased by $345 billion. AA is Assistance Agreement, P&A is Purchase and Assumption, IDT is Insured Deposit Transfer, DINB is Deposit Insurance National Bank, and PO is Payout.

The treatment of uninsured depositors and other unprotected creditors also changed over time. From 1980 to 1987, losses were imposed at 24 percent of resolutions. From 1988 to 1991—at the peak of the first crisis but before the least-cost test provisions of FDICIA had been implemented—this ratio dropped to 14 percent. FDICIA had a profound effect on the treatment of uninsured depositors, and from 1992 to 2007 losses were imposed on uninsured depositors at 65 percent of bank failures. In 2008, concerns about public confidence in deposits increased, the deposit insurance limit was increased from $100,000 to $250,000, and a temporary guarantee program for uninsured noninterest-bearing transaction accounts was introduced. As a result, losses were imposed on uninsured depositors at 28 percent of the failures in 2008 and at only 6 percent of failures from 2009 to 2013.[111]

The usage of bridge banks also differed across crises. Although the authority to use bridge banks was only first granted in 1987, the FDIC used it for 115 banks during the first crisis, primarily for resolving large banking companies.[112] In the second crisis, bridge banks were used for only three institutions, even though more of the banks were larger and failed more quickly.[113]

[111] After the insurance limit was raised, and especially when the Transaction Account Guarantee Program (TAGP) was in place, the amount of uninsured deposits declined. The TAGP protected all noninterest-bearing transaction accounts at participating banks, even if the balances exceeded the insurance limit. The program was enacted in October 2008 and ended in December 2010. Section 343 of Dodd-Frank provided the same additional protection to participating banks from January 2011 through December 2012. Participation in TAGP was voluntary, but most banks participated. At some failed banks, losses that would have been imposed on uninsured depositors exceeded the cost of administering the deposit insurance limit. In that situation, resolution transactions where all deposits were assumed by the acquirer would be less costly to the FDIC than transactions where only insured deposits were assumed by the acquirer.

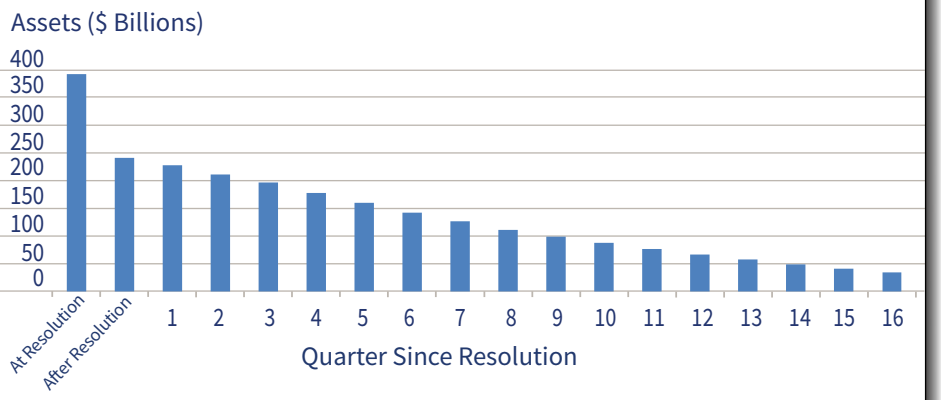
[112] In many cases, multiple institutions within a bank holding company were closed simultaneously. Bridge bank authority was used for only ten banking companies. See FDIC (1998), p. 171. In seven of the ten instances in which the FDIC used this authority, the failure involved institutions with assets of more than $1 billion.

[113] See FDIC (2017), pp. 196–197.

Changes in the FDIC's philosophy had a profound effect on the speed in which assets were sold from receiverships. Figures 11 and 12 provide information about the speed of asset liquidation over the first four years of the receiverships for the two crises.[114] The first column (Assets at Resolution) reports the total asset balance when the banks were resolved. The second column (Assets after Resolution) reports the assets that remained after the acquirer's purchase on the resolution date. Then, the balances are reported for each three-month period after the banks failed. From 1986 to 1994, the FDIC as receiver retained 61 percent of the assets held by the failed banks after resolution.[115] During the second crisis, the FDIC sought to sell as many assets as possible to the acquiring institution to keep assets in the private sector and in recognition of staffing and funding shortfalls, and only 19 percent of assets remained in receivership after resolution.

Figure 11

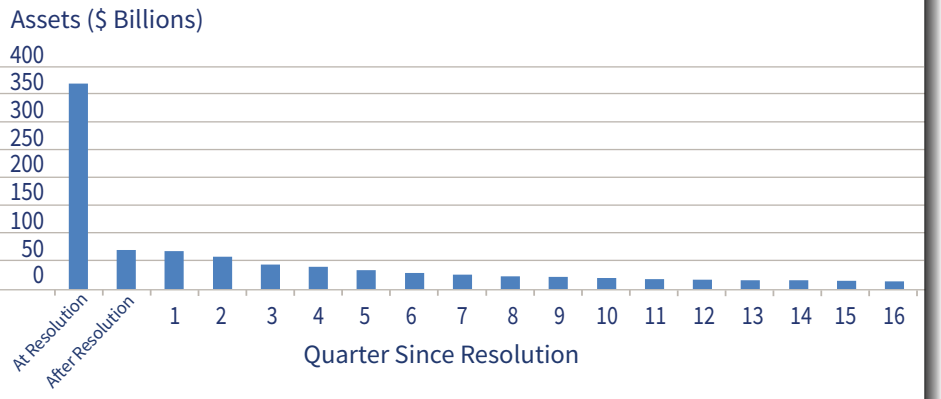
Outstanding Asset Balance Over Life of Receivership (1986 to 1994)



Source: FDIC.

Figure 12

Outstanding Asset Balance Over Life of Receivership (2008 to 2012)



Source: FDIC.
Note: Excludes Washington Mutual.

[114] Figure 11 excludes failures from 1980 to 1985 (because the data are not available), and assistance agreements are omitted (because these were not receiverships). Figure 12 excludes WaMu and failures after year-end 2012. If WaMu had been included, the asset sales speed for the second crisis would have been faster.

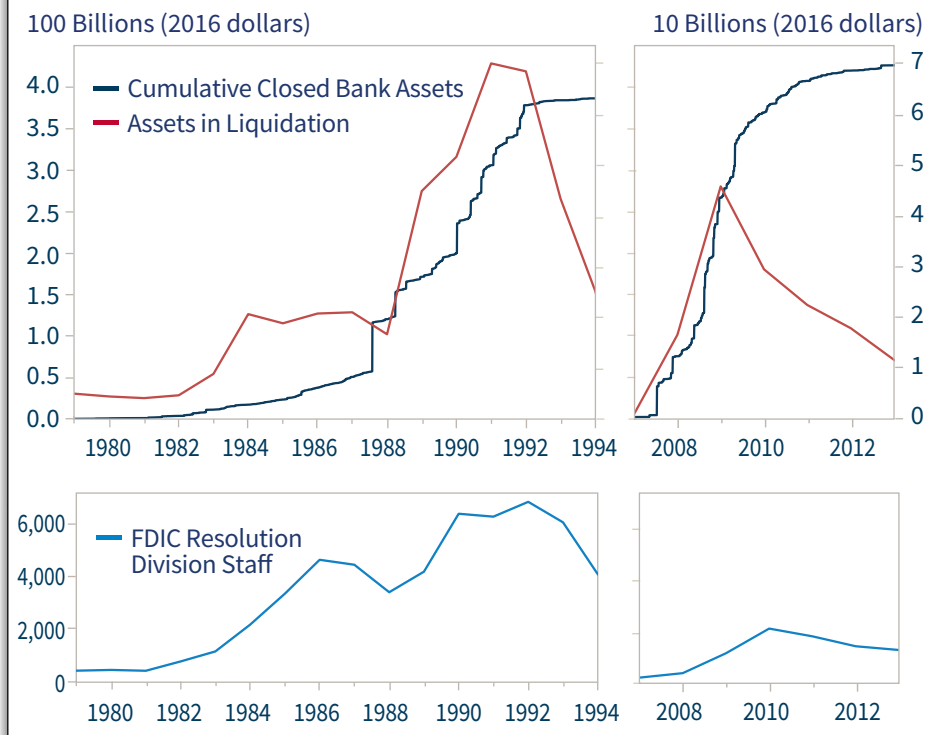
[115] The acquirers purchased 39 percent of the assets. Data prior to 1986 are not available.

In addition to passing a greater portion of failed bank assets to the assuming institutions, the FDIC disposed of retained assets much more quickly during the second crisis than during the first crisis. From 1986 to 1994, the FDIC held approximately 9 percent of failed bank assets 16 quarters following bank failure. At the same point during the second crisis, the FDIC held only 3.7 percent of failed bank assets.

The effects of the philosophical shift are also revealed by comparing cumulative assets of banks that were closed, receivership assets, and FDIC resolution division staff levels during each crisis (Figure 13).

Figure 13

Cumulative Closed Bank Assets, Receivership Assets Available for Sale, and FDIC Resolution Division Staff



Source: FDIC.
Note: Open bank resolutions are omitted, since the bank's assets are not placed in receivership. Washington Mutual (WaMu) is excluded. At WaMu, almost all assets were passed to the acquirer at resolution. Therefore, if WaMu had been included, cumulative closed bank assets would have increased by more than $300 billion from 2008 forward, and assets available for sale would not have changed much.

In the first crisis, receivership assets available for sale peaked in 1991 at $69.6 billion (in 2016 dollars), or 18 percent of assets placed into receivership during the crisis period. In the second crisis, receivership assets available for sale peaked in 2009 at $46 billion, or 10.8 percent of total assets placed into receivership (excluding WaMu). Staff levels were much higher in the first crisis: resolution division staff peaked at 6,757 in 1992, dropped to a low of 219 in 2007, and then reached a maximum of 2,110 during the second crisis.

5.2 Risk Sharing and Securitized Asset Resolution

Loss share agreements, securitizations, and structured transactions all involve the retention, or sharing, by the FDIC of the risk of loss related to assets sold.[116] With a guarantee from the FDIC in its corporate capacity, asset purchasers under loss share agreements have the right to recover certain defined and covered shortfalls in the expected return on covered assets. Such recovery comes not from the limited (and declining) assets of the individual receiverships that held the assets before the sale or other transaction, but from the DIF. In other transactions, the FDIC also transferred assets but retained risk exposure, and sometimes rights of recovery, based on the future value of the assets.

The FDIC first used loss sharing on September 19, 1991. With the sale of the assets of the failed Southeast Bank, Miami, Florida, to First Union National Bank, the FDIC agreed to reimburse the assuming institution for 85 percent of the loss on certain assets, primarily commercial loans. During the first crisis, the FDIC entered into 16 loss sharing agreements to resolve 24 banks. The loss share banks were, on average, relatively large: while loss share was used on only 1.5 percent of the banks that failed during that period, failed banks with loss share agreements held 14 percent of total failed bank assets. The FDIC found that its cost of resolution as a percentage of assets for failing banks holding $500 million or more in assets with loss share was 7.8 percent, compared with 12.2 percent for similarly sized banks closed without loss share. For failed banks with less than $500 million in assets, the difference in cost of resolution to assets was greater: 6.1 percent with loss share versus 17.1 percent without loss share. The FDIC made loss share payments of slightly more than $1 billion, approximately 74.3 percent of the amount it had originally forecast.[117]

The FDIC used loss share much more frequently in bank resolutions during the second crisis. Loss share agreements covering single-family loans, commercial loans, or both were part of 304 bank failures. Approximately 215 billion in failed bank assets was passed to 152 assuming institutions[118] and covered by loss share agreements. As of December 31, 2018, the FDIC had paid $29.1 billion in claims (net of recoveries) to assuming institutions, with remaining net loss share payments estimated to be $566 million.

During the first crisis, the RTC conducted 72 securitizations to dispose of $42 billion in assets, but the FDIC engaged in only two securitization transactions.[119] During the second crisis, the FDIC conducted seven loan securitizations, including performing residential and commercial transactions and nonperforming residential loan securitizations. To increase marketability, the FDIC in its corporate capacity guaranteed the senior bond classes of the performing loan securitizations. Under this asset disposition strategy, certain retained loans ($3 billion in all) from one or more failed banks were pooled and then sold into a trust structure, followed by the issuance of securities with varying characteristics of risk and return. Those assets with similar characteristics and payment histories would be combined into either performing or nonperforming securitizations. In addition to the loan securitizations, the FDIC re-securitized eight mortgage-backed securities, with $6.3 billion in interests held by failed banks in earlier mortgage-backed securities transactions repackaged and sold.

As with securitizations, the RTC created many more private-public partnerships than did the FDIC to sell troubled assets during the first crisis. The RTC sold $21.4 billion in troubled assets through 72 structured transactions, but the FDIC created only two LLCs to sell $3.7 billion in troubled failed bank assets.[120]

From 2008 to 2013, the FDIC used 35 LLCs to sell $26.2 billion in failed bank assets. For 23 of the transactions, the LLC issued a note, guaranteed by the FDIC in its corporate capacity and payable to the FDIC, to cover a portion of the value of the

[116] Other types of risk sharing exist. Examples include stock warrants (or other ownership-sharing devices), seller financing, representations and warranties, and putbacks. The FDIC has made only limited use of these methods. For example, only narrowly defined representations and warranties were provided to buyers. For more information about these three methods, see FDIC (1998), chapters 7, 16, and 17, and FDIC (2017), chapter 6.

[117] FDIC (1998), pp. 193–209.

[118] Many acquirers purchased multiple failed banks.

[119] See FDIC (1998), chapter 16.

[120] See FDIC (1998), chapter 17.

assets transferred. Recoveries on the contributed assets went to pay expenses and repay the notes held by the FDIC, with no equity distribution until the note was paid. Three notes were sold to third parties, providing an immediate recovery to the FDIC. All of the FDIC notes have been paid in full.

Table 5

Summary of Asset Sales with Risk Sharing

(Dollars in Billions)

	1980 to 1994 Crisis		2008 to 2013 Crisis		
	Amount	**% Total**	**Amount**	**% Total**	**% Total excl WaMu**
Loss Share					
Number of Banks	24	1.5	304	62.2	62.3
Assets with Loss Share Coverage	$18.5	6.2	$214.9	31.6	56.4
Total Assets	$41.4	13.9	$314.0	46.2	82.4
Loan Securitizations					
Number of Deals	2		8		
Assets Sold	$1.5	0.5	$3.0	0.4	0.8
Resecuritizations of MBS					
Number of Resecuritizations	0		8		
Assets Sold	$0	0.0	$6.3	0.9	1.7
Joint Ventures (LLCs)					
Number of Deals	2		35		
Assets Sold	$3.7	1.2	$26.2	3.8	6.9
Total Assets Sold with Risk Sharing	$23.7	8.0	$250.0	36.8	65.7

Source: FDIC.

Note: The 1980 to 1994 crisis excludes activity from the Resolution Trust Corporation (RTC). The RTC relied heavily on securitizations and joint ventures for loan sales; it sold $42 billion in loans through 72 loan securitization deals and $21.4 billion in troubled assets in 72 joint ventures. "Total Assets Sold" in the 2008 to 2013 crisis includes an adjustment for a situation in which a loan was sold, repurchased, and resold again. The sale and resale of loans to Franklin Venture are both included in "Assets Sold" under the Securitizations and LLC sections of this table, but the resale has been excluded from the total amount of assets sold. WaMu is Washington Mutual, MBS is mortgage-backed securities, and LLC is Limited Liability Corporation.

Table 5 summarizes the risk-sharing programs for the two crises.

The FDIC relied much more heavily on risk-sharing programs in the second crisis, especially loss share and structured transactions using LLCs. Loss share coverage was provided on 32 percent of failed bank assets during the second crisis but only 6 percent during the first crisis.[121] Likewise, LLC usage increased from 1.2 percent during the first crisis to 3.8 percent during the second crisis.[122] Risk-sharing sales methods were used four times as often during the second crisis (37 percent versus 8 percent); excluding WaMu, usage of risk-sharing sales methods increased eight-fold (66 percent versus 8 percent).

[121] If WaMu is excluded, the FDIC's usage of loss share for the second crisis increases to 56 percent.

[122] If WaMu is excluded, the FDIC's usage of structured sales/LLC for the second crisis increases to 6.9 percent.

5.3 Comparison of Loss Rates

A comprehensive analysis of the overall loss rate on failed banks between the crises presents difficulties.[123] Many more bank failures occurred in the first crisis than in the second crisis. The first crisis was much longer than the second crisis. Significant legislative changes altered the FDIC's resolution toolbox and restrictions as well as its supervisory practices. The FDIC changed its resolution philosophy repeatedly over this time period. The first crisis passed through regional phases, while the second crisis was national in scope amid a broader and deeper recession. Table 6 presents loss rates for the two crises.

Table 6

Loss Rates for Each Crisis*

	Program Wide **	Mean	Median
1980 to 1994 Crisis			
Assistance Agreements	8.3%	7.9%	3.3%
P&A With Loss Share	5.5%	8.7%	7.5%
P&A Without Loss Share	14.4%	21.2%	19.8%
IDT	28.0%	26.7%	26.1%
Payout/DINB	26.2%	25.1%	25.2%
Total	12.7%	20.8%	19.5%
2008 to 2013 Crisis			
P&A With Loss Share	17.8%	22.0%	21.3%
P&A Without Loss Share	3.2%	28.2%	26.5%
Payout/DINB	27.1%	32.7%	34.5%
Total	10.4%	24.6%	23.6%
Total Excluding Washington Mutual	18.8%	24.6%	23.6%

* Losses are calculated as the FDIC loss estimate as of year-end 2018 divided by total assets as of the quarter prior to resolution.
** Mean losses, weighted by assets as of the quarter prior to resolution.
Source: FDIC.
Note: P&A is Purchase and Assumption, IDT is Insured Deposit Transfer, and DINB is Deposit Insurance National Bank.

With these differences noted, the overall loss rates for the crises were remarkably similar: 12.7 percent for all bank failures during the first crisis and 10.4 percent for the second crisis. However, if WaMu is excluded, then the second crisis had a significantly higher loss rate (18.8 percent). The loss rate on assets covered by loss share is noteworthy: for the limited number of banks where loss share was used during the first crisis, the loss rate was 5.5 percent, while the loss rate on a much larger share of failures during the second crisis was 17.8 percent.

The overall loss rate on assets passing through a P&A without loss share during the second crisis was only 3.2 percent, compared with 14.4 percent for the first crisis. However, if WaMu is excluded from the second crisis, the loss rate for the second crisis period jumps to 22.3 percent. It is noteworthy that the loss rate (excluding WaMu) was higher in the second crisis than in the first, even though most of the P&A without loss share transactions occurred as the second crisis waned, when the markets were less fragile and had a greater appetite for failed bank assets and fewer concerns about the real value of those assets.

The loss rates for bank assets passing through POs and DINBs were similar for both crises. Because almost all banks resolved using POs and DINBs lack franchise value or interested bidders, it is not surprising that their loss rates usually exceeded those of other resolution strategies. Many of these institutions were small (and lack the benefits of economies of scale) and in economically depressed areas.

[123] Throughout this section, the loss rate is calculated as the FDIC's costs of resolution divided by total assets.

6 Conclusion

This study has compared certain aspects of the 1980 to 1994 crisis with the 2008 to 2013 crisis, and discussed key differences in the characteristics of the banks that the FDIC resolved and the FDIC's response in meeting its obligations. There were substantive differences in numerous areas. These differences between the crises were shaped by forces and trends in banking and finance, changes in the statutory environment and the associated tools available to the FDIC, the FDIC's viewpoints about its resolution strategy options, and the FDIC's operational capacity. The comparison reveals that crises can vary markedly, and that the availability of a wide variety of resolution tools—combined with the operational capacity to wield those tools given evolving circumstances—benefited the FDIC. It also demonstrates how resolution philosophies have a strong influence on results. Finally, it shows that the banking industry continues to evolve, and that the FDIC's decisions about any future resolution strategies are also likely to evolve as the agency adapts to changes in its environment and circumstances.

References

Bair, Sheila. 2007. "Remarks at the Exchequer Club," Washington, D.C., March 21, 2007. https://www.fdic.gov/news/speeches/archives/2007/chairman/spmar2107.html.

Bennett, Rosalind L., Mark D. Vaughan, and Timothy J. Yeager. 2005. "Should the FDIC Worry about the FHLB? The Impact of Federal Home Loan Bank Advances on the Bank Insurance Fund." FDIC Center for Financial Research Working Papers, 2005-10. https://www.fdic.gov/bank/analytical/cfr/2005/wp2005/2005-10.pdf.

Bovenzi, John F. 2015. *Inside the FDIC Thirty Years of Bank Failures, Bailouts, and Regulatory Battles*. Wiley.

Clarke, George R.G., Robert Cull, and Mary Shirley. 2003. "Empirical Studies of Bank Privatization: An Overview," Working Paper. https://pdfs.semanticscholar.org/2003/d60dc47be4194808439cecd2505e6e4175ba.pdf.

Cole, Rebel A., and Lawrence J. White. 2012. "Déjà Vu All Over Again: The Causes of U.S. Commercial Bank Failures This Time Around," *Journal of Financial Services Research* 42: 5–29. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1644983.

Cooke, J.B., Christoffer Koch, and Anthony Murphy. 2015. "Liquidity Mismatch Helps Predict Bank Failure and Distress," *Federal Reserve of Dallas Economic Letter* 10, no. 6 (May). https://www.dallasfed.org/~/media/documents/research/eclett/2015/el1506.pdf.

Davison, Lee. 2020. "Two Crises, A Comparison," FDIC Staff Studies number 2020-02. https://www.fdic.gov/bank/analytical/cfr/staff-studies/2020-02.pdf.

Diamond, Douglas W., and Raghuram G. Rajan. 2002. "Liquidity Shortages and the Banking Crisis," (Working Paper 8937, National Bureau of Economic Research, May 2002). https://www.nber.org/papers/w10071.pdf.

FDIC. 1977. "Study of Purchase and Assumption Transactions." Unpublished manuscript by the Office of Corporate Planning.

———. Annual Reports (1980, 1992, 1997, 1999, 2004, 2005, 2006, 2007, 2009). https://www.fdic.gov/about/financial-reports/report/.

———. 1984. FDIC: *The First Fifty Years*. https://www.fdic.gov/bank/historical/firstfifty/.

———. 1986. "FDIC Statement of Policy and Criteria on Assistance to Operating Insured Banks."

———. 1995. "Final Report on the FDIC/RTC Transition," submitted to the Committee on Banking and Financial Services, U.S. House of Representatives, December 29, 1995.

———. 1997. *History of the Eighties—Lessons for the Future, Volume 1: An Examination of the Banking Crisis of the 1980s and Early 1990s.* https://www.fdic.gov/bank/historical/history/vol1.html.

———. 1998. *Managing the Crisis*: *The FDIC and RTC Experience 1980–1994*. https://www.fdic.gov/bank/historical/managing/.

———. 2007. *Quarterly Banking Profile.* Fourth quarter.

———. 2014. *Resolutions Handbook.* https://www.fdic.gov/bank/historical/reshandbook/resolutions_handbook.pdf.

———. 2017. *Crisis and Response: An FDIC History, 2008–2013.* https://www.fdic.gov/bank/historical/crisis/.

Financial Crisis Inquiry Commission. 2010. *The Financial Crisis Inquiry Report: Final Report of the National Commission on the Causes of the Financial and Economic Crisis in the United States.* Washington, DC. http://purl.fdlp.gov/GPO/gpo50165.

Fuchs, Jim, and Timothy A. Bosch. 2009. "In-Depth: Why Are Banks Failing?" *Federal Reserve Bank of St. Louis Central Banker* 19, no. 3 (Fall): 4–5.
https://www.stlouisfed.org/publications/central-banker/fall-2009/why-are-banks-failing.

GAO. 2013. "Financial Institutions: Causes and Consequences of Recent Bank Failures," GAO- 13-71 (January 3, 2013).
http://www.gao.gov/products/GAO-13-71.

Johnson, Christian A., and Tara Rice. 2007. "Assessing a Decade of Interstate Bank Branching," Federal Reserve Bank of Chicago Working Paper 2007-03.
https://www.chicagofed.org/publications/working-papers/2007/wp-03.

Jones, Kenneth D., and Tim Critchfield. 2005. "Consolidation in the U.S. Banking Industry: Is the 'Long, Strange Trip' About to End?" *FDIC Banking Review* 17 (4): 31–61.
https://www.fdic.gov/bank/analytical/banking/br17n4full.pdf.

Kowalik, Michal, Troy Davig, Charles S. Morris, and Kristen Regehr. 2015. "Bank Consolidation and Merger Activity Following the Crisis," *Federal Reserve Bank of Kansas City Economic Review* 2015 (Q1): 31-49.
https://www.kansascityfed.org/publicat/econrev/pdf/15q1Kowalik-Davig-Morris-regehr.pdf.

Marino, James A., and Rosalind Bennett. 1999. "The Consequences of National Depositor Preference," *FDIC Banking Review* 12 (2): 19–38.
https://www.fdic.gov/bank/analytical/banking/9910.pdf.

Marino, James A., and Lynn Shibut. 2006. "Resolution Strategies for Large U.S. Commercial Banks." Unpublished manuscript presented at the Bank of England.
https://www.fdic.gov/bank/analytical/cfr/bios/shibut-marino-wp.pdf.

McDill, Kathleen, and Andrea Maechler. 2003. Do Uninsured Depositors Vote with Their Feet? In *Market Discipline in Banking: Theory and Evidence*, edited by George G. Kaufman, 211–48. Elsevier Science, Ltd.

McIntyre, Lloyd E. III, and Peter A. Martino. 2008. "The Changing Liquidity Landscape," *FDIC Supervisory Insights* 5 (2).
https://www.fdic.gov/regulations/examinations/supervisory/insights/siwin08/liquidity_landscape.html.

OCC. 1988. Bank Failure: An Evaluation of the Factors Contributing to the Failure of National Banks.
https://www.occ.gov/publications/publications-by-type/other-publications-reports/pub-other-bank-failure.pdf.

O'Keefe, John P. 1993. "Risk-Based Capital Standards for Commercial Banks: Improved Capital-Adequacy Standards?" *FDIC Banking Review* 6 (1): 1 –15.
https://www.fdic.gov/bank/analytical/banking/br1993vol6no1full.pdf.

Park, Sangkyun, and Stavros Peristiani. 1998. "Market Discipline by Thrift Depositors," *Journal of Money, Credit, and Banking* 30, no. 3 (August): 347–64.
https://www.jstor.org/stable/2601105?seq=1#metadata_info_tab_contents.

Resolution Trust Corporation. 1989. "Open Bank Assistance." Unpublished manuscript.

———. 1995. *Statistical Abstract*.

Seidman, L. William. 1993. *Full Faith and Credit: The Great S&L Debacle and Other Washington Sagas*. Beard Books.

Shirley, Mary, and Patrick Walsh. 2000. "Public Versus Private Ownership: The Current State of the Debate," World Bank Policy Research Working Paper 2420.
http://documents.worldbank.org/curated/en/952171468766218935/Public-versus-private-ownership-the-current-state-of-the-debate.

Shleifer, Andrei, and Robert Vishny. 2011. "Fire Sales in Finance and Macroeconomics" *Journal of Economic Perspectives* 25, no. 1 (Winter): 29–48.
https://scholar.harvard.edu/files/shleifer/files/fire_sales_jep_final.pdf

Strahan, Philip E. 2012. "Liquidity Risk and Credit in the Financial Crisis," *Federal Reserve Bank of San Francisco Economic Letter*, no. 15 (May 14).
http://www.frbsf.org/economic-research/publications/economic-letter/2012/may/liquidity-risk-credit-financial-crisis/.