6

Bank Resolutions and Receiverships

One important way that the FDIC fulfills its mission "to maintain stability and public confidence in the nation's financial system" is by carrying out all the tasks that are triggered by the closure of failed FDIC-insured depository institutions, including the liquidation of the assets held by the failed banks.[1] The FDIC learned important lessons from its experience during the bank and thrift crisis of the 1980s and early 1990s, which generated an enormous volume of failed-bank assets. Many of these assets were retained and managed by the FDIC, and this proved to be operationally complex as well as costly. As a result, after the first crisis ended, the FDIC adopted a resolution strategy[2] that centered on selling assets back into the marketplace promptly, either at the time of failure or shortly thereafter. In the recent crisis, this strategy had the collateral benefit of conserving cash for the FDIC, a benefit that proved to be important as events unfolded (see chapter 5).

The nature of the 2008–2013 crisis, including both its size and the speed of the upsurge in bank failures, made it challenging for the FDIC to sell failed banks and their assets, and it required creativity and adaptability to design sales-contract features that would attract buyers. Early on, as the crisis intensified and the appetite for purchasing failed institutions dwindled in the marketplace, the FDIC responded by including an option to share credit losses with acquirers as a feature of its failed-bank offerings.[3] This proved to be quite helpful. As market conditions evolved during the crisis, the FDIC responded by modifying the contract terms in loss-sharing agreements and adjusting its other asset sales strategies.

The next section of this chapter provides background information: the definitions of the terms "resolutions" and "receiverships" and a summary of the FDIC's responsibilities for resolutions and receiverships; an account of the FDIC's past strategy with respect to those responsibilities; and an overview of the FDIC's readiness planning in the years preceding the outbreak of the recent crisis. The background information is followed by an account

---

[1] For the FDIC's mission, vision and values, see https://www.fdic.gov/about/strategic/strategic/mission.html. Throughout the chapter, the term "banks" refers to all FDIC-insured depository institutions.

[2] Key terms, such as resolution and receivership, are defined below.

[3] Loss sharing is a sales method where the FDIC sells assets to an acquirer and agrees to pay the acquirer for a pre-specified percentage of the future losses on selected failed-bank assets to make the sale more attractive. For additional discussion, see the section titled "Loss-Share Purchase and Assumption."

of the dimensions of the crisis the FDIC had to face in 2008. This is followed by two sections on the main task of resolutions (the main task is the marketing of failed-bank franchises to potential acquirers) and then by two sections on receiverships (whose main task is managing and selling the assets that were not acquired at resolution). In each of those two subject areas, the first section presents general considerations, preparing the way for the second section, which is a narrative and analysis of the decisions the FDIC made in fulfilling its resolution and receivership responsibilities during the 2008–2013 crisis. The chapter ends with a listing and discussion of lessons learned, areas for future research and a short conclusion.

Background: Definitions and Responsibilities, Past Strategy, and Readiness Planning

The background necessary to an understanding of resolution and receivership activity during the 2008–2013 crisis covers three areas: basic definitions of terms and responsibilities; strategies the FDIC used during and after the previous crisis (1980–1994); and the readiness planning that the FDIC engaged in during the period between the two crises, when failure activity was minimal.

Definitions and Summary of FDIC Responsibilities

When a bank fails, a receivership is established at the moment the bank is closed. Similar to bankruptcy proceedings for companies other than banks,[4] a receivership is the legal entity where all the affairs of the failed bank are handled. The receivership does not end until *all* the bank's assets are sold and *all* the claims against the bank are addressed. The term "resolution" is used in multiple ways: often it refers just to the initial phase of the receivership, but it is also used for the entire receivership process. In the second sense, therefore, a bank is not truly resolved until the receivership itself is terminated. In this chapter, however, "resolution" is used in the first sense: the initial phase of the receivership.

Resolving a failed bank takes place on a date that is established, within statutory bounds, through consultation between the bank's chartering authority and the FDIC.[5]

---

[4] For a discussion of the similarities and differences between the receiverships used by the FDIC to resolve failed banks and bankruptcy proceedings used for nonbank firms, see Robert R. Bliss and George G. Kaufman, "U.S. Corporate and Bank Insolvency Regimes: An Economic Comparison and Evaluation," Federal Reserve Bank of Chicago Working Paper, 2006, https://www.chicagofed.org/publications/working-papers/2006/wp-01.

[5] Generally, banks must be closed within 90 days after becoming critically undercapitalized. See 12 U.S.C. § 1831(o)(h)(3)(A). If a state chartering authority is unable or unwilling to close a failing bank, then the FDIC or, for members of the Federal Reserve System, the Federal Reserve Board can use its authority to close the bank and appoint the FDIC as receiver. See 12 U.S.C. §§ 1821(c) (4) and (9). The FDIC used this authority to close a state-chartered bank only once during the 2008–2013 crisis, and the Federal Reserve

On the date the bank fails, these steps are taken in this order: the chartering authority revokes the bank's charter, closes the bank, and appoints the FDIC as receiver;[6] the entire failed bank is placed into receivership; and if the FDIC—in preparing for the resolution—has succeeded in finding an acquirer for some or all of the failed bank's assets or liabilities or both, those assets and liabilities are removed from the receivership and transferred to the acquirer.[7] The date when these events occur is called the resolution date, and it is the culmination of a process that has involved much preparation.[8] One major focus of the preparation—the FDIC's attempt to find a buyer for some or all of the failing bank's assets and liabilities—is called franchise marketing.[9]

But franchise marketing, important as it is, is just the first step in the receivership process that winds up the affairs of failed banks, for after the resolution date, the FDIC's responsibilities as receiver continue.[10] The FDIC must service and sell the assets the acquirer does not buy; take care of the necessary bookkeeping, accounting, and reporting; identify and verify all claims, determine who should get what amount of money, and pay claims as funds become available; decide whether to sue anyone for actions that contributed to the failure (and follow through if advisable); monitor any ongoing agreements with acquirers or the purchasers of assets; and so forth. The receivership is terminated only when all the bank's assets and liabilities have been sold or liquidated or transferred or have otherwise passed beyond the FDIC's responsibility to care for them.[11]

The activities of marketing a failed bank's franchise and managing a receivership are distinct from each other but are also closely related. Of the two activities, franchise

---

Board also used it only once.

[6] Theoretically, state chartering authorities could appoint an entity other than the FDIC. In practice, this is rare and it did not occur during the 2008–2013 crisis.

[7] A lengthy settlement process occurs later to address all the details and matters that are discovered subsequently. Note that the FDIC can also separate the last step of this process (the sale to an acquirer) from the preceding steps of the resolution process. In that case, the bank fails on that date, but resolution occurs later. This option, which does not occur often, is described in the introduction to the section titled "Franchise Marketing: The Bidding Process and Resolution Options."

[8] Not until that date, however, will anything have been set in stone. Sometimes a failing bank manages to figure out a way to survive, and its planned closing does not occur. Also, note that in some cases banks must be closed with very little preparation, usually because of fraud or liquidity problems (liquidity problems occur when the bank lacks the cash needed to pay depositors or other creditors).

[9] Franchise marketing is the process of packaging, marketing, and selling the operating units of an insured depository institution. In cases where the operating value of the institution exceeds the liquidation value, franchise marketing attempts to retain the incremental value of the operating units of the failing institution and allow its viable operations to continue functioning after the failure.

[10] See FDIC, *Resolutions Handbook* (2014), https://www.fdic.gov/bank/historical/reshandbook/resolutionshandbook.pdf, for a more complete description of the FDIC's responsibilities and tasks associated with resolving failed banks.

[11] To facilitate the conclusion of receiverships, the FDIC, in its corporate capacity, may purchase and assume de minimis amounts of receivership assets and liabilities.

marketing has a much bigger effect on the FDIC's cost,[12] on the cash requirements of the Deposit Insurance Fund (DIF), and on the potential harm that bank failures may do to local economies. And franchise marketing shapes many of the receivership management activities, from the resolution date through termination of the receivership. For example, if the acquirer assumes only the insured deposits, the FDIC must determine the insurance status for each depositor and must then pay the uninsured depositors to the extent that funds become available. Compared with franchise marketing, however, the receivership management process involves a wider range of activities and requires substantially more staff and operational resources.

Although there are unique aspects to each activity, there are also some commonalities. Perhaps the strongest commonalities have to do with the sales process in the two activities. Franchise marketing involves the selling of part or all of a bank, and receivership sales involve the selling of retained assets. Table 6.1 compares these two activities. The FDIC's decisions regarding each of the two key areas reflect both the similar and the dissimilar considerations. For both activities, minimizing costs is a major goal, and that goal must be considered in light of market realities and the natural trade-off between risk and return for assets.

Table 6.1. Comparison of Franchise Sales and Retained Asset Sales

Sale Process Characteristic	Franchise Sale	Retained Asset Sales
Risk/return trade-offs and other market dynamics	The same for both	
Number of possible sale methods	Relatively few	Many
Effects on DIF, FDIC cash flow, FDIC operational capacity	Very large	Present but smaller
Effects on deposits and depositors	Yes	No
Potential effects on local (and sometimes regional or national) economy	Larger	Smaller
Number of potential buyers	Smaller[a]	Larger
Flexibility on timing	No. Sale must be arranged quickly.	Yes
Statutory constraints	A mix of general and specific requirements	Only general requirements

[a] Theoretically, companies other than banks could purchase assets (but not deposits). There are, however, significant challenges to marketing to companies other than banks, especially the short time frame available for marketing. The limited marketing time frame is discussed briefly in the section titled "The Bidding Process." To date, only FDIC-insured banks that meet several qualifying criteria, or investors that meet the criteria necessary to open a bank and are vetted ahead of time, have been permitted to bid.

[12] Note, however, that the FDIC's losses are influenced more by the bank's condition and the quality of its assets than by the franchise marketing process or the receivership activities. If there is no acquirer, or if the acquirer purchases only a few assets, then the receivership activities have a stronger influence on costs than franchise marketing does.

Past Strategy

The FDIC's strategies for handling its resolution and receivership responsibilities in the 2008–2013 crisis were shaped by its experiences managing the crisis of the 1980s and early 1990s. During those years, the FDIC managed more than 1,600 bank failures and it also initially managed the Resolution Trust Corporation (RTC), which resolved nearly 750 thrift failures after its creation in 1989.[13] In particular, that crisis generated an enormous volume of failed-bank assets. The FDIC retained and managed a large share of the assets and found the experience to be both costly and operationally complex. As a result, in the years after that earlier crisis, the FDIC adopted a resolution strategy that focused on selling the assets back into the private sector promptly, either at resolution or shortly thereafter.

This strategy was chosen because for senior FDIC staff, an important lesson of the 1980–1994 crisis was that prompt sales of failed-bank assets were advantageous to the FDIC, for four reasons. First, in the early years of the RTC, and to a lesser extent at the FDIC during the 1980s, there was an increasingly large inventory of assets—especially troubled assets—in receiverships. With such a large build-up of assets that eventually would be sold (also known as an "asset overhang"), private investors were concerned that the eventual sale of these assets might harm future asset prices; thus they were less willing to purchase the assets.[14] Senior management believed that, by selling failed banks and failed-bank assets through mechanisms like loss-share agreements into the market at whatever terms the

---

[13] The RTC was a temporary government agency charged with resolving failed thrifts from August 1989 through year-end 1995. The FDIC's role in the management of the RTC changed over time. From the inception of the RTC through the passage of the RTC Refinancing, Restructuring and Improvement Act in December 1991, the FDIC was the exclusive manager. The FDIC had a lesser role in the management of the RTC after that, but the FDIC Chairman continued to serve in an oversight role. In addition, the RTC Completion Act of 1993, passed in December 1993, required that the FDIC and the RTC create a task force to support the transition of the outstanding RTC tasks to the FDIC; it identified and analyzed differences in business practices and made recommendations about RTC practices that should be adopted by the FDIC. See FDIC, "Final Report on the FDIC/RTC Transition" submitted to the Committee on Banking and Financial Services, U.S. House of Representatives and the Committee on Banking, Housing and Urban Affairs, U.S. Senate, December 29, 1995. Lastly, the remaining workload and the RTC employees were absorbed by the FDIC when the RTC was terminated at the end of 1995. For additional discussion on the FDIC authority, see Lee K. Davison, "The Resolution Trust Corporation and Congress, 1989–1993: Part I," *FDIC Banking Review* 18, no. 2 (2006): 38–60, https://www.fdic.gov/bank/analytical/banking/2006sep/article2/article2.pdf, and Lee K. Davison, "The Resolution Trust Corporation and Congress, 1989–1993: Part II," *FDIC Banking Review* 18, no. 3 (2006): 1–30, https://www.fdic.gov/bank/analytical/banking/2007apr/br18n3full.pdf. For information about the FDIC and RTC resolution and receivership activity during this period, see FDIC, *Managing the Crisis: The FDIC and RTC Experience* (1998), https://www.fdic.gov/bank/historical/managing, and RTC, *RTC Statistical Abstract* (1995).

[14] For additional discussion of asset overhangs, see Jeffrey D. Sachs, "Conditionality, Debt Relief, and the Developing Country Debt Crisis," in *Developing Country Debt and Economic Performance,* ed. Jeffrey D. Sachs, vol. 1, *The International Financial System* (1989), 255–96; Kent Cherny and O. Emre Ergungor, "Effective Practices in Crisis Resolution and the Case of Sweden," *Economic Commentary* (February 2009): 1–4, https://www.clevelandfed.org/newsroom-and-events/publications/economic-commentary/economic-commentary-archives/2009-economic-commentaries/ec-20090209-effective-practices-in-crisis-resolution-and-the-case-of-sweden.aspx and FDIC, *Resolutions Handbook* (1998).

market would bear, the sales would establish market prices, which in turn would foster the recovery of asset markets by providing transparent market prices to other market participants. Second, prompt sales helped reduce asset inventories and thus reduced receivership expenses. Third, removing the FDIC as the primary custodian of a large volume of banking assets is operationally simpler for the Corporation, requiring a smaller infrastructure and reducing the potential political pressures that the asset management function may elicit.[15] Fourth, this strategy conserved the FDIC's cash (a consideration that was important after the 2008–2013 crisis broke, as described in chapter 5).

A second lesson learned from the crisis of 1980 through 1994 was to avoid hiring permanent staff to do temporary work. After that crisis ended, the process of downsizing the permanent resolution and receivership staff that had been hired in the 1980s was lengthy, disruptive, hard to manage, and harmful to employee morale.[16]

Staffing was reduced during the period between 1994 and 2008, when bank failures were rare and the need for resolution activities at the FDIC was limited. Seeking to be a responsible steward of the DIF, the FDIC controlled its operating expenses to reflect its reduced workload. It sought to achieve a balance between maintaining readiness for a future economic downturn, on the one hand, and minimizing costs (by maintaining a smaller staff and a slimmer infrastructure during a period of few failures), on the other hand. By reducing the number of employees, the FDIC recognized the risk that it might be initially understaffed if a large number of institutions failed during a short period, but it accepted this risk because the probability of such an event seemed remote.

Readiness Planning

Nevertheless, the FDIC remained aware that a potential banking crisis always lay on the horizon, however distant. Starting in 1999, in response to increasing concentration in the banking industry, the FDIC took several actions that focused on readiness for large-bank failures. Starting in the early 2000s, in response to its shrinking resolutions workload and staff, the FDIC began focusing on resolution readiness planning more generally, taking several initiatives to improve its readiness for an increasing volume of failures.

The actions that focused on readiness for large-bank failures included (a) analyzing numerous topics related to large-bank failures in order to become more familiar with the problems that could arise; (b) becoming familiar with relevant statutes and regulations to identify changes needed to improve the Corporation's readiness; (c) identifying the likely operating challenges and potential responses to them; and (d) conducting simulation exercises where staff attempted to respond to scenarios involving hypothetical large-bank

---

[15] For example, during the 1980–1994 crisis, the FDIC received complaints or requests for more generous treatment of borrowers. For additional discussion, see L. William Seidman, *Full Faith and Credit: The Great S&L Debacle and Other Washington Sagas* (1993); and FDIC, *Resolutions Handbook* (1998).

[16] For additional discussion, see John F. Bovenzi, *Inside the FDIC: Thirty Years of Bank Failures, Bailouts, and Regulatory Battles* (2015).

failures. To ensure strong communication with other banking regulators and a common understanding of the related issues, the FDIC discussed its findings with other regulators, and in some cases included other regulators in the simulation exercises. These exercises led the FDIC to promulgate several regulations that would improve its readiness for large-bank failures: the new regulations clarified the standing of bank creditors in the event of failure;[17] increased the Corporation's capacity to provide insured depositors with prompt access to their funds after failure;[18] and increased the Corporation's capacity to quickly acquire critical information on qualified financial contracts.[19] The exercises also led to improvements in the Corporation's processes for management reporting and for determining the insurance status of deposit accounts.

Among the initiatives that focused on readiness for a large volume of failures was the Corporate Employee Program (CEP), whose purpose was to train both new and experienced FDIC employees in a variety of functions within the organization, with the goal of creating a flexible workforce that could be redistributed depending on economic conditions and levels of resolution activity. If a significant increase in resolution activity occurred, the Division of Resolutions and Receiverships (DRR) would have first priority in using employees trained under the CEP.[20] A second initiative, taken in 2005, was to sign a Memorandum of Understanding with the federal government's Office of Personnel Management that authorized the FDIC, during crisis periods, to waive certain restrictions on rehiring retirees.

The events in the fall of 2008, however, were more severe than the FDIC's planning efforts had envisioned, and—of particular importance—unfolded more quickly than envisioned.

The Dimensions of the Banking Crisis of 2008–2013

After more than a decade of modest failure activity and no failures at all from mid-2004 to February 2007, the banking industry was gripped by crisis from 2008 through 2013. During those years, 489 banks were closed and the FDIC, the Treasury, and the Federal Reserve used systemic risk exceptions to mitigate the serious adverse effects associated

---

[17] 12 C.F.R. § 360.8. See also 74 Fed. Reg. 5797–5807 (Feb. 2, 2009). Most, but not all, of this rule addressed processing complexities associated with sweep accounts. This clarification provided certainty to banks and creditors about how these accounts would be treated if a bank failed.

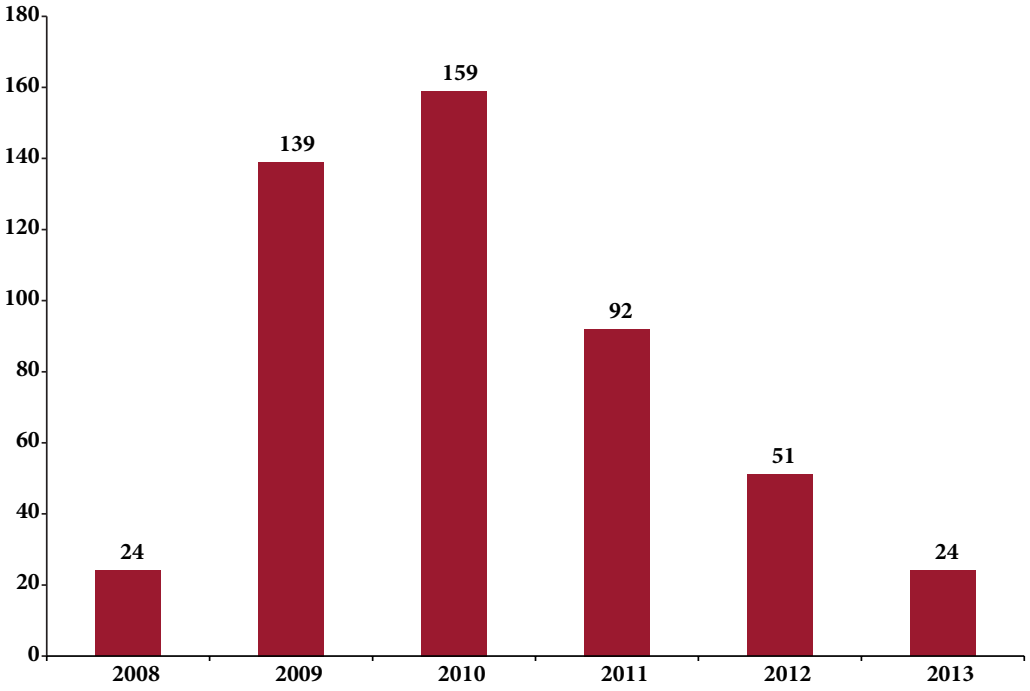
[18] The complexity of the FDIC's deposit insurance rules can make it hard for the Corporation simultaneously to provide quick access to insured funds and deny immediate access to uninsured funds. See 12 C.F.R. § 360.9. See also 73 Fed. Reg. 41180-41211 (Jul. 17, 2008).

[19] A qualified financial contract is a financial instrument that qualifies for special treatment if a bank fails. See 12 C.F.R. § 360.5 for a detailed definition. See 12 C.F.R. pt. 371 for the rule made to improve the FDIC's access to information. See also 73 Fed. Reg. 78162-78173 (Dec. 22, 2008).

[20] For additional discussion, see U.S. Government Accountability Office, "Human Capital and Risk Assessment Programs Report," GAO-07-255, 2007, https://www.gao.gov/assets/260/256532.pdf.

with the potential failure of a few large, systemically important banks (see chapter 3).[21] The 489 failed banks held $686 billion in assets and, according to the most recent estimates, cost the FDIC $72.5 billion to resolve. Although in the first year of the crisis (2008) only 24 banks were resolved, one of them was IndyMac, a large California thrift that failed suddenly on July 8 and proved to be the most expensive failure in FDIC history (that is, at a cost of $12.4 billion, it cost the FDIC the most to resolve); and another of the 2008 failures was Washington Mutual, the largest thrift (and the sixth-largest FDIC-insured institution) in the country at the time, which failed on September 25 and, with $307 billion in assets, was the largest bank failure in the history of the FDIC. In the years following 2008, the dollar amount of failed-bank assets declined but the number of resolutions increased, going to 139 in 2009 and peaking at 159 in 2010. Figure 6.1 provides the number of bank resolutions by year, and Figure 6.2 provides failed-bank assets by year of resolution. (Note that, for a few banks, the resolution occurred sometime after the bank failed.)[22]

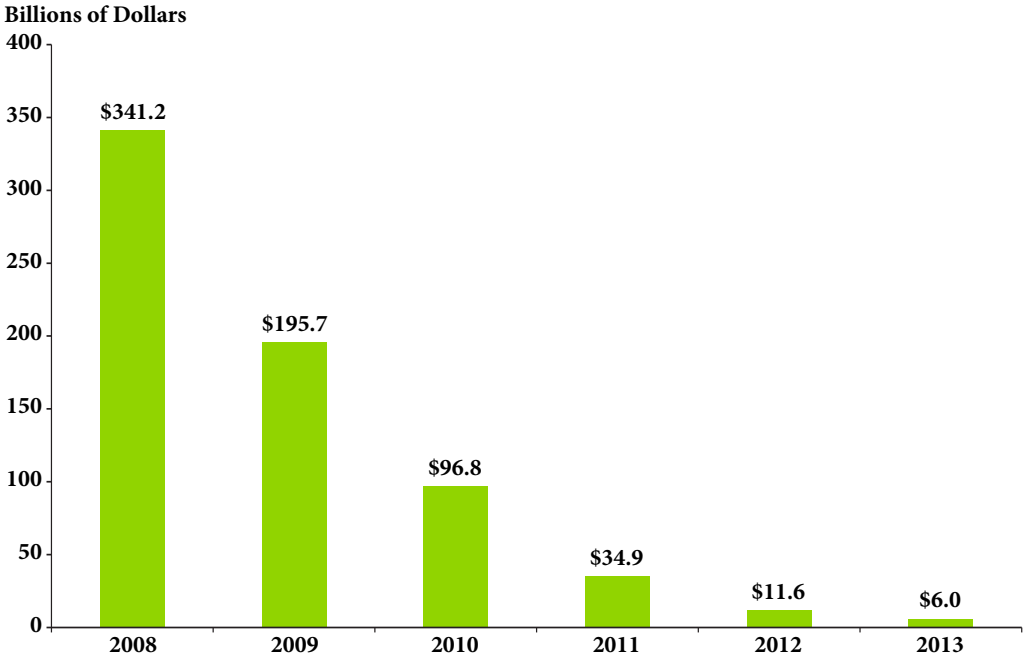
Figure 6.1. Number of FDIC Bank Resolutions by Year



[21] For details about the origins of the global financial crisis that erupted in 2007, see chapter 1.

[22] In these cases, a bridge bank was formed when the bank failed. (Bridge banks are explained in note 24 and in the associated text.) As shown in Table 4.1 (in chapter 4), the number of failures matched the number of resolutions from 2011 through 2013. There were 25 failures but 24 resolutions in 2008, 140 failures but 139 resolutions in 2009, and 157 failures but 159 resolutions in 2010. IndyMac failed in 2008 and was resolved in 2009. Silverton Bank and Independent Banker's Bank failed in 2009 and were resolved in 2010.

Figure 6.2. Total Assets of Failed Banks by Year of Resolution



Note: Assets are as of the quarter before failure.

Five of the seven largest banks that failed between 2008 and 2013 had invested heavily in riskier forms of single-family mortgages, whereas many of the smaller failed banks held significant portfolios of commercial real estate (CRE) loans, especially acquisition, development, and construction (ADC) loans.[23] The two states with the most failures were Georgia (87 bank failures, or 24.6 percent of Georgia banks as of year-end 2007) and Florida (70 bank failures, or 21.8 percent). Puerto Rico was also hit hard, for the three banks that failed in Puerto Rico, though a small number, constituted 30 percent of the banks in that territory.

Meeting the challenge of resolving 489 banks in six years began with franchise marketing. The next section explains franchise marketing: the bidding process and the several resolution options available. The subsequent section tells the story of the FDIC's franchise marketing efforts during the six crisis years, highlighting the necessary trade-offs and constraints.

[23] As of the quarter-end date before failure, single-family loans constituted 74 percent of total loans at the seven largest closed banks, but only 22 percent for the remaining 482 banks. For additional information on the lending practices that contributed to bank failures, see chapter 4 and U.S. Government Accountability Office, "Causes and Consequences of Recent Bank Failures," GAO-13-71, 2013, https://www.gao.gov/assets/660/651154.pdf.

Franchise Marketing: The Bidding Process and Resolution Options

As noted above, when a bank approaches failure, the FDIC prepares to resolve the bank by seeking an acquirer so that as many of the bank's assets and liabilities as possible can be sold to the acquirer instead of remaining in the receivership created on the failure date. In seeking an acquirer—that is, in marketing and selling a failing-bank franchise—the FDIC uses a bidding process that is expected to lead to one of the following outcomes, although the expectation is not always fulfilled: a basic purchase of assets and an assumption of liabilities (P&A), a whole-bank P&A, a loss-share P&A, or various combinations of the P&A options, including a P&A with loan pools. (These options are described in the next section.) If there are no bids, or if all the bids are more costly than a payout, the FDIC does a payout (also called a liquidation); in a payout, the FDIC pays all insured depositors at failure and then receives funds from asset sales gradually over time. (For the advantages and disadvantages of using a payout, see the box on page 185.)

In addition, there are two other alternatives that are permitted by the Federal Deposit Insurance Act and were occasionally, though infrequently, used. One is to resolve a failed institution by organizing a new insured depository institution called a "bridge bank."[24] A bridge bank is typically used when the FDIC does not have enough time to effectively market the institution to a third party before failure. The assets and liabilities are placed in receivership, a bridge bank is established, and then selected assets and liabilities are moved into the bridge bank. The bridge bank is allowed to continue normal operations before the final resolution.[25] The other infrequently used alternative granted to the FDIC by the FDI Act is to organize a Deposit Insurance National Bank (DINB). A DINB is a form of payout where the deposit accounts are transferred to a newly chartered temporary bank operated by the FDIC. It is similar to a bridge bank, but its operations are more limited,[26] and its purpose is to ensure that depositors have continued access to their insured deposits as they transfer their deposit accounts to other financial institutions.

In seeking potential buyers for failed-bank franchises, the FDIC must take financing into consideration. As noted below in the discussion of the bidding process, either the FDIC or the acquirer may contribute cash at resolution, depending on whether an

---

[24] A bridge bank is a temporary national bank operated by the FDIC to facilitate the resolution of an insured institution. Certain requirements for private-sector banks are waived for bridge banks (such as capital requirements). The life of a bridge bank is normally limited to two years. Although extensions are permitted, the FDIC has never pursued one.

[25] The FDIC routinely replaces the failed bank's senior management and may curtail or shut down any segment of the bank's operations that it chooses (for example, lending operations that contributed to the bank's failure).

[26] For example, loans cannot be originated. Loans are not transferred into the DINB but are retained in receivership for disposition.

acquirer buys more assets than liabilities, more liabilities than assets, or equal amounts of both. As a result, resolution choices have a large influence on the FDIC's cash position, which was under pressure during the early stages of the crisis. (See chapter 5 for additional discussion.)

Advantages and Disadvantages of Using a Payout

A payout requires extensive resources for managing and selling all the assets after the bank fails. The up-front cash needs for the payout are greater than for any of the P&A options and include both capital and working capital. In addition, a payout is the resolution method that causes the most disruption to the bank's customers and the local economy: all relationships are lost, and depositors abruptly (but only briefly) lose access to their funds.[a]

In terms of pricing, the payout has both advantages and disadvantages for the FDIC. Advantages include additional time for due diligence (that is, evaluating the assets, legal questions, and so forth) and marketing; the ability to publicly announce sales initiatives; and a more extensive bidder pool for asset sales that is not limited to FDIC-insured institutions. On the other hand, the bank's franchise value (if any) is lost and, in addition, transaction costs are higher, not only because the assets and liabilities undergo at least two transfers of ownership (from the failed bank to the FDIC, and from the FDIC to the ultimate buyer) but also because receivership management costs are greater.

If the FDIC had used this transaction extensively during the recent crisis, two additional problems could have arisen. First, the resulting strains on the FDIC's operating capacity could well have harmed prices because of deteriorating asset-servicing quality. Second, the volume of assets held by the FDIC could have been large enough to affect market prices.

From an overall perspective, the payout option is always available but is often the more costly approach.

---

[a] Unless a DINB or a paying agent is established, both insured and uninsured depositors lose access to funds briefly. The FDIC almost always mails checks to most of the insured depositors by Monday or Tuesday (following a Friday failure). Checks that were written by depositors shortly before failure, but that had not cleared as of the failure date, are returned. All automated transactions scheduled for after the failure date are not executed.

The Bidding Process

In the franchise marketing bidding process, the FDIC offers one or more options to potential acquirers, and under each option, potential acquirers are invited to take either insured deposits only or all deposits. In some cases, the FDIC excludes from its offerings some or all of the brokered deposits (that is, deposits provided to the bank by a deposit

broker). (For a discussion of the role of brokered deposits in resolutions, see the box on noncore funding and franchise value in the section below titled "Resolution Options.") In addition, potential acquirers can submit bids that do not conform to the FDIC's offerings. The FDIC considers all bids, even those that do not conform to its offerings.

The FDIC is required by law to accept the least-cost bid (see box on page 188 for details, including conditions under which there may be an exception to the least-cost requirement).

The FDIC is also required by law to observe certain time periods for appointing a receiver for a failing bank, which has implications for the timeline for marketing a failing bank. If a bank is failing because it becomes critically undercapitalized, the Prompt Corrective Action provision of the Federal Deposit Insurance Corporation Improvement Act of 1991 (FDICIA) mandates a hard stop of 90 days before the bank is closed—90 days after the bank's capital breaches the threshold.[27] Theoretically the FDIC can prepare for a failure before that clock starts running, but in practice it rarely collects the detailed data needed for a thorough evaluation of the assets that supports the marketing process until after the bank becomes critically undercapitalized. And if the bank fails for some other reason, such as fraud or liquidity problems,[28] the FDIC has far fewer than 90 days to prepare. These timing restrictions may make it difficult for the FDIC to collect good-quality information when it sells failed banks and for potential bidders to perform comprehensive due diligence. Researchers have found that sellers who provide better information about their products receive better prices,[29] and therefore the timing restrictions may affect the prices that acquirers are willing to pay. In comparison, almost no private-sector mergers and acquisitions are performed with that speed. They usually take much more time, and in almost all cases the parties have the option of deciding not to sell if they do not like the price.

---

[27] FDIC, *Resolutions Handbook* (2014), figure 2 (on page 9) provides a typical resolution timeline. The FDIC is permitted to extend the time frame by up to 180 days if it determines, in writing, that a brief delay would reduce the loss to the DIF. See Section 38 of the FDI Act. This exception has been used occasionally to facilitate a private-sector rescue of a bank, but not to facilitate the closing of a bank.

[28] Liquidity problems occur when a bank lacks the cash needed to pay depositors or other creditors.

[29] For examples related to the importance of information in bank resolution, see Larry Benveniste et al, "Contract Design for Problem Asset Disposition," *Journal of the American Real Estate and Urban Economics Association* 22, no. 1 (1994): 149–67; and Stephan Madaus, "Bank Failure and Pre-Emptive Planning: The Special Requirements of a Bank Resolution and a 'Default Resolution Option,'" Working Paper, 2013, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2277452. For examples that relate the value of information to asset sale prices, see Sudhir Nanda, James E. Owens, and Ronald C. Rogers, "An Analysis of Resolution Trust Corporation Transactions: Auction Market Process and Pricing," *Real Estate Economics* 25, no. 2 (1997): 271–94; Joao Granja, "The Relation between Bank Resolution and Information Environment: Evidence from the Auctions for Failed Banks," *Journal of Accounting Research* 51, no. 5 (December 2013): 1031–70; and James A. Berkovec, John J. Mingo, and Xeuchun Zhang, "Premiums in Private versus Public Bank Branch Sales," Federal Reserve Board's Finance and Economic Discussion Series Working Paper, 1997, https://www.federalreserve.gov/pubs/feds/1997/199733/199733pap.pdf.

As for the bidding process itself, the details have changed over time but the basic idea is always that an acquirer tells the FDIC what assets and liabilities from the failed bank it is willing to take,[30] as well as what (if any) money will change hands. Each acquirer essentially asks for the amount of additional cash that it wants. If, for example, the value of the assets bought by an acquirer exactly offsets the liabilities assumed, the bidder may not ask for any FDIC payment. But if the value of the liabilities exceeds the value of the assets (if, in other words, there is a capital shortfall), the acquirer will usually want cash. Sometimes the acquirer is willing to take less cash—perhaps because it believes it will be able to manage the bank in a way that gives it a high return at that price, or because the failed bank fits its business strategy well and the acquirer is afraid someone else will offer a lower bid. At other times, an offeror may demand more cash—perhaps because it wants a higher profit margin. And if the value of the assets purchased exceeds the value of the liabilities assumed, the acquirer will generally pay the FDIC.[31] (See box on page 194 for a discussion of financing for the aquirer.)

Once the FDIC receives all the bids, it performs the least-cost test analysis and determines which acquirer—and which transaction—is the winner, and that is the transaction that the FDIC executes. As noted above, if there are no bids that cost less than a liquidation, the FDIC chooses the liquidation. Bids usually do not come in until about a week before the resolution date, and it is only after the FDIC receives the bids and estimates the related costs that the Corporation knows which is the winning bid or discovers that it will be liquidating the bank.

As a result of the marketing process, the FDIC knows who is likely to bid, but sometimes a bidder that showed strong interest may back out at the end, or a bidder who showed only lukewarm interest may end up submitting the winning bid. Furthermore, there is a vetting process, so the winning bidder is *always* on a pre-approved list of banks that are permitted to bid.[32]

---

[30] This is usually accomplished by bidding on an FDIC offering that stipulates the liabilities to be assumed and the assets to be purchased. As mentioned above, however, the bidder can submit bids that do not conform to the FDIC's offerings.

[31] For example, this might occur if the acquirer takes all the bank's assets but does not take the brokered deposits. In this case, the FDIC will pay the brokered deposits directly. Note that the FDIC's funding requirements for a failed bank are not necessarily the same as the amount of funds provided to the acquirer at resolution (there are often funding requirements related to those assets and liabilities that remain in the receivership).

[32] As discussed below (in the section titled "Private Equity Acquirers"), some firms were allowed to create a new bank charter to acquire a failed bank. These firms also underwent a vetting process.

The Least-Cost Test

The least-cost requirement is a statutory standard applied to the resolution of failing banks under the FDI Act, as amended in 1991 by FDICIA.[a] As a general rule, it requires that the FDIC determine, after any bids for a failing bank are received, whether any of those bids would impose a lesser cost on the DIF than a payout of insured deposits and associated liquidation of the failed bank's assets. If more than one bid qualifies, then the bid presenting the least cost to the DIF is accepted. The least-cost test is applied separately to every bank failure.[b] In addition, the FDIC is legally permitted to liquidate a bank even if liquidation is not the least-cost alternative.

The FDIC uses its experience to determine what the market will bear and its knowledge of the bank to design offerings for the failed-bank auction. Qualified acquirers can submit bids that do not conform to the FDIC's offerings. All bids must be analyzed for the least-cost test, including those that do not conform to the FDIC's offerings. A bid can be rejected if the cost of the bid cannot be estimated. Furthermore, a bid can be rejected even if it meets the least-cost test if (a) the transaction is impossible to execute, or (b) the bid failed to meet various regulatory requirements, or (c) the FDIC believes the resulting institution would be unsafe and unsound.

---

[a] See https://www.fdic.gov/regulations/laws/rules/1000-1500.html for details. An exception is permitted for systemic risk. For the banks discussed in this chapter, however, the systemic risk exception was not used. (On use of the systemic risk exception during the crisis of 2008 to 2013, see chapters 2 and 3.)

[b] The FDIC faces additional statutory constraints related to its funding options and receivership operations. For a complete list of these constraints, see https://www.fdic.gov/regulations/laws/rules/.

Resolution Options

As noted above, the franchise marketing process is expected to lead to some form or variant of a purchase and assumption (P&A) transaction, although in fact there may be no bidder, or no viable bid, and in either of those cases, the FDIC will liquidate the bank, as explained above. The four forms of a P&A transaction are the basic P&A, the whole-bank P&A, the loss-share P&A, and the P&A with loan pools. Table 6.2 defines each of these options, which are discussed in more detail below.

Table 6.2. Common P&A Transactions

Basic P&A	The acquiring institution assumes deposits and generally purchases only the failed institution's cash, cash equivalents, and marketable securities.
Whole-Bank P&A	The acquiring institution assumes deposits and purchases all—or almost all—of the assets of the failed institution on an "as is" discounted basis (with no guarantees).
Loss-Share P&A	The acquiring institution assumes deposits and purchases assets of the failed institution beyond those acquired in a basic P&A, and the FDIC as receiver agrees to share losses on certain types of assets (up to an established limit) with the acquiring institution. In most cases, this agreement is very similar to the whole-bank P&A except for the loss-sharing provision on some of the assets purchased.
P&A with Loan Pools (and Other Combinations)	For loan pools, the acquiring institution assumes deposits and purchases the failed institution's cash, cash equivalents, marketable securities, and pools (groups) of loans or other assets. Bids are submitted and evaluated separately for each loan pool. Alternatively, the FDIC may effectively combine these options. For example, the FDIC may offer deposits, cash, securities, and single-family mortgages, plus a separate loan pool for all other consumer loans (thus, ORE [other real estate][a] and commercial loans are excluded). Two other examples of frequently used combinations are (1) a whole-bank offering, except with pools for ORE and ADC loans; and (2) a mix of options across multiple banks that are all scheduled to fail on the same date.

[a] ORE is real estate that is not used by the bank for its normal operations, and comprises primarily real estate that the bank owns because of a foreclosure on loan collateral.

Basic Purchase and Assumption. In a basic P&A, the deposits,[33] cash, and low-risk securities of the failed bank are passed to an acquirer, and the remaining assets are retained in the receivership. The FDIC provides cash in accordance with the winning bid; the amount of the cash roughly equals the difference between the deposits and the market value of the assets of the failed bank that were purchased by the acquirer. This resolution method offers two benefits compared with a liquidation. First, it allows at least some of the bank's deposit franchise value to be retained (on franchise value, see box on page 190). Second, there is less disruption because depositors receive continuous deposit processing services. During the crisis, many potential acquirers were not interested in a basic P&A because consumer demand for insured deposits was high (thus they could readily find deposits by other means) and they saw few opportunities to invest the cash promptly and meet their required return.

[33] This can be either all deposits or only insured deposits. Some or all brokered deposits may be excluded as well.

Noncore Funding and Franchise Value

Many banks that failed funded their operations by using brokered deposits, Internet deposits, repurchase agreements, and Federal Home Loan Bank (FHLB) advances—collectively, noncore funding— but these funds rarely contributed to franchise value. In all, the banks that failed between 2008 and 2013 held higher levels of brokered deposits and FHLB advances than healthier banks. In terms of dollars, failed banks held $44.6 billion in brokered deposits (9.8% of all failed-bank deposits) and $14.5 billion in Internet deposits (3.2%) at failure. In terms of number of banks, 386 failed banks (79%) held brokered deposits, 279 (57%) held Internet deposits, and 248 (51%) held both brokered and Internet deposits. Acquiring banks usually had no interest in these deposits: whereas 97% of nonbrokered deposits were assumed by other banks at failure, only 20% of brokered deposits were assumed.[a]

As of the quarter before failure, 337 failed banks (69%) held FHLB advances. Excluding Washington Mutual, FHLB advances constituted 13.3% of failed-bank liabilities.[b] FHLB advances sometimes reduced the value of the failed banks even more than brokered deposits did because of prepayment fees, high overcollateralization rates,[c] and concerns that the FHLB advances did not fit into the acquirers' asset liability management plans.

---

[a] Starting in April 2009, the FDIC generally did not include in its resolution offerings the brokered deposits that were processed by the Depository Trust and Clearing Corporation (a clearing and settlement company). The FDIC usually did include other types of brokered deposits.

[b] Including Washington Mutual, the percentage increases to 16.5%.

[c] Overcollateralization occurs when the assets that are pledged to secure the debt exceed the amount of debt issued. FHLBs sometimes increase the required levels of overcollateralization as bank health declines, and in some cases, FHLBs required a "blanket" lien that encompassed all the bank's assets.

Whole-Bank Purchase and Assumption. The whole-bank P&A is what its name implies: essentially all the bank's assets and all its liabilities are bought by the acquirer. This transaction minimizes market disruption and requires fewer staff to execute than transactions where the FDIC retains more assets. It also conserves cash for the FDIC, because although the FDIC provides cash up front to address the capital shortfall, the assets and deposits are sold together and therefore there are minimal ongoing working capital needs. Because of uncertainty about the value of the failed-bank assets, the whole-bank option was rarely cost-effective at the height of the crisis: the risk premiums demanded by potential acquirers were simply too great. As the crisis abated and asset risk premiums fell, the whole-bank option became more attractive. Even during good times, however, one implication of this option is that the pool of bidders is limited to healthy FDIC-insured institutions (deposits can be sold only to FDIC-insured banks). Nonbank bidders are unable to bid on the assets even if they want to purchase them (the restricted

competition could reduce prices) and even though nonbank bidders frequently offer the highest bids for retained asset sales. In addition, bidders are expected to take almost all the assets even if they would prefer to take only a subset.[34] Some studies have argued that the whole-bank option may not be cost-effective because the best acquirer for the troubled assets may not be the same party as the best acquirer for the performing assets.[35] In addition, the lack of adequate time to perform due diligence (because of the brevity of the marketing period) may increase an acquirer's perception of asset risk and thus reduce the price that the acquirer is willing to pay.

Loss-Share Purchase and Assumption. A loss-share P&A is very similar to the whole-bank P&A except that the FDIC, as receiver, agrees to share losses on certain types of assets (up to an established limit).[36] See the box on page 192 for an example. Like the whole-bank transaction, the loss-share P&A minimizes disruptions to the bank's customers and the local community, and conserves cash for the FDIC. In terms of staffing, the loss-share option requires more resources than the whole-bank option (in order to monitor the loss-share agreements after the bank fails) but substantially fewer resources than a basic P&A (or, for that matter, than a payout). Depending on circumstances, the effects of loss share on the pricing of the failed-bank franchise may vary. During periods of distress when asset values become highly uncertain, loss share offers clear advantages: the FDIC retains much of the risk exposure and therefore loss share may improve franchise sale prices; it allows the FDIC to tap the government's comparative advantage in absorbing large risks;[37] and it enables the FDIC to participate in asset price improvements after banks fail (by reducing loss share payments).[38] However, loss share is like whole-bank P&A in two respects: it

---

[34] In this situation, the bids may incorporate low estimates of asset value for the unwanted assets.

[35] Roger Kormendi et al., *Crisis Resolution in the Thrift Industry* (1989), and FDIC, "FDIC Policies for the Resolution Trust Corporation," Draft White Paper, S&L Study Group, 1989, recommend that good assets and troubled assets be sold separately.

[36] The FDIC in its corporate capacity acts as a backstop as well.

[37] This comparative advantage has been explored in insurance markets. Insurance companies in the private sector must hold capital (which is costly) to protect themselves from bankruptcy if large adverse events (such as major hurricanes) occur. To protect themselves from bankruptcy, the companies sometimes purchase re-insurance or catastrophe insurance. The price for insuring against large but unlikely risks is substantially higher than expected losses. As the size of the loss exposure increases and the likelihood of occurrence decreases, the ratio of insurance cost (for re-insurance or catastrophe insurance) to expected losses tends to increase exponentially. On the other hand, the federal government is a much larger entity and can more easily go into debt or increase taxes to cover large unexpected risks. For additional discussion, see Kenneth A. Froot, "The Market for Catastrophe Risk: A Clinical Examination," *Journal of Financial Economics* 60 (2001): 529–71, and Morton Lane and Olivier Mahul, "Catastrophe Risk Pricing," World Bank Policy Research Working Paper 4765, 2008, https://openknowledge.worldbank.org/bitstream/handle/10986/6900/WPS4765.pdf?sequence=1&isAllowed=y.

[38] In addition, it could increase "true-up" payments, which are described later in the section titled "Evolution of FDIC Franchise Sale Offerings."

limits the pool of potential bidders to healthy banks, with the result that the restricted competition could reduce prices, and it asks bidders to purchase almost all the assets and deposits, even if their preference is to purchase only a subset of the failed bank's assets.

Some researchers have recommended loss share because the government is better positioned to absorb large risks than the private sector and because it helps address the lack of comprehensive information at resolution (on the part of both the FDIC and the acquirer) caused by the short duration of the marketing period.[39] In addition, the FDIC's experience with loss share in the early 1990s was positive.[40]

Example of Loss-Share Purchase and Assumption

Assume a failing bank that holds $100 in assets and $100 in liabilities. All liabilities are insured deposits. The FDIC offers a whole-bank resolution with 80 percent loss-share coverage on the loan portfolio, which makes up 70 percent of the assets. The loss-share coverage is based on the book value of the loans ($70), and it covers some—but not all—of the expenses associated with managing the loans.

The acquirer submits a $7 discount bid. The FDIC pays the acquirer $7 at resolution. The acquirer collects $50 on the loans (net of expenses covered under the agreement) over time, so that $20 in asset losses ($70 book value minus $50 net asset recovery) are incurred and covered by the agreement. The FDIC pays the acquirer $16 (80 percent of $20) to cover its share of the loss. The acquirer pays the other $4 (20 percent of $20), plus any other costs that are not covered by the loss-share agreement.

Note that, in the bidding process, the acquirer with the smallest discount bid wins (assuming that all other aspects of the bid are the same). The discount does not influence the calculation of the loss-share payments.[a]

[a] This is a simplified example. See https://www.fdic.gov/bank/individual/failed/lossshare/ for additional discussion and https://www.fdic.gov/bank/individual/failed/bankofmiami-p-and-a.pdf for an example of an agreement that includes details about the loss-share coverage.

[39] See the section below titled "The Bidding Process" for additional discussion of the marketing period. Larry Benveniste et al., "Contract Design for Problem Asset Disposition," *Journal of the American Real Estate and Urban Economics Association* 22, no. 1(1994): 149–67, suggested—as support for the use of risk-sharing choices for failed-bank resolutions—that governments were better placed to absorb large risks than the private sector. Mark Speigel, "The Disposition of Failed Japanese Bank Assets: Lessons from the U.S. Savings and Loan Crisis," *FRBSF Economic Review* (2002): 1–15, https://www.frbsf.org/economic-research/files/article1-2.pdf, suggests loss share as a way to overcome information shortages at resolution. FDIC, "Study of Purchase and Assumption Transactions," Unpublished Manuscript, Office of Corporate Planning, 1977, recommends risk-sharing as a response to inadequate information at resolution. FDIC, "FDIC Policies for the Resolution Trust Corporation," Draft White Paper, S&L Study Group, 1989, suggests gain-sharing for both reasons.

[40] FDIC, *Managing the Crisis*: *The FDIC and RTC Experience* (1998), 193–205, https://www.fdic.gov/bank/historical/managing.

Loan Pools and Other Combinations of the Basic Options. The FDIC can also offer numerous combinations of the basic options. One commonly used option, called "loan pools," is to group the assets of the failed bank into homogeneous pools at resolution, ask bidders to submit separate bids for each pool (and for deposits), and allow bidders to "link" bids, that is, allow them to set requirements for the minimum combination of assets and deposits that they will accept. Another combination is to simply exclude certain assets or liabilities from the initial franchise offering and sell them later. For example, distressed assets could be retained in the receivership so that they could be offered later to both bank and nonbank bidders.

A key benefit of these options is that they more easily attract bidders that are interested in some—but not all—of the assets. In addition, bidders that are willing to bid for the whole bank but that place very little value on certain types of assets held by the failed bank might offer better prices. However, compared with whole-bank offerings (with and without loss share), these options are harder to execute, especially if the FDIC's operational capacity is poorly positioned to manage the tasks needed to execute the transaction. In addition, these options often require more cash and may be more disruptive to bank customers and the local economy than the whole-bank options.[41]

Theoretically, these options could be extended to allow asset workout companies (that is, companies that specialize in managing and selling delinquent loans and/or troubled real estate) or other nonbank firms to bid on the assets—but not the deposits—of the failed bank at resolution. Although this approach offers significant advantages by enlarging the pool of potential bidders for failed-bank assets, it also entails substantial operational challenges because of the very brief marketing period for failed banks and concerns about confidentiality.

Yet another variation is to market assets and deposits from multiple banks at the same time. Some analysts have recommended this approach as a way to improve bidder interest and, potentially, prices.[42] Both theory and the FDIC's experience indicate that the use of linked bids across multiple failed banks is effective and should be considered when circumstances allow.

In summary, the various options for combining types of resolution offer the potential for lower costs because the number of potential bidders is greater and bidders can more easily limit their purchases to the types of assets they most desire. However, these options generally require more FDIC resources (both staff and time) and are harder to execute

---

[41] FDIC, "FDIC Policies for the RTC," recommended holding back troubled assets from the initial resolution offering to improve prices. Offering troubled assets as a separate loan pool accomplishes the same objective. Roger Kormendi et al., *Crisis Resolution,* also suggested that troubled loans be sold separately. The principles espoused in Edward J. Kane, "Principal-Agent Problems in S&L Salvage," *Journal of Finance* 45, no. 3 (1990): 57–61, also support this approach (although Kane does not specifically recommend it).

[42] FDIC, "FDIC Policies for the RTC," recommends linked bids. Donald R. Fraser and Hag Zhang, "Package Bidding in Thrift Resolutions," *Journal of Financial Services Research* 11, no. 3 (1997): 283–94, and Office of Management and Budget, "Resolving the Thrift Crisis," 1993, xiv, suggest combining thrifts for sale.

than the whole-bank options. In addition, the extent of working capital requirements is less predictable, as are the need for staff and the possibility of market disruption.

Financing for the Acquirer (Seller Financing)

In some cases, acquirers owed the FDIC money at resolution. This situation arose whenever the acquirer purchased assets from the failed bank that were worth more than the liabilities that they assumed from the failed bank.[a] In this case, it might be beneficial for the FDIC to offer to finance some or all of the acquirer's contribution, potentially improving the bid price, the availability of bidders, or both.

The FDIC provided seller financing to failed-bank acquirers several times in the 1970s as a way to improve demand and expand the bidder pool for failed banks.[b] The FDIC also used seller financing for three resolutions during the recent crisis: the Puerto Rico banks that failed in April 2010. Only a few potential acquirers had expressed an interest in acquiring the Puerto Rico banks, and the FDIC was concerned that some of the acquirers lacked the liquidity necessary for a successful acquisition. In all three cases, the acquirers purchased substantially more assets than the deposits they assumed.[c] Without seller financing, the acquirers would have needed to bring substantial amounts of cash to close the deals.

---

[a] This usually occurred when the acquirer purchased most or all of the assets but did not assume all the deposits—frequently in cases where a substantial amount of brokered deposits were retained in the receivership, or where the acquirer purchased only asset pools. For example, if the acquirer purchased $100 in assets and assumed $60 in liabilities, it would owe the FDIC $40 at resolution. Note that asset values incorporate the bid price demanded by the acquirer.

[b] FDIC, "Study of Purchase and Assumption Transactions," Unpublished Manuscript, Office of Corporate Planning, 1977.

[c] All three failed banks had large amounts of brokered deposits that were, for the most part, not assumed by the acquirers. For example, Banco Popular purchased $9.2 billion in assets from Westernbank but assumed only $2.4 billion in liabilities, so assets exceeded liabilities by $6.7 billion. The FDIC provided $5.8 billion in seller financing to close the transaction.

Franchise Marketing during the Crisis

From 2008 through 2013, the franchise marketing process evolved as conditions changed. Resolution staff were operating under constant pressure amid great uncertainty, and they had to consider multiple trade-offs in the light of competing goals and objectives. Discussed in this section are the options they chose and the changes they made over time; the role played by bridge banks; the role played by the opportunity to involve private equity acquirers; and the aggregate results for resolutions during the crisis. At the end of the process, the winning bids affected the

FDIC's overall financial position, risk exposure, and staffing requirements, and may also have influenced the local economies where bank failures were concentrated.

Evolution of FDIC Franchise Sale Offerings

At the outset of the financial crisis, the primary resolution tools in use at the FDIC were whole-bank P&A and P&A with optional loan pools. The use of these two options was in keeping with the objective of moving failed-bank assets back into the marketplace promptly and minimizing costs. Early in the crisis, however, investors' appetite for risk plummeted, so that the FDIC faced not only a lack of buyers for loan pools but also little interest in standard whole-bank purchases; moreover, buyers also showed little interest in buying the assets that were retained in receivership. In response to the evolving crisis, the FDIC sought to adapt its offerings to include sales-contract features that would attract buyers. This situation led the Corporation to rely increasingly on loss sharing as a feature of its failed-bank offerings in order to resolve the growing number of bank failures.[43] Many acquirers preferred the loss-share option, and by the middle of 2009, whole bank with loss share became the dominant FDIC franchise marketing option, and often the only one offered to potential acquirers. As the crisis continued and conditions in the marketplace changed, the FDIC modified the contract terms in loss-sharing agreements. The starting point, though, was the experience the FDIC had had with its loss-share program in the early 1990s.

The original (2008) agreements offered 80 percent loss-share coverage for capital losses and selected expenses. For single-family assets, coverage was provided for ten years. For other assets, coverage was provided for five years, and in addition the acquirer was required to share recoveries with the FDIC for another three years. If losses exceeded a pre-specified level, loss-share coverage increased to 95 percent.

In October 2009, the FDIC added a "true-up" feature that was designed to claw back some of the extra profits from acquiring banks in cases where the asset losses were lower than anticipated at the time of failure. There were true-up provisions for 215 transactions, or 71 percent of the loss-share transactions.

In April 2010, in response to improving markets, the FDIC stopped offering the increase to 95 percent coverage. In June 2010, the FDIC dropped loss-share coverage for consumer loans[44] and began soliciting bids for the loss coverage rate of up to 80 percent for all other types of loans and for other real eastate (ORE). In September 2010, the FDIC introduced a tiered loss-sharing structure that was designed to improve the

---

[43] For additional discussion, see the section above titled "Loss-Share Purchase and Assumption" and https://www.fdic.gov/bank/individual/failed/lossshare/.

[44] Consumer loans are smaller than other types of loans and therefore administrative costs are relatively high, but for most banks during the crisis, anticipated losses on consumer loans were modest. Thus it seemed less likely that loss share yielded a net benefit for these loans.

acquirer's incentives to minimize asset losses.[45] But because of the complexity of that structure, it was used only 27 times. In all, the FDIC provided 95 percent coverage for 97 transactions, or 32 percent of the loss-share transactions.

In early 2011 the FDIC began to expand its regular offerings, typically offering three versions of a whole-bank resolution: no loss-share coverage; loss share for commercial assets only; or loss-share coverage for single-family and commercial assets. In April 2012 the FDIC began to limit its offerings of loss-share coverage for single-family assets to those failed banks that had extensive amounts of troubled single-family loans. As conditions continued to improve, loss sharing was gradually phased out. In the fourth quarter of 2013, the FDIC dropped loss share altogether from its regular offerings and started offering loan pools (in addition to whole-bank transactions) whenever the loans could be pooled logically and potential bidders expressed an interest in them.

Throughout the crisis, in considering how to structure its resolution offerings, the FDIC regularly reached out to potential acquirers, listened to them, and, if appropriate, adjusted its offerings accordingly. When potential acquirers showed little interest in the FDIC's whole-bank offerings for a particular failing bank, the FDIC considered ways to address the potential acquirers' concerns, usually by expanding its offerings. The most typical additions were "modified" whole bank (where certain troubled assets, such as ORE, delinquent loans, or ADC loans, would be retained in receivership but all other assets were included in the offering) or loan pools. In some cases, the FDIC would develop unique proposals to address unique situations.

In cases where the FDIC lacked enough time to market banks effectively before they failed, the FDIC used bridge banks. (See note 24 and the associated text.)

Bridge Banks

Following the 1980–1994 crisis, senior FDIC staff anticipated that bridge banks would be an important option for resolving the failures of large insured depository institutions.[46] During the 2008–2013 crisis, however, the FDIC used bridge banks for bank failures only three times.

---

[45] The agreement provided relatively high FDIC coverage for losses that fell below a pre-set threshold (where it was likely that losses would be incurred, regardless of asset servicing quality) and above a higher pre-set threshold (where losses were unlikely to occur unless servicing quality was poor or markets deteriorated). In the middle tier, the FDIC's coverage rate was low. For an example of this kind of agreement, see https://www.fdic.gov/bank/individual/failed/horizonfl-p-and-a.pdf.

[46] For example, see Arthur J. Murton, "Resolving a Large Bank: The FDIC's Perspective," speech given at the Seventh Annual Banking Conference at the Federal Reserve Bank of Chicago, October 1, 2004; and James A. Marino and Lynn Shibut, "Resolution Strategies for Large U.S. Commercial Banks," Unpublished Manuscript, 2006.

The first time was when IndyMac, a $30 billion thrift, failed suddenly in July 2008.[47] IndyMac's size alone would have made its resolution difficult; however, its size was only one of several complicating factors. After the long period of almost no bank failures, the level of media interest in IndyMac's failure was unusually high; and a large number of depositors—roughly 30,000—held potentially uninsured deposits and therefore did not immediately gain access to all the deposits held in their accounts.[48] During the first two weeks after IndyMac's failure, a run on deposits led to the withdrawal of almost $3 billion from the newly chartered bridge institution, IndyMac Federal.[49] The unprecedented deposit withdrawals likely reduced IndyMac Federal's franchise value and clearly signaled to the FDIC that a much deeper issue was lack of trust in the financial system. The FDIC quickly took action and began a campaign to educate the public on deposit insurance and the FDIC. After a few weeks, the withdrawal rate at IndyMac Federal slowed and the deposit base stabilized, but the IndyMac experience highlighted the risks and challenges of deploying the bridge bank structure.

In 2009, the FDIC used bridge banks to resolve two bankers' banks.[50] Bankers' banks provide a variety of banking services to other depository institutions. They are harder to resolve than traditional depository institutions for two main reasons. First, only depository institutions are permitted to be shareholders of bankers' banks, and very few banks are interested in entering this specialized business area. Second, they present resolution difficulties because of their interconnectedness with other depository institutions. One of the banks was sold to another bankers' bank shortly after the failure; the other one was paid out after the customers were given time to move their deposits to other banks.

Private Equity Acquirers

Another consideration for the FDIC in marketing failed banks was the possibility of expanding the number of acquirers by working with private equity investors. Private equity investors are wealthy individuals (or groups of individuals) who are seeking high-yield investments, and as the crisis unfolded, several private equity investors expressed an interest in purchasing failed banks. The FDIC wanted to ensure that any purchase of failed banks by private equity investors was consistent with, and in the best long-term

---

[47] Because IndyMac was a thrift institution, the bridge bank was technically a conservatorship due to a gap in the law that was since addressed.

[48] Many of these depositors were later found to be fully insured, but over the closing weekend the FDIC lacked full information, so funds were held back until the insurance status of these deposits could be determined. What made the deposit insurance determinations at IndyMac so challenging was the volume of deposit accounts, including brokered deposits and a large number of trust accounts (the latter are governed by complex deposit insurance provisions).

[49] John F. Bovenzi, *Inside the FDIC: Thirty Years of Bank Failures, Bailouts, and Regulatory Battles* (2015), 16.

[50] Silverton National Bank failed on May 1, 2009, and Independent Banker's Bank failed on December 18, 2009.

interests of, the banking industry. The FDIC also sought open discussion and transparency surrounding the participation of private equity firms in the banking industry.

The FDIC was well aware of the associated risks, but it was also cognizant of the potential benefits. The risks derive from the nature of banking, which is a unique business that requires specialized management skills—skills that many private equity investors may not fully appreciate. Newly chartered banks have historically failed at much higher rates than well-established banks,[51] and the takeover of a failed bank and its troubled assets introduces additional complications that most de novo banks do not have to face. In addition, private equity investors generally prefer short-term investments (often seeking to cash out in three to five years), a preference that could prove problematic in running and managing a bank. At the same time, however, new investors might increase the number of bidders for failed banks and infuse capital into the industry, thus potentially increasing the availability of credit to businesses, consumers, and the overall economy.

On November 21, 2008, the Office of Comptroller of the Currency (OCC) announced the availability of a "shelf" charter that would facilitate the purchase of failed banks by private equity investors.[52] A shelf charter allows investors to seek conditional and preliminary approval of a bank charter that will become active only if the investor purchases a failed bank. On July 9, 2009, to address the risks posed by private equity investment, the FDIC published a proposed Statement of Policy on qualifications for failed-bank acquisitions,[53] and on September 2, 2009, the Corporation released a final Statement of Policy.[54] The Statement of Policy addressed requirements related to capital, source of strength,[55] time restrictions on selling the depository institution, ownership

---

[51] Robert DeYoung, "De Novo Bank Exit," *Journal of Money, Banking and Credit* 35, no. 5 (2003): 711–28, found that de novo banks that were established between 1980 and 1985 failed at much higher rates than other banks during the period after they consumed their start-up capital but before they became mature. In addition, he found that de novo banks that were established during a period of stress were more likely to fail than other de novo banks. Yan Lee and Chiwon Yom, "The Entry, Performance, and Risk Profile of De Novo Banks," FDIC Center for Financial Research Working Paper 2016-03, 2016, https://www.fdic.gov/bank/analytical/cfr/2016/wp2016/2016-03.pdf, found similar results for de novo banks chartered between 2000 and 2008.

[52] See Office of the Comptroller of the Currency, "OCC Conditionally Approves First National Bank Shelf Charter to Expand Pool of Qualified Bidders for Troubled Institutions," NR 2008-137, November 21, 2008, https://www.occ.gov/news-issuances/news-releases/2008/nr-occ-2008-137.html. The Office of Thrift Supervision (supervisor of thrifts until 2010, when it was abolished by Dodd-Frank) later announced a program as well.

[53] FDIC, "Proposed Statement of Policy on Qualifications of Failed Bank Acquisitions," 74 Fed. Reg. 32931–32934 (Jul. 9, 2009), https://www.fdic.gov/regulations/laws/federal/2009/09policyJuly9.pdf.

[54] FDIC, "Final Statement of Policy on Qualifications of Failed Bank Acquisitions," 74 Fed. Reg. 45440-45449 (Sept. 2, 2009), https://www.fdic.gov/regulations/laws/federal/2009/09FinalSOP92.pdf. For additional discussion, see also Frank Righeimer Martin, "Private Equity Investments in Failed Banks: Appropriate Investors Welcome," *North Carolina Banking Institute* 14, no. 1 (2010), http://scholarship.law.unc.edu/ncbi/vol14/iss1/17.

[55] Under a source-of-strength requirement, the owner is required to provide additional capital to the depository institution if its capital falls below specified thresholds.

structure, and disclosure. On November 26, 2008, the FDIC announced that it had established a modified bidder qualification process that allowed interested parties that did not have a bank charter, such as private equity investors, to bid for failed banks.[56]

From 2008 to 2013, 18 private equity investor groups purchased 60 failed banks (or 12 percent of the banks that failed in those years). These failed banks held $84 billion in assets (12 percent of all failed-bank assets over the same period), and the investors purchased $75 billion in assets held by these banks. (Excluding Washington Mutual, the private equity investor groups purchased 22 percent of all failed-bank assets.) The investors brought $5.6 billion in capital to the industry.

Aggregate Results for Resolutions during the Crisis

Table 6.3 summarizes the use of the different strategies deployed by the FDIC from 2008 to 2013. The failed banks are grouped into five categories: (1) Washington Mutual Bank (WaMu), (2) other whole-bank P&A,[57] (3) loss-share P&A,[58] (4) other P&A,[59] and (5) payout and DINB.[60] For failed banks that were placed into bridge banks before resolution, the final resolution method was used for categorization.

Of the $686 billion in assets resolved over the course of the crisis, $307 billion (45 percent) were the assets of WaMu. The second-largest bank that failed was IndyMac ($30 billion, or 4.5 percent).

Early in the crisis, loss-share transactions increased quickly, going from 2 in 2008 to 91 in 2009, and from 2009 to 2011 they made up a larger number of resolutions than all other strategies combined. The number of loss-share resolutions peaked in 2010 and dropped substantially in 2012 and 2013. In every year of the crisis except 2008 and 2012, however, loss share was used to resolve the majority of failed-bank assets. In all, excluding WaMu, loss-share transactions were used for 62 percent of the failed banks and 82 percent of failed-bank assets. The heaviest use of other P&A and payout/DINB resolutions was made during 2009 and 2010, the most challenging years of the banking crisis.

---

[56] See FDIC, "FDIC Expands Bidder List for Troubled Institutions," Press Release PR-127-2008, November 26, 2008, https://www.fdic.gov/news/news/press/2008/pr08127.html.

[57] WaMu was a whole-bank P&A but is reported separately because of its size and unique characteristics. "Other whole-bank P&A" is all P&As (WaMu excluded) where 90 percent or more of assets were passed to the acquirer and no loss-share coverage was provided.

[58] P&A where loss share was provided on any assets at resolution, regardless of the share of assets passed to the acquirer.

[59] P&A that was not loss share or whole bank. It includes basic P&As, loan pools, and other combinations.

[60] DINBs are described above in the introduction to the section titled "Franchise Marketing: The Bidding Process and Resolution Options."

Table 6.3. FDIC Bank Resolutions by Resolution Type, 2008–2013

		(Dollars in Billions)						
Resolution Type		**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**Total**
WaMu	Number	1						1
	Assets	$307.0						$307.0
Other Whole Bank P&A	Number	1	13	14	23	15	12	78
	Assets	$0.1	$1.7	$2.0	$5.4	$2.3	$1.4	$12.9
Loss Share P&A	Number	2	91	130	58	20	3	304
	Assets	$16.5	$174.2	$86.8	$26.4	$4.8	$3.4	$312.1
Other P&A	Number	20	25	6	9	12	8	80
	Assets	$17.7	$12.9	$1.0	$2.3	$3.4	$1.2	$38.4
Payout/DINB	Number		10	9	2	4	1	26
	Assets		$6.8	$7.1	$0.9	$1.1	$0.0	$15.9
Total	Number	24	139	159	92	51	24	489
	Assets	$341.2	$195.7	$96.8	$34.9	$11.6	$6.0	$686.3

In terms of resolution costs, the several resolution strategies fared very differently. Table 6.4 summarizes FDIC losses by resolution type.[61]

Table 6.4. FDIC Losses by Resolution Type, 2008–2013

				Loss Rate (Cost/Assets)		
Resolution Type	**Number of Failures**	**Total Assets ($ Billions)**	**Total Cost to FDIC ($ Billions)**	**Weighted Mean**	**Mean**	**Median**
P&A						
Washington Mutual	1	307.0	0.0	0.0%	0.0%	0.0%
Other Whole Bank	78	12.9	2.2	16.8%	23.0%	23.4%
Loss Share	304	312.1	56.8	18.2%	22.3%	21.6%
Other	80	38.4	9.3	24.3%	33.9%	34.1%
Total P&A	463	670.4	68.3	10.2%	24.4%	23.3%
Payout/DINB	26	15.9	4.4	27.4%	33.2%	34.7%
Total	**489**	**686.3**	**72.7**	**10.6%**	**24.9%**	**23.6%**

Note: Assets are as of the final Call Report filed by the failed bank. Loss estimates are as of year-end 2016. The weighted mean loss rate is weighted by assets. Systemic failures are excluded.

[61] The resolution costs reported here are as of year-end 2016. These estimates include undiscounted activity through year-end 2016 plus estimated future activity discounted to year-end 2016. For additional discussion, see Rosalind Bennett and Haluk Ünal, "Understanding the Components of Bank Failure Resolution Costs," *Financial Markets, Institutions and Instruments* 24, no. 5 (2015): 349–89.

WaMu resulted in no loss to the DIF. Total resolution costs over the crisis were $72.7 billion and represented 10.6 percent of total assets at failure (including WaMu); excluding WaMu, losses represented 19.2 percent of total assets.[62] Also excluding WaMu, loss-share P&A had the lowest mean and median loss rates, and whole bank had the lowest weighted average loss rate. The loss rates for other P&A were similar to those for payouts and DINBs. Note that studies have found that the relative condition of the failed bank influences the resolution type that is used at failure. This phenomenon, called "selection bias," was documented during earlier periods but has not been estimated for the 2008–2013 crisis.[63] One should therefore interpret the results in Table 6.4 carefully because some (or possibly all) of these cost differences may be attributable to differences in financial condition. To gain additional insight, see Table 6.5, which provides selected financial condition indicators by resolution type.

Table 6.5. Selected Condition Indicators by Resolution Type

		(Averages as of Final Call Report Filed before Failure)			
Resolution Type	**Number of Banks**	**Noncurrent Loan Rate[a]**	**Brokered to Total Domestic Deposits**	**ADC Loans to Total Loans[b]**	**Equity to Assets**
P&A					
Washington Mutual	1	4.1%	18.1%	1.8%	7.9%
Other Whole Bank	78	12.7%	3.8%	10.3%	1.3%
Loss Share	304	16.8%	9.6%	21.0%	1.2%
Other	80	19.4%	16.0%	25.7%	1.8%
Total	463	16.6%	9.8%	20.0%	1.3%
Payout/DINB	26	15.1%	25.7%	23.9%	1.8%

[a] The sum of nonaccrual loans plus loans 90+ days delinquent, divided by total loans.
[b] ADC stands for Acquisition, Development, and Construction.

WaMu had a capital ratio (that is, the ratio of equity to assets) of 7.9% and a noncurrent loan rate of 4.1%. For the other groups, capital ratios were lower and noncurrent rates

[62] If IndyMac were also excluded, the loss rate drops to 17.3 percent. This compares with a loss rate of 12.7 percent for FDIC resolutions from 1980 to 1994, and 25.2 percent for thrift resolutions (by the FSLIC and the RTC) from 1980 to 1994. Because (1) failed thrifts held more real estate loans than did failed banks during the 1980–1994 period, and (2) real estate loans were the primary driver of losses during the 2008–2013 crisis, one might conclude it would be likely that losses during the recent crisis would be similar to thrift losses during the earlier one. However, this was not the case: the thrift losses in the earlier period were exacerbated by closure delays on the part of the FSLIC and by the inadequate financial resources of both the FSLIC and the RTC.

[63] See Rosalind Bennett and Haluk Ünal, "The Effects of Resolution Methods and Industry Stress on the Loss on Assets from Bank Failures," *Journal of Financial Stability* 15 (December 2014): 18–31; and James A. Berkovec and Nellie J. Liang, "Selection in Failed Bank Auction Prices: An Econometric Model of FDIC Resolutions," Federal Reserve Board Finance and Economics Discussion Series 93-40, 1993.

were higher. The whole-bank P&A without loss share had a noncurrent rate of 12.7%, and brokered deposits constituted 3.8% of deposits. The payout/DINB group had the highest level of brokered deposits (25.7%), and other P&A had the worst noncurrent rate (19.4%) and the highest concentration of ADC loans (25.7%). It seems likely, then, that the condition of the banks within each category contributed to the differences in the FDIC loss rates shown in Table 6.4. Even so, the FDIC estimated that the loss-share transactions saved $42 billion, or 13.6 percent of total assets, compared with the estimated cost of a payout.[64]

As shown in Table 6.4, the loss-share bank failures cost the FDIC an estimated total of $56.8 billion. As of year-end 2016, the FDIC had paid $29.5 billion in loss-share payments, and total loss-share payments were expected to be $31.4 billion, or 55 percent of the total loss. Most of the remaining costs were related to the asset discounts that were part of the bids submitted by acquirers. Although the total asset discount for the loss-share bank failures amounted to $30.1 billion (which represents the sum of all acquirers' bids for their transactions), the FDIC's related losses were somewhat lower than that.[65] Unlike the loss share payments, the losses related to the asset discount were insensitive to future asset price changes. As of year-end 2016, no true-up payments had been made on the 215 transactions with true-up provisions, but the FDIC anticipated receiving $837 million in true-up payments to offset these losses.[66]

Receiverships: Staffing and Infrastructure, Interactions and Trade-Offs

Although franchise marketing is a key component of the FDIC's resolution activities, it is just the first step in the receivership process that winds up the affairs of failed banks. A few of the main receivership tasks undertaken during the crisis are the subject of this section of the chapter. Those activities (plus other activities that are not discussed here)[67] require

---

[64] The cost savings estimate was calculated as the difference between the resolution cost and the payout cost, divided by the payout cost, based on the least-cost test estimates for the loss-share resolutions at the time of resolution. Therefore, the estimate does not consider subsequent asset price movements or other changes that may influence the cost of the loss-share transactions or payouts. It also does not consider the possibility that the FDIC could have resolved the banks using methods other than loss share or a payout.

[65] In many cases, the acquirer would receive cash or would purchase more assets than the liabilities that it assumed, or both. In other cases, including some of the largest loss-share transactions, the relationship between the asset discount and the FDIC's loss was more complicated, but the FDIC's loss generally amounted to 80 to 100 percent of the asset discount.

[66] There were additional expenses and recoveries as well, but these were small in comparison with the loss-share payments and the asset discounts. On true-up payments, see the beginning of the section above titled "Evolution of FDIC Franchise Sale Offerings." Some early termination payments were probably influenced by anticipated future true-up payments. As of year-end 2016, true-up payments were expected from 64 percent of the outstanding loss-share agreements that included true-up provisions.

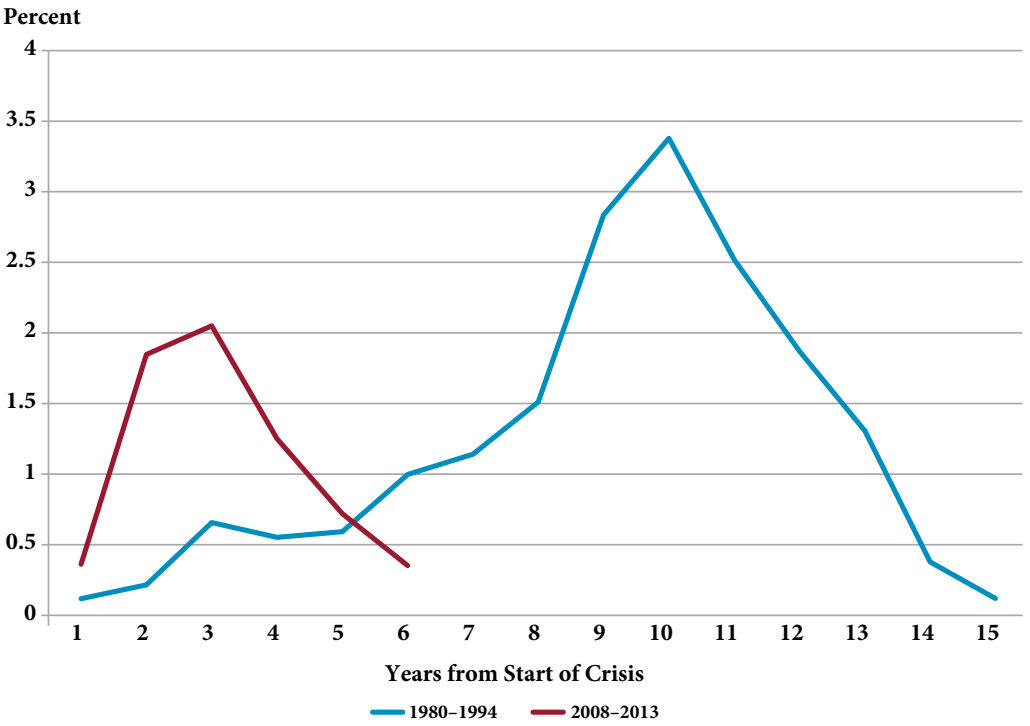
[67] Among the important tasks not discussed are accounting, reporting, deposit insurance determination, receivership liability management, contract management, legal claims, and enforcement.

substantial staffing and infrastructure to execute well, and so this section begins with a discussion of the FDIC's staff at the onset of the crisis and the process that was followed to develop the necessary resolution and receivership infrastructure to manage the workload. The section goes on to discuss strategic considerations: interactions and trade-offs.

Staffing and Infrastructure

As noted above, the events in the last half of 2008 and the corresponding rise in resolution activity were more severe and—importantly—unfolded more quickly than the FDIC's planning efforts had envisioned. The plans anticipated that individual large banks would fail quickly but did not anticipate either the number of large-bank failures or the increased speed of small-bank failures. Figure 6.3 compares the 1980–1994 crisis with the 2008–2013 crisis in terms of the speed and extent of failures.

Figure 6.3. Failed Banks as a Percentage of All Banks by Year from Start of Each Crisis

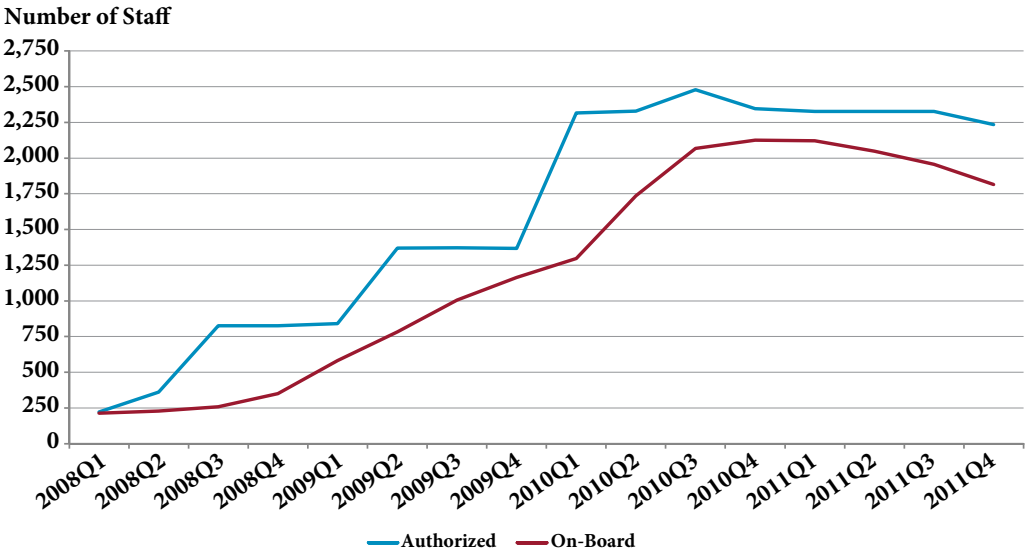


Failure rates increased much faster during the 2008–2013 crisis: by 2009, the second year of the recent crisis, almost 2 percent of banks had failed—a rate that was not reached until the previous crisis was past its eighth year. The difficulty of keeping pace with the speed at which the recent crisis unfolded imposed costs on the FDIC. In some cases the costs were relatively minor, such as when the accounts payable function fell behind in paying bills, which it did for several receiverships. In other cases, the costs were potentially more substantial. For example, some assets might have lost value because asset management

resources were overtaxed. In addition, the FDIC's staffing challenges were always kept in mind when decisions were being made about resolution offerings to potential bidders.

In June 2008, the FDIC increased its authorized staff for the Division of Resolutions and Receiverships (DRR) from 227 to 339. By September 2008, the total authorized DRR staff stood at 825, but the actual on-board DRR staff was only 259. The hiring of additional staff became a priority, and the FDIC dedicated resources to building its staff.[68] Even so, it took time to search for, hire, and train new staff while also abiding by the various procedures and mandates related to hiring federal employees. Looking ahead to the "Lessons Learned" section, one can see that more-robust pre-crisis readiness planning may help reduce such delays in the future.[69] Figure 6.4 represents total authorized and on-board DRR staff during the first four years of the crisis.

Figure 6.4. Total DRR Authorized and On-Board Full-Time Staff, 2008–2011



The FDIC eventually reviewed more than 25,000 applications for DRR positions, and in 2011, when DRR staffing was at its peak, the Division had more than 2,100 employees—an almost tenfold increase from the number at year-end 2007. To reduce the kind of staff disruption and layoffs that had occurred during and after the 1980–1994 crisis, the FDIC hired mostly temporary employees. Of the total DRR staff at its peak, over 80 percent were temporary employees.

---

[68] Note that DRR received critical support from other divisions, especially in the legal and administrative areas. These other areas, as well as the bank supervision area, were also stretched thin as the crisis ramped up, and thus the staffing efforts extended beyond DRR.

[69] For example, new organization charts and position descriptions could be drafted and approved ahead of time as part of a readiness plan.

More than 60 of the employees were rehired annuitants. The plan to rehire annuitants was one part of the FDIC's readiness planning that proved to be particularly beneficial because these highly seasoned retirees were able to immediately begin contributing to receivership activities. In contrast, the Corporate Employment Program did not work as designed. The CEP assumed that many of the employees who would be shifted to resolution tasks would come from the supervision area. However, as resolution activity began to increase, the workload of other divisions—including supervision—also increased, so that the realignment of resources was inhibited. (See chapter 4 for additional discussion.)

Much like the consolidated offices established during the 1980–1994 crisis, regional temporary satellite offices (TSOs) were established in the 2008–2013 crisis. Their primary tasks were managing resolution and receivership activities and selling any retained assets related to failed financial institutions in their geographic area of responsibility.[70] The opening of the first TSO was authorized by the FDIC in November 2008, and took place three months later, in California. Two additional TSOs were subsequently opened: a Florida office in August 2009, and an Illinois office in May 2010.

The use of TSOs allowed for easier coordination during bank failures: they improved FDIC communication with the staff of the failed institution and with acquirers, borrowers, and creditors; and they reduced travel costs. They also improved the FDIC's hiring options because they were located in areas with large numbers of finance professionals seeking work. In contrast to what had happened during the 1980–1994 crisis, the TSOs were closed as planned. The temporary staff began to decline in 2011. The California TSO closed in January 2012, the Illinois TSO in September 2012, and the Florida TSO in April 2014.

Staffing was one concern, and infrastructure was another. Infrastructure here refers to two things: enhanced information technology (IT) capability, and the use of contractors.

The FDIC's readiness planning had included building an enhanced IT infrastructure, and the Corporation improved its ability to market failing depository institutions by establishing virtual data rooms (VDRs) that streamlined the process of providing information to potential acquirers of failed banks.[71] This change proved to be instrumental in the effective marketing of failed institutions, and without such a pre-crisis investment it would have been much harder to successfully sell as many failed institutions. A new general ledger was introduced in 2005, and in 2007 the FDIC implemented a new franchise marketing and asset management tool and began developing a new insurance determination system. Some of these IT investments were more successful than others. The unexpected size and speed of the 2008–2013 crisis challenged the design and capacity of some of the updated IT infrastructure, which had

---

[70] FDIC Board Resolution 11-08 No 077274.

[71] VDRs are electronically accessed data repositories that provide potential bidders with access to financial data on the failing institution, legal documents, information on the due diligence process and on bidding procedures, and descriptions of the resolution transactions being offered.

been built for a slower-developing and smaller crisis.[72] These experiences emphasized the importance of scalability in the designing of IT systems and the associated business processes related to resolutions and receiverships.

Another key component of the FDIC's resolution infrastructure was the extensive use of contractors throughout the 2008–2013 crisis. Early in the crisis, when staffing was especially thin, the use of contractors was an essential part of the FDIC's failure-resolution process. However, the contract review process was overtaxed, and it quickly became apparent that the contracting arrangements in place as of year-end 2007 were insufficient for the volume and type of work required. In addition, the time frame to approve new contracts or to modify existing contracts under FDIC's delegations of authority was not conducive to supporting the volume of failures that the FDIC faced early in the crisis. (Delegations of authority define the levels of FDIC management that are authorized to approve various actions. For example, contracts above $10 million might require approval by the FDIC Board of Directors.) Thus, several adjustments were made to provide timely contractor services that could keep pace with the number of failures. These adjustments included entering into many more contracts, expanding the sizes of contracts, and adjusting the delegations of authority.

In addition, the FDIC built up its contract oversight process. To manage the rapidly expanding workload, it was necessary to hire and train Contract Oversight Managers at a very fast pace. The FDIC developed and implemented new contractor evaluation metrics, established contractor performance evaluations to assess current contactors or to award future contract tasks, created automated systems for compiling contractor metrics, and streamlined the process of getting contractors on board. In 2010, the FDIC established a central contract oversight group that supervised most of the Corporation's receivership contracts.

Once an adequate set of contracts was in place and capacity was increased, the FDIC's overall experience with the use of contractors was positive. The contracts supported a wide variety of tasks, including accounting, financial reporting, investigations, loan servicing, real estate management, asset sales, specialized asset sales, information technology services, data analysis, reviews of compliance with loss-share agreements, and asset valuation. Over the course of the crisis, however, the need for contractors diminished. In 2008, contractor expenses made up 60 percent of total receivership expenses, but as the FDIC staff was built up, expenditures on contractors gradually fell. In 2013, contracting costs made up 32 percent of total receivership expenses.

The staffing, IT, and contracting resources that were developed during the crisis supported numerous resolution and receivership activities, some of the most important of which were related to the management and disposition of the assets that were retained in receivership.

---

[72] In addition, there were delays in developing the insurance determination system; it was completed in 2010.

Strategic Considerations: Interactions and Trade-Offs

All assets that are retained in a receivership have to be liquidated (sold) according to the principles stipulated in FDICIA:

> [T]he Corporation shall conduct its operations in a manner which—
> **(i)** maximizes the net present value return from the sale or disposition of such assets;
> **(ii)** minimizes the amount of any loss realized in the resolution of cases;
> **(iii)** ensures adequate competition and fair and consistent treatment of offerors;
> **(iv)** prohibits discrimination on the basis of race, sex, or ethnic groups in the solicitation and consideration of offers; and
> **(v)** maximizes the preservation of the availability and affordability of residential real property for low- and moderate-income individuals.[73]

Within this broad mandate, the FDIC has considerable flexibility in formulating asset liquidation strategies, but it also must consider a number of inherently contradictory goals and make a number of trade-offs. These trade-offs are discussed below. They are always considered in the context of the need to make the three basic choices that influence the returns from receivership sales: how quickly to sell; what sales method to use; and how to service the assets before they are sold. And these decisions are interdependent. For example, if the FDIC chooses sales methods that require a long preparation time before the assets are sold, then the FDIC must stand ready to manage a large portfolio of assets during crisis periods (because as existing assets are prepared for sale, others will come in and the total number and value of assets in receiverships will build up). Therefore, the FDIC must consider all three aspects of its asset sale process—how quickly, what method, and how to service—as it makes decisions about retained asset sales and management and how best to meet the statutory requirements.

As noted in the "Background" section early in the chapter (in the subsection titled "Past Strategy"), after its experience in the crisis of 1980 to 1994, the FDIC sought to return retained assets to the private sector quickly. However, the economic environment in 2008 through 2013 made this hard to do without incurring significant losses. This difficulty highlights an inherent trade-off when it comes to speed in asset sales. On the one hand, quick sales avoid potential inefficiencies and costs associated with government asset management; these inefficiencies could include weaker incentives to maximize asset recoveries (compared with incentives in the private sector),[74] additional loan servicing transfer costs,[75] and more-

---

[73] 12 USC § 1821(d)(13)(E). See also 12USC § 1823(d)(3)(D).

[74] Researchers have suggested several reasons for weakened incentives if the government manages assets. For additional discussion, see William L. Megginson et al., "The Choice of Private versus Public Capital Markets: Evidence from Privatizations," *Journal of Finance* 59, no. 6 (2004): 2835–70.

[75] A loan servicing transfer is a change in the company that processes loan payments. These companies

costly audit and review processes (compared with the private sector).[76] Further, as noted above, the accumulation by the government of a substantial share of assets may cause an asset overhang problem that could cause private investors to defer asset purchases in the belief that prices will drop in the future.[77] On the other hand, if a liquidating entity like the FDIC sells assets quickly in a downturn, it may obtain poor prices for even high-quality assets, as competition for asset sales is weak and potential buyers with the best ability to maximize asset values might lack the resources needed to bid on the assets.[78] Thus, buyers would be likely to expect to get bargains and would bid accordingly. Moreover, when asset markets are experiencing fire sales,[79] the quick sale of significant amounts of retained assets by a large entity like the government may worsen market conditions. Because the effects of quick asset sales vary substantially with market conditions and because the FDIC sells assets during periods of both good and bad market conditions (but mostly when markets are weak), the FDIC's best strategic choices may change as market conditions shift.

In addition to questions about the timing of asset sales, the FDIC must consider the best method of selling assets. The FDIC relied heavily on competitive auctions for its sales of retained assets.[80] Researchers have found that the best choice of auction format depends on the situation (e.g., market conditions, asset characteristics) in which the

collect loan payments, maintain loan records, collect and pay insurance and taxes related to loans, and follow up on loan delinquencies. They charge fees to take on new assets. In addition to the fees, loan servicing transfers may impose indirect costs, such as lost information or delays or miscommunications in addressing delinquencies. The number of loan servicing transfers is reduced if assets are sold at or shortly after resolution.

[76] Governments inevitably face more public scrutiny than private companies. For additional discussion, see Seidman, *Full Faith and Credit.*

[77] See the subsection "Past Strategy" for a description of an asset overhang, and see note 14 for related literature.

[78] See Andrei Shleifer and Robert W. Vishny, "Liquidation Values and Debt Capacity: A Market Equilibrium Approach," *Journal of Finance* 47, no. 6 (1992): 1343–66; also Joao Granja, Gregor Matvos, and Amit Seru, "Selling Failed Banks," *Journal of Finance* 72, no. 4 (2017): 1723–84.

[79] A fire sale is a sale in which a financially constrained asset holder sells an asset for less than its true value because the holder needs cash right away. During the 2008–2013 crisis, the prevalence of fire sales led several types of assets to lose value very quickly. Fire sales were also exacerbated by a lack of financing options for potential buyers. For more details, see Andrei Shleifer and Robert W. Vishny, "Fire Sales in Finance and Macroeconomics," *Journal of Economic Perspectives* 25, no. 1 (2011): 29–48; Markus K. Brunnermeier, "Deciphering the Liquidity and Credit Crunch 2007–2008," *Journal of Economic Perspectives* 23, no. 1 (2009): 77–100; *Turmoil in U.S. Credit Markets: Recent Actions Regarding Government Sponsored Entities, Investment Banks and Other Financial Institutions, Before the Senate Banking, Housing, and Urban Affairs Committee,* 110th Cong. (September 23, 2008) (testimony by Henry M. Paulson Jr., Secretary of the Treasury), https://www.gpo.gov/fdsys/pkg/CHRG-110shrg50400/html/CHRG-110shrg50400.htm; and Timothy F. Geithner, *Stress Test: Reflections on Financial Crises* (2014).

[80] Other options include selling assets at a fixed price, negotiating with borrowers to recover funds, negotiating sales with potential buyers, or, for performing loans, holding assets and collecting the payments.

auction will be held.[81] In practice, it can be hard to identify the ideal auction format, but the FDIC used a variety of auction formats in response to the circumstances it faced.

The FDIC also faces decisions and trade-offs associated with the terms of the sale. A basic question is whether to sell the asset outright or retain some risk in hopes of higher prices. For some of its sales of retained assets, the FDIC set terms that shared risks with the buyer (that is, where the FDIC and the buyer shared future asset losses and recoveries). More specifically, the FDIC's securitizations[82] and limited liability companies[83] included risk-sharing provisions. Like the use of P&A agreements with loss share for franchise sales, these risk-sharing sale methods have the potential to improve prices—but the FDIC could lose money after the sale if asset values drop or if the assets are not well managed. In addition, these risk-sharing options require oversight after the sale is complete, and the costs associated with the oversight function are large enough that asset sales with risk-sharing are not cost-effective for small amounts of assets. In contrast, selling assets outright is simpler to execute and reduces the FDIC's risk exposure immediately, thereby eliminating the need for oversight.

Several characteristics of the economic environment during the crisis made the risk-sharing of assets attractive to buyers: the sudden and steep deterioration in some asset markets at the beginning of the 2008–2013 crisis, the accompanying uncertainty about asset values,[84] and the lack of good information about some failed-bank assets. But if the terms of these transactions are not properly designed, risk-sharing can weaken the incentive for buyers to manage assets well. Good contract design and monitoring processes are therefore vital to the success of this strategy.

The question of how to service assets is primarily focused on loans because most retained assets are loans and, as described below, the servicing of loans is a complex task. On the servicing question, the FDIC chose not to hire contractors to do both the loan servicing and the loan sales (which is a method that was used in the 1980–1994

---

[81] Numerous authors have found connections between asset sale processes (and especially auction formats) used by sellers of assets and the resulting sales revenue. See, for example, Paul Klemperer, "Auction Theory: A Guide to the Literature," *Journal of Economic Surveys* 13, no. 3 (1999): 227–86; Vijay Krishna, *Auction Theory* (2009); and Guhan Subramanian, *Negotiauctions: New Dealmaking Strategies for a Competitive Marketplace* (2010). However, much of the research involves theoretical analyses that do not fully capture the circumstances faced by the FDIC as it makes decisions about auction formats.

[82] Securitization is the process of creating one or more securities that are collateralized by a pool of other financial assets and are then sold to investors. The sections below titled "Sales of Securities" and "Securitizations" describe the FDIC's securitization activities during the crisis.

[83] A limited liability company (LLC) is a hybrid type of legal structure that provides the limited liability features of a corporation and the tax efficiencies and operational flexibility of a partnership. The section below titled "Limited Liability Companies" describes the FDIC's LLC activities during the crisis.

[84] Nicholas Bloom, "The Impact of Uncertainty Shocks," *Econometrica* 77, no. 3 (2009): 623–85, found that increases in uncertainty have been accompanied by decreases in investment, while Bloom et al., "Really Uncertain Business Cycles," NBER Working Paper Series 18245, 2012, found that uncertainty rises during recessions and could be an important driver of business cycles.

crisis) because of the challenges of designing good contract incentives.[85] The other options for servicing retained loans are discussed in more detail below (in the section titled "Asset Servicing").

Receivership Tasks during the Crisis

Any discussion of receivership tasks during the 2008–2013 crisis must begin with the dimensions of the FDIC's receivership responsibilities during that period and then with the particulars of what was entailed in servicing assets at that time. The environment and the particulars of what had to be done lead directly to the methods the FDIC used for selling retained assets and to decisions about which methods would be best for which asset type: the trade-offs discussed above can be seen influencing the FDIC as it decided on the best way to manage and sell the assets it held in receivership. Finally, this section discusses one important receivership task that did not have to do with selling retained assets but, instead, followed directly from decisions made during franchise marketing: the administration and oversight of loss-share P&As.[86]

The Dimensions of the FDIC's Receivership Responsibilities during the Crisis

As of year-end 2007, the FDIC was managing only $800 million of assets that were retained in receiverships, but by year-end 2008 that number had risen to $15.1 billion. Figure 6.5 shows certain key types of assets held for liquidation for the years 2008 through 2013. During that period, the FDIC managed a total of $87.5 billion in assets from 492 failed depository institutions.[87]

The volume of receivership assets peaked in 2009 and then steadily decreased. The reduction in receivership assets was the result of several factors. The failure rate stabilized and then fell after 2010, and compared with 2009, the volume of new assets that were retained in receivership at resolution dropped somewhat in 2010 and substantially after 2010, as the asset size of the failed banks fell. As the failure rate stabilized, the FDIC continued to liquidate its previously acquired assets, reducing the total number of assets in liquidation. Moreover, in more than 60 percent of failures during the 2008–2013 crisis,

---

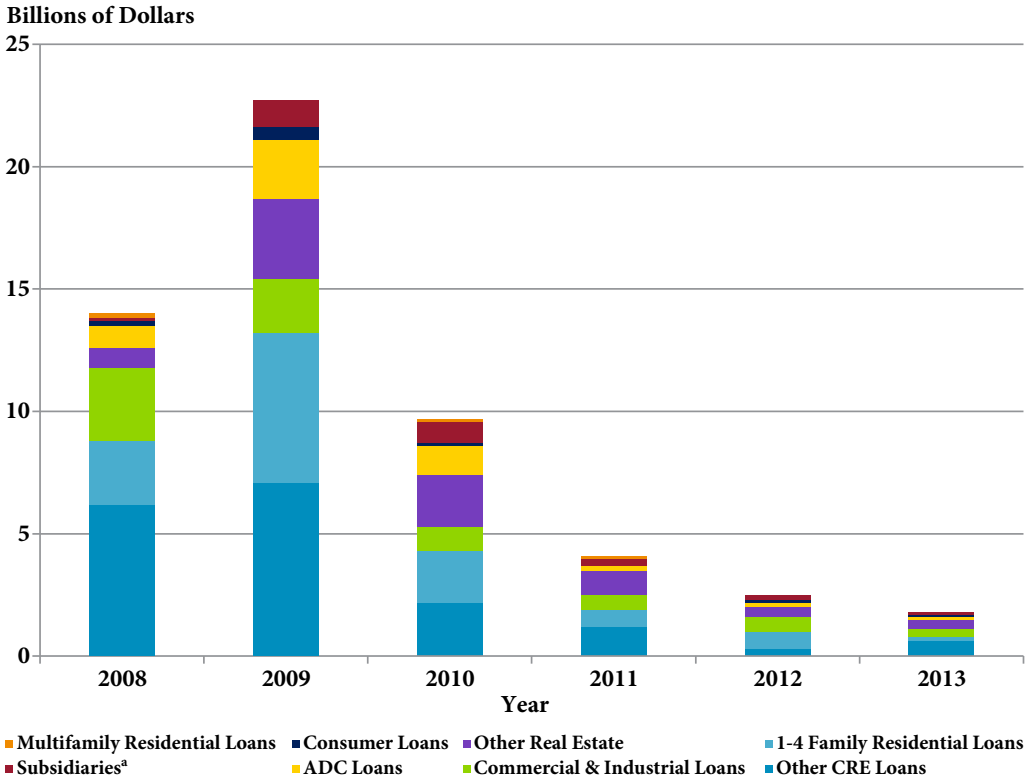
[85] See FDIC, *Managing the Crisis*, 333–71, for additional discussion of the importance of incentives in these types of contracts and the related challenges. See also Resolution Trust Corporation, "Hard to Sell Asset Review Project," 1992.

[86] As noted previously, a number of important tasks are not discussed in this chapter, including accounting, reporting, deposit insurance determination, receivership liability management, contract management, legal claims, and enforcement.

[87] In addition to the 489 bank failures during the crisis period, there were a few receiverships from pre-crisis bank failures that were still open when the crisis began.

the receiver did not retain any loans from the failed institution.[88] From 2008 to 2016, the FDIC liquidated almost 95 percent of the assets that were retained in the 489 receiverships created during the crisis, and only $3.2 billion of the assets remained unsold. In addition, the FDIC had terminated 145 (30 percent) of the receiverships.

Figure 6.5. Loans, ORE, and Subsidiaries in Liquidation, 2008–2013



[a] Defined as companies held as subsidiaries of failed banks.

Asset Servicing

Most of the assets that were retained in receiverships during the crisis were loans, and for retained loans the FDIC as receiver undertook the associated servicing responsibilities previously held by the failed institution. Loan servicing included general loan administration tasks such as collecting payments and managing escrow accounts, but it also included more resource-intensive responsibilities such as monitoring delinquencies, managing defaulted loans, and approving loan or line of credit disbursements. Like private-sector institutions, the FDIC was subject to a large number of statutory and

[88] In other words, the acquirer purchased all the loans.

regulatory requirements that set standards for loan servicing tasks.[89] For foreclosed properties, servicing involved property management tasks such as maintaining the property, collecting rents, paying local taxes, and so forth.

As part of receivership planning, the FDIC began analyzing loans that required special attention, such as unfunded and partially funded lines of credit, and ADC loans.[90] In some cases, decisions to extend additional credit were a matter of policy. For example, the FDIC advanced additional credit to a wilderness farm that would otherwise have lacked the necessary funds to provide food for its animals. Many funding decisions were time sensitive, and it was important for the FDIC to have the capabilities to make prompt decisions about extensions of credit. To that end, the FDIC had explicit delegated authority for determining whether to extend additional funds under a failed institution's credit facility.

In the years between the 1980–1994 crisis and the most recent crisis, the FDIC had established the internal goal of placing 90 percent of the marketable loans retained in receivership in a sales initiative within 90 days of the failure date (and another internal goal of terminating receiverships [in the absence of specific impediments] within three years).[91] In those interim years, when an institution failed, the FDIC generally managed and sold the loans from a field receivership site that was established at the failed bank's location. The FDIC was usually able to sell all, or almost all, of the retained loans from the receivership site at reasonable prices within three months. The FDIC would continue to operate the necessary IT systems that had been used by the failed institution and would retain enough staff members from the failed institution to service the assets until they were sold. This strategy was economical, and it allowed the FDIC to close the receivership field site promptly and avoid costly loan servicing transfers.[92]

As the crisis began to unfold, however, the FDIC no longer received bids that met its price expectations on its bulk loan sales that occurred immediately after failure. For example, bidders were offering 30 to 50 cents on the dollar for performing loans that, in better times, had sold at or close to par. Consequently loans were not sold and field receiverships remained open for an extended time—upward of a year or even longer. The accumulation of assets at different receivership sites was expensive, and it became

---

[89] Relevant statutes include (but are not limited to) the Equal Credit Opportunity Act, the Truth in Lending Act, the Small Business Regulatory Enforcement Fairness Act, the Service Member's Civil Relief Act, the Fair Debt Collections Practices Act, and the Fair Credit Reporting Act.

[90] FDIC, "A Borrower's Guide to an FDIC Insured Bank Failure," https://www.fdic.gov/bank/individual/failed/borrowers/.

[91] See FDIC, "Annual Performance Goals," 2008. ("Percentage of failed institution's assets marketed: 90 percent of the book value of a failed institution's marketable assets is marketed within 90 days of failure.") For details on the FDIC's current strategic goals, see FDIC, "Strategic Plans," https://www.fdic.gov/about/strategic/.

[92] See note 75 for a definition of a loan servicing transfer and a discussion of the related costs.

increasingly difficult to manage the overall portfolio or to take advantage of opportunities to coordinate sales of assets across receiverships.[93] Therefore, the FDIC shifted to a policy of transferring retained loans to national servicers[94] within 90 days of an institution's failure (at least for loans that were not expected to sell quickly from the receivership field site at reasonable prices).[95] The national servicers collected information on the receivership loans on-site, which reduced costs and improved data quality. After 2010, the FDIC began to rely heavily on national servicers as its primary asset managers. As a result of the switch to national servicers, the average time the FDIC remained on-site at a failure decreased from more than a year to about 115 days.

Asset Sales by Type of Asset

Because the types of assets that needed to be sold influenced both the FDIC's decisions about sale methods and the markets into which the retained assets were sold, the FDIC generally organized its sales efforts by asset type. The three asset types whose sales are discussed here are securities, loans, and ORE.

Sales of Securities. In most cases, the acquiring institution assumed the failed institution's holdings of U.S. Treasuries, municipal securities, and similar investment-grade securities. The FDIC usually offered the other securities from the failed institution to potential acquirers as part of the franchise sale at resolution, but often potential acquirers were not interested in purchasing risky, illiquid securities and priced them accordingly. Thus the FDIC retained many illiquid, hard to price, and complex securities in its receiverships.

For disposal of the more liquid securities, competitive auctions to qualified bidders were conducted by in-house staff, sometimes with the assistance of a financial advisor under contract to the FDIC. This method was typically used for agency debt, agency-issued mortgage-backed securities, and municipal securities—all of them where potential bidders could use prices paid for other recent sales to inform their bids.[96]

---

[93] The average cost of maintaining an open receivership site, including rent, receivership assistance contracts, and payroll services contracts, was about $500,000 per month. Many of the costs did not decline even as the number of outstanding assets declined. In addition, failed-bank staff members or general-purpose receivership contractors were not always highly skilled in asset management. Moreover, it was hard to develop and maintain accurate, up-to-date asset listings for all the assets in receivership when assets were being serviced at a large number of open receivership sites.

[94] National servicers are servicers and private firms that specialize in loan servicing and have a national (rather than local) scope.

[95] Currently the decision as to whether the loan portfolio can be sold quickly on-site or whether it is moved to a national servicer for a structured transaction is made on a case-by-case basis. If the FDIC can obtain about the same price for a loan sale made on-site right after failure as it can with later sales from a national servicer (possibly using a structured transaction), it is advisable to sell from the receivership site, which—when a quick sale at a market price is feasible—has lower management costs compared with the cost of using a loan servicer.

[96] Likewise, the FDIC could use recent asset prices to set reserve prices (that is, the minimum price that the

In situations where the FDIC liquidated securities with transfer restrictions, or in cases where there was a limited number of candidate purchasers for a specific asset, a negotiated sale was arranged.[97]

The FDIC retained a substantial volume of private label mortgage-backed securities (PLMBS) that acquirers rejected. Because few investors were purchasing these types of assets at the time, the FDIC believed that the prices it could obtain in an auction would fall below the long-term value of the securities. Therefore, the FDIC used the PLMBS that were retained in receiverships to collateralize eight PLMBS securitizations that it issued in 2010.[98] Seven were residential MBS and one was a commercial MBS. This strategy improved pricing and marketability because the FDIC provided a guarantee, backed by the full faith and credit of the U.S. government, for the senior tranche of each securitization.[99] The securitizations had two features to help reduce the FDIC's potential exposure under the guarantee. First, the senior tranche was overcollateralized, allowing the securitization to absorb substantial losses without triggering the FDIC guarantee. Second, the FDIC used interest earned on the underlying MBS to make payments toward the principal balance in the senior tranche.

The PLMBS securitizations were considered a successful alternative to auctioning the securities in 2010. The principal balance of the PLMBS that were used to collateralize the FDIC securities was $6.35 billion. The FDIC estimated it would net $3.46 billion if it sold the PLMBS in 2010 through an auction. Providing a guarantee improved the securities' marketability, and the face value of the securitizations sold was $4.2 billion. Additional proceeds from the securitizations, such as guarantee fees and increases in the value of retained interests, resulted in a projected recovery of $5.12 billion,[100] which was 48 percent more than the estimated recovery from an auction at the time. As of year-end 2016, the outstanding face value of the FDIC securities was $1.06 billion, but the outstanding face value of the underlying securities was $2.82 billion. Any payments made on the underlying securities that were not needed to satisfy the FDIC securities would go to the receiverships.

It is impossible to determine with certainty whether the securitizations were more advantageous than a strategy of holding the PLMBS for future auction would have been. The securitizations provided a substantial cash recovery in 2010, thus improving the FDIC's cash position compared with what it would have been if a holding strategy had been used, and enabled the FDIC to receive much better prices than the prices that would

---

FDIC would accept). These securities had low loss rates.

[97] For example, negotiated sales could be used for limited partnership interests, closely held securities, and securities with a "right of first refusal" restriction.

[98] After 2010, the FDIC did not acquire enough mortgage-backed securities to warrant further securitizations.

[99] A senior tranche is the least risky tranche in a securitization and takes losses only when all the other tranches have lost their full value. For a detailed explanation of securitization and tranches, see chapter 1.

[100] This figure includes the transaction cost associated with securitizations.

have been achieved with a cash sale. Both approaches (securitization with a guarantee, and holding) required that the FDIC bear the full risk of further price deterioration, but holding the MBS might have allowed the FDIC to more fully participate in potential price improvements, receive slightly higher interest income, and avoid certain transaction costs.

Sales of Loans. The FDIC retained over $50 billion in loans in its receiverships, and therefore the task of selling them was daunting. Moreover, there were many types of loans (ranging from small consumer loans to large commercial loans), and the quality of the loans varied (ranging from loans where the borrowers were routinely paying the loans on time, to loans that were in foreclosure proceedings). The FDIC used bulk sales to sell loans outright; in addition, it used two kinds of structured sales. Outright sales are when all aspects of ownership, including risk, are transferred from one party to another party. Structured sales are a form of joint ownership where multiple parties share not only the asset management responsibilities but also the benefits and costs of a pool of assets.[101] The two kinds of structured sales the FDIC used were securitizations (defined in note 82 as "the process of creating one or more securities that are collateralized by a pool of other financial assets and are then sold to investors") and limited liability companies (LLCs), which were the legal entities used to execute a type of joint venture that was used heavily during the crisis.

—Bulk Sales. The FDIC routinely offered loans for bulk sale, in pools grouped by loan type, loan performance status, and/or geography; these types of sales are often called "bulk loan sales" or "whole loan sales."[102] The FDIC used third-party contractors to sell the loans, usually at an on-line sealed-bid auction.[103] The contractor would provide Internet marketing, due diligence, imaging and indexing of files, pooling, an on-line bidding platform, and closing services for the sales. To encourage wide participation in the auctions, the FDIC sought potential buyers through many venues, and assets were marketed both through the FDIC's public website and through the loan sale contractor's website. Because of the challenges associated with estimating the value of many of these loans, the FDIC did not usually set reserve prices (that is, the minimum price that the FDIC would accept). Instead, it would monitor the extent of interest expressed by bidders (measured by the number of bids or the number of bidders who performed due diligence) to determine whether the winning bid constituted a true market price.

---

[101] Contracts enumerate the responsibilities, benefits, and costs for each party. Clearly, these sales are more complex than straightforward asset sales, called here "outright sales."

[102] In locations where there were many loans for sale at the same time, the groups were more homogeneous. When the FDIC had fewer loans available for sale, the loan pools were more diverse.

[103] The FDIC's sealed-bid process is a form of a "first price sealed bid auction," where bidders submit bids to the auctioneer in such a manner that no other bidders know one's bid—for example, in a sealed envelope. The bidder submitting the highest bid wins the object and pays what he or she bid.

The FDIC sold $10.6 billion in retained assets using bulk loan sales; the loss rate for these loans was 49 percent.[104] Bulk loan sales carried no retained risk for the FDIC and provided quick cash infusions at a time when the DIF's cash balance was under pressure. Seller financing was never offered. Prompt loan sales limited the time during which the FDIC was required to service the retained loans. However, early in the crisis, relatively few buyers were interested in these loans (which were often viewed as high risk because they had been originated by failed banks), and the buyers who were interested often suffered funding constraints or were seeking bargains. Given the loss rates for cash loan sales of assets related to real estate, the FDIC found structured instruments (such as loan securitizations and LLCs, discussed below) to be an appealing alternative.

—***Securitizations.*** As the volume of unsold loans held in receiverships increased during the 2008–2013 crisis, the FDIC explored alternative disposition options, including loan securitizations. With the securitization market remaining largely frozen at the start of the 2008–2013 crisis, the FDIC began to securitize loans with an FDIC guarantee, backed by the full faith and credit of the U.S. government, to increase the marketability and prices of its securitizations. From 2010 through 2013, the FDIC issued eight securitizations backed by $3.0 billion in loans; six transactions had an FDIC guarantee on the senior tranches. The total face value of the Class A securities (see next paragraph) was $2.2 billion, or 73.9 percent of the collateral book value.

After the FDIC identified and assembled loans for securitization, an underwriter recommended a securitization structure. For example, the first securitization issued was structured with three classes (the senior "A" tranche, the mezzanine "M" tranche, and the first loss "OC" tranche) as well as with residual certificates. For the securitizations of performing loans, the senior class (that is, the "A" tranche) typically accounted for 80 to 85 percent of the overall capital structure and carried an FDIC corporate guarantee.[105] Generally, subordinate interests on the residential securitizations (all junior classes below the guaranteed senior tranches) were held by FDIC receiverships, with the option of marketing them at a later date. Subordinate-class certificates on commercial property transactions were sold to private investors at issuance. For both residential and commercial transactions, all residual certificates were retained by the FDIC.

The FDIC Board of Directors approved each securitization before it was marketed. The FDIC drafted clauses in its securitization trust documents that were designed to reduce operational risk. Third-party contractors facilitated all aspects of the securitization transaction, including pricing, marketing, and settlement. Consistent with the improving asset markets, all of the transactions performed above original expectations. As of the end

[104] For additional details, see https://www.fdic.gov/buying/historical.

[105] For the two securitizations where most of the collateral was nonperforming loans (that is, loans where the borrowers were delinquent), the size of the senior tranche was less than half of the collateral balance and no guarantees were provided.

of 2016, one transaction had been unwound;[106] the outstanding face value of the class "A" securities had decreased by over 80 percent, to $395 million; and, $928.3 million in collateral remained outstanding, with payments due to the receiverships. Therefore, it appears highly unlikely that the FDIC will be required to make payments on any guarantees.

The FDIC's securitization program, in which a significant volume of loans were sold quickly, enabled the Corporation to improve its cash position. The FDIC was able to sell at reasonable prices, even when markets were in disarray, because it used its guarantee authority and retained the residuals; however, this also meant that the FDIC retained almost all of the risk exposure. The improving asset markets, as well as careful attention to contract design, contributed to the recoveries from these instruments and allowed the FDIC to avoid having to make guarantee payments.

—Limited Liability Companies. As an alternative to bulk sales or securitizations, the FDIC used what are referred to as equity partnerships, Structured Transaction Sales, or LLC transactions.[107] Whereas most of the loans that were securitized were of relatively high quality, most of the loans sold into Structured Transaction Sales were subperforming or nonperforming (that is, borrowers were delinquent or the loans had other problems). In a Structured Transaction Sale, the FDIC as receiver for one or more failed banks created a separate entity (the LLC) and then assigned assets to the LLC from one or more receiverships in exchange for all of the equity interest in the LLC. The FDIC then sold a portion of the LLC equity interest to a third-party investor that became the managing member of the LLC. Proceeds from the assets were paid to a custodian/paying agent, which distributed the proceeds to the FDIC and the investor according to the terms of the specific LLC agreement. When a large share of the assets had been liquidated, the LLC usually terminated with a bulk sale or the managing member's buyout of the FDIC's LLC interest.

During the 2008–2013 crisis the FDIC entered into 35 Structured Transaction Sales, disposing of 43,315 assets with a book value of $26.2 billion. These Structured Transaction Sales disposed of approximately 30 percent of all assets unsold at bank resolution. The terms of each of the transactions were published by the FDIC.[108] Of the Structured Transaction Sales, 20 (57 percent) held ADC loans, 8 (23 percent) held other CRE loans, and 7 (20 percent) held single-family mortgage loans.[109] The average

---

[106] A transaction is unwound when the buyers of the FDIC securities have been paid in full and the security is extinguished. If, at that point, any of the loans that collateralized the securities have outstanding balances, then all the remaining payments made on the loans belong to the residual certificate holders—in this case the FDIC receiverships.

[107] As stated in note 83, an LLC is a hybrid type of legal structure that provides the limited liability features of a corporation and the tax efficiencies and operational flexibility of a partnership. The private-sector "owners" of an LLC are referred to as "members."

[108] See FDIC, "Structured Transaction Sales," https://fdic.gov/buying/historical/structured/index.html.

[109] Note that about $1 billion of the assets were ORE rather than loans. Almost all of the ORE related to foreclosed ADC loans.

size of the ADC transactions was larger than the average size of the other types: ADC transactions constituted 65 percent of total LLC assets.

In September 2009, after six sales, the FDIC revised the form of the LLCs to offer financing as an option. By providing seller financing when such financing was not generally available from private sources, the FDIC hoped to attract more investor interest and improve prices. On the basis of feedback from potential acquirers and a preliminary analysis of bids received, the strategy seemed to be successful.

Table 6.6 provides information about the performance of these transactions. For each group of LLCs, four estimates of value are compared. The middle two columns aggregate estimates that were prepared by financial advisors shortly before the LLCs were created: they estimated the value of the assets if a cash sale were to be conducted or if an LLC were to be created. The last two columns aggregate estimates prepared by the LLC managing members (the companies that managed the LLCs). The "Initial" column reports the estimates that the managing members prepared shortly after each LLC was created, and the "June 2016" column reports the most recent estimates.

Table 6.6. LLC Recovery Rates

Category	Number of LLCs	Initial Book Value ($ Millions)	Pre-Close Financial Adviser Estimate (%)		LLC Managing Member Estimate (%)[a]	
			Bulk Sale	LLC	Initial	June 2016[b]
FDIC Financing						
No	12	5,868.5	23.4	34.5	34.1	33.4
Yes	23	20,306.6	31.9	42.5	42.2	51.5
Asset Type						
ADC	20	17,001.3	24.4	36.1	33.5	43.7
Other CRE	8	4,708.0	38.0	47.0	54.6	54.2
SFR	7	4,465.8	42.8	51.5	51.2	54.7
Overall LLC Program	35	26,175.1	30.0	40.7	40.3	47.4
Median		490.7	33.5	41.6	42.0	42.5
Mean		857.6	34.4	42.2	43.8	44.9
Standard Deviation		828.6	14.5	13.8	14.8	15.5

[a] Net present value of projected or actual cash flows as of the LLC sale date, divided by the initial asset balance. The discount rate is adjusted for risk using a method similar to the one used in the FDIC's financial statements. Note proceeds are discounted at lower rates than equity distributions.

[b] For the June 2016 estimate, over 90 percent of the cash flows are actuals rather than estimates.

The aggregate across all LLCs showed that, on a program-wide basis, the estimated recovery from a bulk sale of the assets was 30 percent and the estimated recovery from an LLC sale was 40.7 percent. The managing members initially estimated a 40.3 percent recovery. The most recent estimates anticipate a 47.4 percent recovery. For 71 percent

of the transactions, the current estimates are higher than the original estimates.[110] On the basis of the pre-close estimates, the use of LLCs would have saved the FDIC an estimated $2.8 billion dollars (compared with bulk sale estimates); on the basis of the most recent estimates, the savings increased to $4.6 billion. Improvements in the asset markets probably contributed to the increased return. On the basis of this simple comparison, seller financing did not appear to influence the difference between the two pre-close estimates (one for whole-loan sales and one for the LLCs); after the sale, however, the transactions with seller financing showed stronger improvements. ADC assets provided much lower returns (43.7 percent) than either other CRE (54.2 percent) or single-family residential assets (54.7 percent). ADC assets also showed the strongest improvements compared with the initial projections; this may be because of value added through effective servicing or because ADC loan values are more heavily influenced by improvements in the real estate market, or both.[111] In terms of the number of bids received or differences in the basic structure of the risk-sharing agreements, no clear trends in recoveries were readily discernible.

Sales of Other Real Estate (ORE). As with most types of assets in receivership, the number of ORE assets (that is, foreclosed properties) increased rapidly at the start of the 2008–2013 crisis, and by the end of the crisis more than 13,500 ORE assets had been acquired. To dispose of its ORE, the FDIC relied primarily on direct sales of the assets by real estate brokers. If the assets did not sell within established FDIC timelines, the properties were sold at public auction. One advantage of this strategy was that the brokers aggressively marketed the property during the listing period, since properties placed in public auctions were subject to a reduced commission. In addition, the FDIC found that disclosing that a property was to be included in a scheduled auction often caused a hesitant buyer, fearful of becoming involved in competitive bidding, to make an offer.

The FDIC's ORE auctions were held in a location near the properties being sold. In addition, often there were options that allowed bidders to submit bids by phone or online as well. The auctions included dozens, and sometimes even hundreds, of properties for sale from multiple receiverships. The FDIC sought to include a mix of attractive and less-appealing properties in each auction to increase interest and encourage competitive bidding. The properties were listed both on the FDIC's website and on the auctioneer's

---

[110] Note that more than 90 percent of the most recent estimate has already been realized. All recovery estimates are discounted to the LLC sale date.

[111] The servicing of ADC loans is more complicated than the servicing of other real estate loans. See OCC, "The Conptroller's Handbook," 2013, for a discussion. For evidence that land prices are more volatile than other real estate prices, see Joseph B. Nichols, Stephen D. Oliner, and Michal R. Mulhall, "Swings in Commercial and Residential Land Prices," *Journal of Urban Economics* 73 (2013): 57–76, and Raphael W. Bostic, Stanley D. Longhofer, and Christian L. Redfearn, "Land Leverage: Decomposing Home Price Dynamics," *Real Estate Economics* 35, no 2 (2007): 183–208. Land makes up a larger share of the collateral value for ADC loans than for other types of real estate lending.

website before the sale. The FDIC set reserves for the properties at these auctions, based on its assessment of marketability and the length of time the property had been previously marketed. At least a few absolute auctions[112] were included to strengthen investor interest; these were typically used for the least desirable properties.

The types of ORE sold included bank premises, commercial properties, undeveloped land, multifamily properties, and single-family residences. The highest recovery rate (70.4 percent of book value) was for bank premises. These properties tended to be well maintained and located in well-trafficked areas. Other commercial properties had a recovery rate of 57.4 percent. The real estate class suffering the lowest total recovery rate was unimproved land, at 36.4 percent. This class of real estate, with no immediate use and sometimes located in areas that were overbuilt, often had very little value. The largest class by number of units of properties auctioned was single-family residential properties, constituting nearly 50 percent of the number of properties that were auctioned. The recovery rate for these properties was also higher, at 63.4 percent, than the overall recovery rate (59.4 percent) for all ORE sales.[113]

Loss-Share Administration and Oversight

One important task of receiverships does not have to do with selling retained assets but with following up on a critical decision made during franchise marketing. When the FDIC entered into loss-share agreements at resolution, the P&A contracts included a section that laid out the acquirers' and the FDIC's responsibilities associated with the assets that were to receive loss-share coverage. Because the FDIC retained a large share of the risk exposure from the portfolio of assets under loss-share agreements and because the FDIC's loss-share coverage might weaken the acquirers' incentives to work aggressively to minimize losses, it was important for the FDIC to protect its interests by carefully monitoring the acquirers' performance under those agreements.[114]

The portfolio of assets under loss-share agreements was dominated by real estate loans. CRE loans (which included both ADC loans and other types of CRE loans) constituted 45% of portfolio assets ($98 billion), and single-family mortgages constituted 35% ($74 billion). Another 3% ($6.5 billion) was ORE. A total of 1.1 million assets were placed in the program. On the basis of asset counts, most of the assets were consumer loans: single-family mortgages constituted 43% of the assets, and other consumer loans constituted 26%. Figure 6.6 provides details.

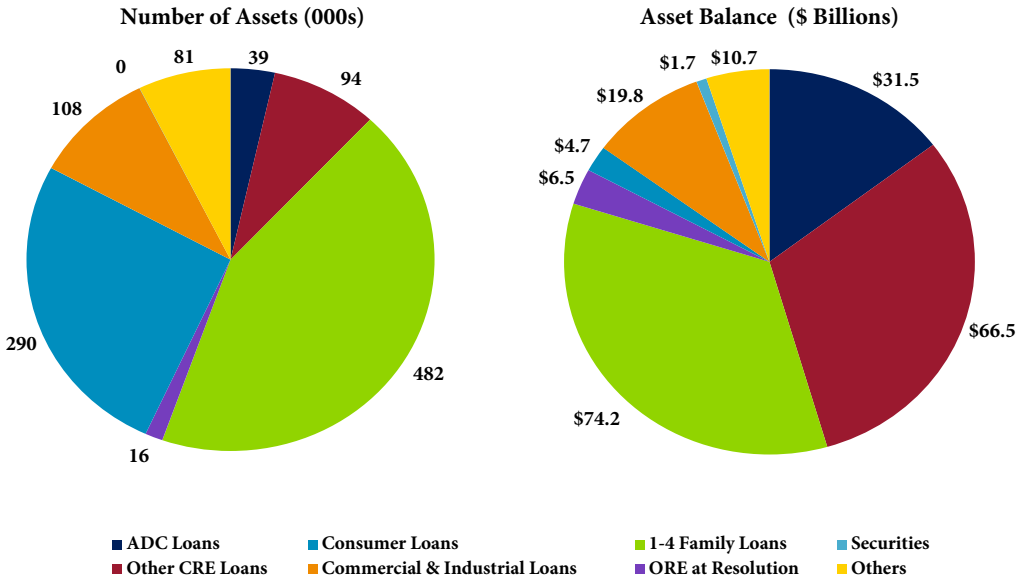
---

[112] An absolute auction is an auction where the seller does not set a reserve price (minimum required price). Buyers are attracted to absolute auctions because they sometimes result in bargain prices.

[113] Source: https://sales.fdic.gov/closedrealestate/. These figures include most, but not necessarily all, sales of retained ORE from 2008 to 2013.

[114] For additional information about the loss-share program, see the section above titled "Loss-Share Purchase and Assumption." See also FDIC, "Loss Share Questions and Answers," https://www.fdic.gov/bank/individual/failed/lossshare.

Figure 6.6. Loss-Share Asset Portfolio at Resolution, Number and Dollar Amount



Total Number of Assets: 1,109 **Total Asset Balance: $215.6**

About 32% of the asset value of CRE loans came from ADC loans that were especially problematic.[115] At resolution, 35% of the ADC loans were in default, whereas 11% of the other CRE loans were in default. About 9% of the single-family mortgages were in default at resolution.[116]

The primary goals of the review program were to minimize the FDIC's losses and ensure that the acquirer complied with the terms of the loss-share agreement. If an acquirer had asset management weaknesses, inaccurate loss reporting, or other compliance problems, the FDIC could mitigate its losses by quickly identifying problems, asking the acquirer to address them, and following up with the acquirer appropriately. Two key components of the monitoring program were regular on-site reviews and the review of standard information reported by the acquiring banks. The FDIC undertook on-site reviews for most acquirers annually, although acquirers of the largest portfolios were reviewed semiannually.

The FDIC also required that acquirers with single-family loss-share coverage pursue a loan modification program. Under this program, the loan terms for delinquent owner-occupied single-family mortgages were modified (to make the loan affordable to the

[115] Many failed banks had large ADC exposures. For additional discussion, see chapter 4 and U.S. General Accountability Office, "Causes and Consequences of Recent Bank Failures," GAO-13-71, 2013.

[116] Calculations are based on asset balances rather than counts.

borrower)[117] if the estimated net present value of the modified loan was higher than the net present value of foreclosure.[118] Acquirers had several options for assisting troubled borrowers in managing their mortgages, thereby minimizing FDIC costs: the acquirer could adopt the loan modification program described in the agreement, or other programs approved by the U.S. Treasury (such as its Home Affordable Modification Program [HAMP]), or other programs that met the same purpose.[119] As of March 2017, acquiring banks had modified 25,736 owner-occupied first-lien single-family mortgages, and two-thirds of the loans were still active and under the loss-share program. Almost 80 percent of the modified loans that were active in the loss-share program were current, and another 6.6 percent were 30 to 59 days delinquent. Compared with other loan modification programs, these results appear generally favorable. For example, Fitch reported cumulative-to-date default rates of 30 percent or more for modified loans.[120]

Because loss share imposes administrative costs on both the acquirers and the FDIC, it was often beneficial to terminate agreements once the value of the FDIC's loss-share coverage fell below the loss-share agreements' administrative costs. As of year-end 2016, the FDIC had terminated 151 single-family agreements and 156 non-single-family agreements. In sum, all the agreements at 159 failed banks had terminated.[121] In 2017, early termination activity continued to be brisk.

---

[117] Loans were modified so that the monthly mortgage payment fell below a predetermined percentage of the borrower's income. This was achieved by reducing the interest rate, lengthening the term of the loan, and/or deferring principal and interest payments on part of the loan balance. For a sample agreement, see pages 58-93, and especially pages 92–93, of https://www.fdic.gov/bank/individual/failed/firstfederal-ca-p-and-a.pdf. Also, note that the FDIC provided loss-share coverage for modifications of noncurrent loans as well as performing loans with high risk of imminent default—that is, where there was a strong chance that the loan would default soon because of the loan characteristics.

[118] In estimating the net present value of modifications, acquirers were expected to consider the redefault probability (that is, the probability that the loan might default again) after modification.

[119] The FDIC had to approve alternative programs (except the U.S. Treasury programs) to ensure that they met the program goals.

[120] Fitch, "Risk Growing in Mortgage Loan Modifications: Historical Modification Data Review," Feb. 9, 2017, 5, https://www.loansafe.org/wp-content/uploads/2017/02/Risk-Growing-in-Mortgage-Loan-Modifications.pdf. These rates were reported nearly six years after modifications, and some of the loan modifications under the loss-share program are not this mature. However, Fitch also reported that 75 percent of redefaults occurred in the first two years after modification (p. 1).

[121] At some banks, loss-share coverage was provided only for single-family assets or only for non-single-family assets.

Lessons Learned for Resolutions and Receiverships

As the crisis unfolded, the FDIC learned a great deal and kept making adjustments to improve its results. Some of the most important lessons learned from that experience are discussed here.

Lesson 1: Readiness Planning Is Essential

Early in the crisis, as the speed and size of failures exceeded expectations, the FDIC's infrastructure was challenged (despite the FDIC's efforts to improve infrastructure before the crisis), and the Corporation was forced to devote resources to the expansion of its capacity on a largely ad hoc basis. In hindsight, it might have been more effective if the FDIC, as part of its readiness planning, had built a larger and more agile infrastructure—including staff, contracts, and IT systems—during the lull between the end of the previous crisis and the start of this new one.

The FDIC now has the opportunity to explore options for maintaining readiness in a low-failure environment with that environment's concomitant pressures on the FDIC to streamline its operations.[122] The difficulty is that trade-offs are necessary between two of the FDIC's responsibilities: to be a steward of the DIF and to maintain preparedness for a crisis. In other words, budgetary pressures must be balanced against the reality that the magnitude and speed of banking crises are unpredictable. In its readiness planning since the end of the crisis, the FDIC has increased its baseline staffing for resolution and receivership activities and it continues to enhance its systems and processes to bolster its receivership capabilities. Developing scalable and up-to-date receivership IT systems is an important aspect of readiness planning because deploying the right technology contributes to the FDIC's ability to manage a crisis successfully.

But since crises can occur quickly, it is also helpful to have a roadmap for increasing key resources and infrastructure when needed. Whether through the use of contractors, reallocated employees, rehired annuitants, or new employees, the roadmap can make it easier for the FDIC to build its capacity quickly. Plans to build capacity should remain broad and focus on scalability and flexibility, but they should also include the technical and operational details necessary to implement quick capacity-building.

Finally, although the 2008–2013 crisis began quickly, especially in comparison with the 1980–1994 crisis, the FDIC noticed underlying currents of weakness in depository institutions well before the failures accelerated. For example, the FDIC's *2007 Annual Report* stated that "The year posed major challenges to financial institutions and to the economy as a whole. Slumping housing markets and escalating problems, particularly related to subprime mortgage lending, were among the chief contributors to increased

[122] Maintaining readiness in this kind of environment may include exploring how other agencies or private companies with highly variable resource demands address their resource challenges. For example, the Federal Emergency Management Agency has developed readiness capabilities despite the unpredictable need for disaster relief. The Department of Defense has addressed its need to quickly expand capacity by using reservists.

uncertainty in the financial markets."[123] The FDIC also noticed weaknesses through its monitoring of the condition of institutions between examinations: the FDIC's Statistical CAMELS Off-Site Rating (SCOR) system began to flag an increasing number of potentially troubled depository institutions in early 2007.[124] Going forward, it will be helpful to examine the possibility of building resolution capacity earlier—that is, when standard indicators of industry condition (including, for example, the SCOR system), financial and market indicators, or other signals draw attention to substantial weaknesses in the banking industry, even if failure projections are uncertain. The risk of possibly becoming temporarily overstaffed (if bank failures should not materialize) might be a cost that is justified by the highly cyclical and uncertain workload, but research is needed to identify which triggers are likely to be most helpful in initiating the build-up of staff.

Lesson 2: Consider Offering More Resolution and Financing Options to Acquirers

As noted above, the loss-share transaction was the FDIC's dominant resolution offering from mid-2009 through 2010. In early 2011, the FDIC expanded its regular resolution offerings to include whole bank without loss share, and the FDIC subsequently supplemented its regular offerings with other options (especially loan pools) more frequently before it began to phase out loss share in 2012. The loss-share option was attractive early in the crisis and, especially, at the height of the crisis. Loss share leveraged the FDIC's natural advantage over private parties in absorbing large risks during a period when the market's appetite for risk was low. It reduced disruption to bank customers and communities during a period when the cost of disruption was high,[125] and it minimized staff and cash needs during a period when both were in short supply and future needs were uncertain but potentially very large. It might, however, have been advantageous for the FDIC to have broadened its offerings more quickly as its resources improved and as its programs for selling retained assets became more established.[126] For example, the FDIC might have offered loan pools with and without loss share as well as whole-bank transactions.

---

[123] FDIC, *2007 Annual Report,* 4, https://www.fdic.gov/about/strategic/report/2008annualreport/index_pdf.html.

[124] SCOR uses quarterly Consolidated Reports of Condition and Income (Call Report) data to help the FDIC identify institutions that have worsening financial conditions between examination cycles. For details, see Charles Collier et al., "The SCOR System of Off-Site Monitoring: Its Objectives, Functioning, and Performance," *FDIC Banking Review* 15, no. 1 (2003): 17–32, https://www.fdic.gov/bank/analytical/banking/2003sep/2_15n3.pdf.

[125] GAO, "Causes and Consequences." The GAO studied the disruption caused by failures from 2008 to 2011 and stated that "our results suggest that bank failures in a state were more likely to affect its real estate sector than its labor market or overall economy" (p. 146). Thus, the FDIC's resolution methods appear to have resulted in less severe disruption than what had been documented from earlier bank failures.

[126] Economic theory and research point to benefits for the FDIC from offering a wide variety of options so that the markets can determine the most cost-effective option. See Edward J. Kane, "Principal-Agent Problems in S&L Salvage," *Journal of Finance* 45, no. 3 (1990): 755–64; Kormendi et al., *Crisis Resolution*; and FDIC, "FDIC Policies for the RTC."

In addition, the FDIC might consider broadening its options for funding resolutions. During the crisis, the FDIC avoided borrowing from the U.S. Treasury or the Federal Financing Bank (FFB) by imposing prepaid deposit insurance assessments.[127] With the infusion of cash from the industry, resolution and receivership methods that required working cash became relatively more attractive to the FDIC than they had been before the prepaid assessment. Another way to improve the cash position of the DIF (and thus provide more freedom to adopt resolution methods that require working cash) might have been to offer notes to acquirers instead of, or as an alternative to, cash. This option raises serious policy questions that would need to be considered, including questions about the appropriate note terms, when and how to offer notes to acquirers, the risks associated with this option, and what controls should be put into place.

Lesson 3: Include Use of National Servicers for Large-Scale Crises in Readiness Plans

Before the recent crisis, the FDIC had been able to sell assets quickly at field sites that were open for only a few months at each failed-bank location. When the crisis struck and markets for such assets suddenly dried up, the FDIC retained more assets, its scope of operations suddenly widened, and its previous strategy became less cost-effective. Thus the FDIC benefited by shifting to a reliance on national loan servicers. National servicers made possible stronger and more consistent loan servicing and supported a more comprehensive asset sales strategy—one that often improved prices by grouping assets from multiple receiverships into various sales initiatives. However, executing such a large shift in operations in the middle of a crisis was not optimal, and the FDIC might have avoided some of the associated disruption had there been an opportunity to make the change earlier. This experience suggests that readiness plans should include either the ongoing maintenance of national servicing contracts—even during periods when the FDIC's receivership activity levels are modest—or an ability to switch to national servicing contracts promptly without having to expend scarce resources to set up the program. Although the cost of retaining national servicers during periods of low activity may seem high, these costs must be balanced against the value of being able to seamlessly scale up this key component of receivership operations when activity levels increase, especially with little lead time.

---

[127] For additional discussion, see chapter 5 as well as FDIC, Prepaid Assessments, 74 Fed. Reg. 59056–59066 (Nov. 17, 2009), https://www.fdic.gov/regulations/laws/federal/2009/09finalad51nov17.pdf. As discussed in chapter 5, prepaid assessments had benefits beyond the improved liquidity of the DIF. The DIF cash position was also improved by increased assessment rates, a special assessment in 2009, and the FDIC's heavy use of whole-bank resolutions, including loss-share resolutions.

Lesson 4: Structured Sales Worked Well

The FDIC used two types of structured transactions to sell retained assets during the crisis: LLCs and securitizations. Both of these asset sale methods allowed the FDIC to pool similar assets to attract more bidder interest; they were also designed so that the FDIC retained a significant share of the financial risks associated with the assets (thus potentially improving the FDIC's recoveries but leaving the FDIC exposed to additional losses if markets declined).

Although recoveries varied across individual LLC transactions, the overall recoveries for the LLC program were materially higher than estimated bulk loan sale recoveries and original estimates. The strong recoveries were probably influenced by the combination of well-aligned incentives and the market and asset management expertise of the managing members. Recoveries for securitized loans were also higher than estimated recoveries from bulk loan sales. Market improvements probably contributed to the higher recoveries for both programs.

Lesson 5: Effective Loss-Share Administration Requires Adequate Infrastructure

For three reasons, FDIC oversight of the loss-share agreements was critical to the success of the loss-share program. First, the risk exposure that the FDIC retained was in this instance substantial. Second, the program had the potential to weaken the incentive of acquirers to manage the portfolios in ways that minimized the FDIC's costs. Third, some acquirers were unfamiliar with the program requirements. Four elements proved to be most important for administering the oversight process. The FDIC and the acquirer needed to move quickly to ensure a mutual understanding of expectations; the FDIC had to conduct regular on-site reviews to ensure compliance with the loss-share agreements; the FDIC needed to follow up on any areas of disagreement or noncompliance; and the automated data collection and reporting system, together with the associated requirements for standardized data reporting, made it possible to apply FDIC procedures more consistently, and supported effective program-wide management. To mitigate program losses effectively in the future, it is critical that the FDIC implement the necessary back-office operations and infrastructure to oversee the program promptly and effectively.

Postscript: Areas for Future Research and Conclusion

A well-informed staff is invaluable when a crisis erupts. A staff that has a strong knowledge of the FDIC's historical resolution experience and a deep understanding of its options and the legal requirements, operational requirements, costs, and policy trade-offs for each option improves the FDIC's ability to make good decisions. During the 2008–2013 crisis, however, the FDIC made numerous choices based on incomplete

information. Although incomplete information is inevitable during periods with heavy bank-failure activity, there may be opportunities to reduce the FDIC's future uncertainties by using information from the recent crisis (both from the FDIC and elsewhere) and the available academic research to analyze questions likely to arise the next time bank failures increase. The next time may be either another crisis or a period of more-moderate increases in failure activity.

Examples of areas in which additional research may prove helpful are the trade-offs in resolving failed banks, costs and benefits of prompt asset sales, early-warning tools, the use of risk-sharing transactions and the incentives embedded in risk-sharing agreements, the market power of asset buyers, and seller financing options.

Trade-Offs in Resolving Failed Banks. Study the trade-offs among minimizing costs, minimizing disruption from failures, minimizing operational and financial risk, minimizing liquidity needs, and encouraging market discipline when failed banks are sold. How should the FDIC balance these trade-offs as it considers what resolution strategies to pursue? Should the balance shift in response to industry conditions and general economic conditions, and, if so, how?[128]

Costs and Benefits of Prompt Asset Sales. The FDIC's strategic shift toward swift liquidation was implemented consistently through all its asset sale programs and was embodied in Annual Performance Goals for prompt marketing of assets and termination of receiverships.[129] This was a fundamental policy choice with broad effect. It yielded notable benefits, such as minimizing asset servicing costs, reducing the FDIC's need for receivership infrastructure, and reducing potential market distortions from excessive government holdings of assets. There were also costs. Because assets were sold promptly during a serious downturn, high risk premiums (and possibly discounts demanded by asset buyers with market power) were embedded in many of the sale prices.[130] Receivership interest earnings were lower.[131] The importance of asset liquidation speed to the resolution process and the importance of the associated costs to the FDIC—and to society—call for careful analysis of the effects that follow from this fundamental policy choice.

---

[128] The FDIC's statutory mandates preclude some potential shifts but allow others.

[129] As noted above, the FDIC sought to market all assets within 90 days and to terminate receiverships (without specific impediments) within three years. The FDIC currently has very similar goals in place. For details on the FDIC's current strategic goals, see FDIC, "Strategic Plans," https://www.fdic.gov/about/strategic/.

[130] The FDIC mitigated the costs by marketing widely and including risk-sharing provisions.

[131] This occurred because the earning assets were sold quickly. Had they remained in receiverships, the receiverships would have collected more interest payments.

Early-Warning Tools. Investigate the possibility of devising early-warning tools that could trigger timely increases in resolution staff yet would be relatively unlikely to yield "false positives" that would lead to excessively high staff levels.

Risk-Sharing. Consider how much risk-sharing is appropriate for the FDIC. How should factors such as industry condition influence the FDIC's use of risk-sharing strategies? In addition, explore how the incentives embedded in the various loss-share, LLC, and securitization contracts influenced (a) the performance of the underlying assets; (b) the servicer's/asset manager's behavior; and (c) the FDIC's losses. What are the implications for future resolution and receivership choices (choice of tools, design for the sharing percentages, thresholds, true-up, and so forth)?

Market Power of Asset Buyers. Consider how the small number of interested and qualified buyers influences franchise and asset sales, and thus how the market power of asset buyers affected the FDIC's losses. How effective were the FDIC's strategies for counteracting the downward pressure on asset prices because of the market power held by asset buyers? What resolution policies, methods, or practices might reduce the extent of that market power and therefore reduce the FDIC's losses?

Seller Financing Options. Consider additional seller financing options for franchise sales, bulk loan sales and ORE sales. The available evidence shows that asset buyers found it difficult to obtain financing early in the 2008–2013 crisis and that asset prices drop materially when financing options are not readily available.[132] The FDIC never offered seller financing for bulk loan sales or ORE sales, and rarely offered it for franchise sales.[133] Some analysts have advocated a broader use of seller financing for retained asset sales.[134]

---

[132] See Andrei Shleifer and Robert W. Vishny, "Liquidation Values and Debt Capacity: A Market Equilibrium Approach," *Journal of Finance* 47, no. 6 (1992): 1343–66; Joao Granja, Gregor Matvos, and Amit Seru, "Selling Failed Banks," *Journal of Finance* 72, no. 4 (2017): 1723–84; Viral Acharya, Sreedhar T. Bharath, and Anand Srinivansan, "Does Industry-wide Distress Affect Defaulted Firms? Evidence from Creditor Recoveries," *Journal of Financial Economics* 85, no. 3 (2007): 787–821; and Viral Acharya, Hyun Song Shin, and Tanju Yorulmazer, "Crisis Resolution and Bank Liquidity," *Review of Financial Studies* 21, no. 6 (2011): 2166–205.

[133] Seller financing was offered only for the three franchise sales where it was used. Seller financing is irrelevant for many commonly used franchise sale structures because acquirers do not need cash to close the transaction. It may be helpful for whole-bank structures where brokered deposits are retained in receivership, for loan pools, and for other combination structures.

[134] See Michael Lea and Kenneth Thygerson, "A Model of the Asset Disposition Decision of the RTC," *Journal of the American Real Estate and Urban Economics Association* 22, no. 1 (1994): 117–33; FDIC, *Final Report of the FDIC/RTC Transition* (1995); and FDIC "FDIC Policies for the RTC." None of these documents suggests universal use of seller financing; instead, they all recommend it in certain circumstances or for certain types of assets (such as for commercial ORE or for troubled assets). In contrast, Office of Management and Budget, "Resolving the Thrift Crisis," 1993, discusses trade-offs associated with seller financing but does not advocate its use.

Despite the credit risk associated with seller financing, it may be worthwhile to consider whether there might be additional situations where seller financing could yield net benefits, and, if so, how to manage risk exposure, set appropriate loan terms and borrower vetting processes, and minimize market distortions.

* * *

Because every crisis—and every failing bank—is unique, crisis resolution necessarily involves making judgments in a difficult environment and with a high degree of uncertainty. During the 2008–2013 crisis, the FDIC successfully resolved 489 bank failures representing $686 billion in assets. Insured deposit balances were protected and receivership assets were liquidated, with the net proceeds used to pay creditors as required by law. The FDIC benefited from (a) a robust set of resolution tools provided by Congress, (b) its previous experience in applying those tools, and (c) its willingness to wield those tools in new ways to respond to new challenges. Moreover, the FDIC considered the various trade-offs in light of the constraints it was operating under and took decisive actions that proved to be quite successful overall. Particularly important examples of such actions were offering loss share early in the crisis and switching to national loan servicing contracts. Nonetheless, there are also lessons to be learned from the FDIC's experience in the crisis of 2008 through 2013, as this section has indicated. Following up on these lessons will further strengthen the FDIC's crisis preparedness, enhancing its ongoing contribution to maintaining the nation's financial stability.

Bibliography

Acharya, Viral, Sreedhar T. Bharath, and Anand Srinivansan. "Does Industry-wide Distress Affect Defaulted Firms? Evidence from Creditor Recoveries." *Journal of Financial Economics* 85, no. 3 (2007): 787–821.

Acharya, Viral, Hyun Song Shin, and Tanju Yorulmazer. "Crisis Resolution and Bank Liquidity." *Review of Financial Studies* 24, no. 6 (2011): 2166–205.

Acharya, Viral, and Tanju Yorulmazer. "Cash-in-the-Market Pricing and Optimal Resolution of Bank Failures." *Review of Financial Studies* 21, no. 6 (2008): 2705–42.

Ashcraft, Adam. "Are Banks Really Special? New Evidence from the FDIC-Induced Failure of Healthy Banks." *American Economic Review* 95, no. 5 (2005): 1712–30.

Bair, Sheila. Remarks by Sheila C. Bair, Chairman, Federal Deposit Insurance Corporation, at the Exchequer Club, Washington, DC, March 21, 2007. https://www.fdic.gov/news/news/speeches/archives/2007/chairman/spmar2107.html.

———. *Bull by the Horns: Fighting to Save Main Street from Wall Street and Wall Street from Itself.* 2012.

Bank of International Settlements (BIS). "A Brief History of the Basel Committee." October 2015. http://www.bis.org/bcbs/history.htm.

Bennett, Rosalind, and Haluk Ünal. "The Effects of Resolution Methods and Industry Stress on the Loss on Assets from Bank Failures." *Journal of Financial Stability* 15 (December 2014): 18–31.

_____. "Understanding the Components of Bank Failure Resolution Costs." *Financial Markets, Institutions and Instruments* 24, no. 5 (2015): 349–89.

Benston, George J., Robert A. Eisenbeis, Paul M. Horvitz, Edward J. Kane, and George G. Kaufman. *Perspectives on Safe and Sound Banking: Past, Present and Future.* 1986.

Benveniste, Larry, Dennis Capozza, Roger Kormendi, and William Wilhelm. "Contract Design for Problem Asset Disposition." *Journal of the American Real Estate and Urban Economics Association* 22, no. 1 (1994): 149–67.

Berkovec, James A., and Nellie J. Liang. "Selection in Failed Bank Auction Prices: An Econometric Model of FDIC Resolutions." Federal Reserve Board Finance and Economics Discussion Series 93-40. 1993. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2277452.

Berkovec, James A., John J. Mingo, and Xeuchun Zhang. "Premiums in Private versus Public Bank Branch Sales." Federal Reserve Board's Finance and Economic Discussion Series Working Paper. 1997. https://www.federalreserve.gov/pubs/feds/1997/199733/199733pap.pdf.

Bernanke, Ben S. "Nonmonetary Effects of the Financial Crisis in the Propagation of the Great Depression." *American Economic Review* 73, no. 3 (1983): 257–76.

Bliss, Robert R., and George G. Kaufman. "U.S. Corporate and Bank Insolvency Regimes: An Economic Comparison and Evaluation." Federal Reserve Bank of Chicago Working Paper 2006-01. 2006. https://www.chicagofed.org/publications/working-papers/2006/wp-01.

Bloom, Nicholas. "The Impact of Uncertainty Shocks." *Econometrica* 77, no. 3 (2009): 623–85.

Bloom, Nicholas, Max Floetotto, Nir Jaimovich, Itay Saporta-Eksten, and Stephen J. Terry. "Really Uncertain Business Cycles." NBER Working Paper Series 18245. 2012. http://www.nber.org/papers/w18245.

Bostic, Raphael W., Stanley D. Longhofer, and Christian L Redfearn. "Land Leverage: Decomposing Home Price Dynamics." *Real Estate Economics* 35, no. 2 (2007): 183–208.

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

Brown, David T., Brian A. Ciochetti, and Timothy J. Riddiough. "Theory and Evidence on the Resolution of Financial Distress." *Review of Financial Studies* 19, no. 4 (2006): 1357–97.

Brunnermeier, Markus K. "Deciphering the Liquidity and Credit Crunch 2007–2008." *Journal of Economic Perspectives* 23, no. 1 (2009): 77–100.

Burr, Stephen. "Practitioner's Corner: Structuring Two Important Real State Finance Transactions." *Real Estate Finance* 27, no. 2 (August 2010): 8–12.

Carns, Frederick S., and Lynn A. Nejezchleb. "Bank Failure Resolution, the Cost Test and the Entry and Exit of Resources in the Banking Industry." *FDIC Banking Review* 5, no. 2 (1992): 1–14.

Cherny, Kent, and O. Emre Ergungor. "Effective Practices in Crisis Resolution and the Case of Sweden." *Economic Commentary,* February 2009, 1–4. https://www.clevelandfed.org/newsroom-and-events/publications/economic-commentary/economic-commentary-archives/2009-economic-commentaries/ec-20090209-effective-practices-in-crisis-resolution-and-the-case-of-sweden.aspx.

Clark, George R., G, Robert Cull, and Mary Shirley. "Empirical Studies of Bank Privatization: An Overview." Working Paper. 2003. http://siteresources.worldbank.org/INTFR/Resources/475459-1107978088492/EmpiricalStudiesofBankPrivatization.pdf.

Cochrane, John H. "Challenges for Cost-Benefit Analysis of Financial Regulation." Working Paper. 2014. https://faculty.chicagobooth.edu/john.cochrane/research/papers/cochrane_benefits_costs_JLS.pdf.

Collier, Charles, Sean Forbush, Daniel A. Nuxoll, and John O'Keefe. "The SCOR System of Off-Site Monitoring: Its Objectives, Functioning, and Performance." *FDIC Banking Review* 15, no.1 (2003): 17–32. https://www.fdic.gov/bank/analytical/banking/2003sep/2_15n3.pdf.

Coval, Joshua, and Erik Stafford. "Asset Fire Sales (and Purchases) in Equity Markets." *Journal of Financial Economics* 86, no. 2 (2007): 479–512.

Cowan, Arnold R., and Valentina Salotti. "The Resolution of Failed Banks during the Crisis: Acquirer Performance and FDIC Guarantees 2008–2010." *Journal of Banking and Finance* 54 (2015): 222–38.

Curry, Timothy, Joseph Blalock, and Rebel Cole. "Recoveries on Distressed Real Estate and the Relative Efficiency of Public versus Private Management." *AREUEA Journal* 19, no. 4 (1991): 495–515.

Davison, Lee K. "The Resolution Trust Corporation and Congress, 1989–1993: Part I." *FDIC Banking Review* 18, no. 2 (2006): 38–60. https://www.fdic.gov/bank/analytical/banking/2006sep/article2/article2.pdf.

———. "The Resolution Trust Corporation and Congress, 1989–1993: Part II." *FDIC Banking Review* 18, no. 3 (2006): 1–30. https://www.fdic.gov/bank/analytical/banking/2007apr/br18n3full.pdf.

DeYoung, Robert. "De Novo Bank Exit." *Journal of Money, Banking and Credit* 35, no. 5 (2003): 711–28.

DeYoung, Robert, Michal Kowalik, and Jack Reidhill. "A Theory of Bank Resolution: Technological Change and Political Economics." *Journal of Financial Stability* 9, No. 4 (2013): 612–27.

Diamond, Douglas W., and Raghuram G. Rajan. "Fear of Fire Sales, Illiquidity Seeking, and Credit Freezes." *Quarterly Journal of Economics* 126, no. 2 (2011): 557–91.

Federal Deposit Insurance Corporation (FDIC). "A Borrower's Guide to an FDIC Insured Bank Failure." https://www.fdic.gov/bank/individual/failed/borrowers/.

———. "Loss-Share Questions and Answers." https://www.fdic.gov/bank/individual/failed/lossshare/.

———. "Mission, Vision, and Values." https://www.fdic.gov/about/strategic/strategic/mission.html.

———. "Strategic Plans." https://www.fdic.gov/about/strategic/.

———. "Structured Transaction Sales." https://www.fdic.gov/buying/historical/structured/index.html.

———. "Study of Purchase and Assumption Transactions." Unpublished Manuscript. Office of Corporate Planning. 1977.

———. *Annual Report*. 1979, 1992, 1997, 1999, 2004–2007, 2009.

———. Board Resolution 11-08 No 077274.

———. "FDIC Policies for the Resolution Trust Corporation." Draft White Paper. S&L Study Group. 1989.

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

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

———. *Resolutions Handbook*. 1998, 2014. https://www.fdic.gov/bank/historical/reshandbook/resolutions_handbook.pdf.

———. "Annual Performance Goals." 2008.

———. Large Bank Deposit Insurance Determination Modernization; Interim and Final Rules. 73 *Federal* Register 41180–41211, July 17, 2008. https://www.fdic.gov/regulations/laws/federal/2008/08Final717.pdf.

———. Deposit Insurance Regulations; Revocable Trust Accounts. 73 *Federal Register* 56700–56712, September 30, 2008. https://www.fdic.gov/regulations/laws/federal/2008/08sep26rule.pdf.

———. Record Keeping Requirements for Qualified Financial Contracts. 73 *Federal Register* 78162–78173, December 22, 2008. https://www.fdic.gov/regulations/laws/federal/2008/08rulead30.pdf.

———. "FDIC Expands Bidder List for Troubled Institutions." Press Release PR-127-2008, November 26, 2008. https://www.fdic.gov/news/news/press/2008/pr08127.html.

———. Processing of Deposit Accounts in the Event of an Insured Depository Institution Failure. 74 *Federal Register* 5797–5807, February 2, 2009. https://www.fdic.gov/regulations/laws/federal/2009/09finalad26.pdf.

———. Proposed Statement of Policy on Qualifications of Failed Bank Acquisitions. 74 *Federal Register* 32931–32934, July 9, 2009. https://www.fdic.gov/regulations/laws/federal/2009/09policyJuly9.pdf.

———. Final Statement of Policy on Qualifications of Failed Bank Acquisitions. 74 *Federal Register* 45440-45449, September 2, 2009. https://www.fdic.gov/regulations/laws/federal/2009/09FinalSOP92.pdf.

———. Prepaid Assessments. 74 *Federal Register* 59056–59066, November 17, 2009. https://www.fdic.gov/regulations/laws/federal/2009/09finalad51nov17.pdf.

———. FDIC Laws, Rules and Regulations. 2016. https://fdic.gov/regulations/laws/rules/.

———. Recordkeeping for Timely Deposit Insurance Determination. 81 *Federal Register* 87734–87767, December 5, 2016. https://www.gpo.gov/fdsys/pkg/FR-2016-12-05/pdf/2016-28396.pdf.

FDIC Office of the Inspector General. "Audit of the Least Cost Test Model." Audit Report 01-025. 2001. https://www.fdicig.gov/sites/default/files/publications/01-025.pdf.

———. "Evaluation of the FDIC's Monitoring of Loss Share Agreements." Report EVAL-12-002. 2012. https://fdicig.gov/sites/default/files/publications/12-002EV.pdf.

Fitch. "Risk Growing in Mortgage Loan Modifications: Historical Modification Data Review." February 9, 2017. https://www.loansafe.org/wp-content/uploads/2017/02/Risk-Growing-in-Mortgage-Loan-Modifications.pdf.

Fraser, Donald R., and Hag Zhang. "Package Bidding in Thrift Resolutions." *Journal of Financial Services Research* 11, no. 3 (1997): 283–94.

Froot, Kenneth A. "The Market for Catastrophe Risk: a Clinical Examination." *Journal of Financial Economics* 60, (2001): 529–71.

Gardner, Cyrus J., Roger C. Kormendi, and Gregg M. Breen. "Retained Interest Transactions vs. Bulk Sales: Evidence from the RTC." *Journal of Financial Engineering* 5, no. 2 (June 1996): 85–116.

Gaudet, Richard B. "Loss-Sharing Agreements between the FDIC and Acquiring Banks: Advice for the Borrower." *American Bankruptcy Institute Journal* 29, no. 3 (April 2010): 38–39, 62–63.

Geithner, Timothy F. *Stress Test: Reflections on Financial Crises.* 2014.

Gilbert, Alton, and Levis Kochin. "Local Economic Effects of Bank Failures." *Journal of Financial Services Research* 3, no. 4 (1989): 333–45.

Granja, Joao. "The Relation between Bank Resolution and Information Environment: Evidence from the Auctions for Failed Banks." *Journal of Accounting Research* 51, no. 5 (December 2013): 1031–70.

Granja, Joao, Gregor Matvos, and Amit Seru. "Selling Failed Banks." *Journal of Finance* 72, no. 4 (2017): 1723–84.

Gupta, Atul, and Lalatendu Misra. "Failure Resolution in the U.S. Thrift and Banking Industries." *Financial Management* 29, no. 4 (1999): 87–105.

International Association of Deposit Insurers. "Enhanced Guidance for Effective Deposit Insurance Systems: Ex Ante Funding." 2015. http://www.iadi.org/en/assets/File/Papers/Approved%20Guidance%20Papers/IADI_Enhanced_Guidance_on_Ex-Ante_Funding_June_2015.pdf.

Jacques, Kevin, and Peter Nigro. "Failed Bank Acquisitions and Lending Activity." *Business Economics* 30, no. 3 (1995): 57–61.

Kane, Edward J. 1990. "Principal-Agent Problems in S&L Salvage." *Journal of Finance* 45, no. 3 (1990): 755–64.

Kindleberger, Charles P. *Manias, Panics and Crashes: A History of Financial Crises*. 4th ed. 2000.

Klemperer, Paul. "Auction Theory: A Guide to the Literature." *Journal of Economic Surveys* 13, no. 3 (1999): 227–86.

Kormendi, Roger, Victor Bernard, S. Craig Pirrong, and Edward Snyder. *Crisis Resolution in the Thrift Industry*. 1989.

Krishna, Vijay. *Auction Theory*. 2009.

Lane, Morton, and Olivier Mahul. "Catastrophe Risk Pricing." World Bank Policy Research Working Paper 4765. 2008. https://openknowledge.worldbank.org/bitstream/handle/10986/6900/WPS4765.pdf?sequence=1&isAllowed=y.

Lea, Michael, and Kenneth Thygerson. "A Model of the Asset Disposition Decision of the RTC." *Journal of the American Real Estate and Urban Economics Association* 22, no. 1 (1994): 117–33.

Lee, Yan, and Chiwon Yom. "The Entry, Performance, and Risk Profile of De Novo Banks." FDIC Center for Financial Research Working Paper 2016-03. 2016. https://www.fdic.gov/bank/analytical/cfr/2016/wp2016/2016-03.pdf.

Madaus, Stephan. "Bank Failure and Pre-Emptive Planning: The Special Requirements of a Bank Resolution and a 'Default Resolution Option.'" Working Paper. 2013. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2277452.

Marino, James A., and Lynn Shibut. "Resolution Strategies for Large U.S. Commercial Banks." Unpublished Manuscript. 2006.

Martin, Frank Righeimer. "Private Equity Investment in Failed Banks: Appropriate Investors Welcome." *North Carolina Banking Institute* 14, no. 1 (2010): 403. http://scholarship.law.unc.edu/ncbi/vol14/iss1/17.

Megginson, William L., Robert C. Nash, Jeffry M. Netter, and Annette B. Poulsen. "The Choice of Private versus Public Capital Markets: Evidence from Privatizations." *Journal of Finance* 59, no. 6 (2004): 2835–70.

Murton, Arthur J. "Resolving a Large Bank: The FDIC's Perspective." Speech given at the Seventh Annual International Banking Conference at the Federal Reserve Bank of Chicago, October 1, 2004.

Nanda, Sudhir, James E. Owens, and Ronald C. Rogers. "An Analysis of Resolution Trust Corporation Transactions: Auction Market Process and Pricing." *Real Estate Economics* 25, no. 2 (1997): 271–94.

Nguyen, Hoai-Luu. "Do Bank Branches Still Matter? The Effects of Closings on Local Economic Outcomes." Working Paper. December 2014. http://economics.mit.edu/files/10143.

Nichols, Joseph B., Stephen D. Oliner, and Michal R. Mulhall. "Swings in Commercial and Residential Land Prices." *Journal of Urban Economics* 73 (2013): 57–76.

Office of the Comptroller of the Currency (OCC). "OCC Conditionally Approves First National Bank Shelf Charter to Expand Pool of Qualified Bidders for Troubled Institutions." NR 2008-137, November 21, 2008. https://www.occ.gov/news-issuances/news-releases/2008/nr-occ-2008-137.html.

———. "The Comptroller's Handbook." 2013.

Office of Management and Budget (OMB). "Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs." Circular A-94. 1992.

———. "Resolving the Thrift Crisis." 1993.

Office of Personnel Management (OPM). "Hiring Information: Direct Hire Authority." https://www.opm.gov/policy-data-oversight/hiring-information/direct-hire-authority/#url=Fact-Sheet.

———. "Workforce Restructuring." https://www.opm.gov/policy-data-oversight/workforce-restructuring/reductions-in-force/.

———. "Workforce Reshaping Operations Handbook," 58–59. March 2017. https://www.opm.gov/policy-data-oversight/workforce-restructuring/reductions-in-force/workforce_reshaping.pdf.

Pyhrr, Stephen A., Waldo L. Born, Rudy R. Robinson III, and Scott R Lucas. "Real Property Valuation in a Changing Economic and Market Cycle." *Appraisal Journal,* January 1996, 14–26.

Reinhart, Carmen M., and Kenneth S. Rogoff. *This Time Is Different*. 2009.

Resolution Trust Corporation (RTC). "Hard to Sell Asset Review Project." 1992.

———. *RTC Statistical Abstract*. 1995.

Sachs, Jeffrey D. "Conditionality, Debt Relief, and the Developing Country Debt Crisis." In *Developing Country Debt and Economic Performance,* edited by Jeffrey D. Sachs. Vol. 1, *The International Financial System,* 255–96. 1989.

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

Shirley, Mary, and Patrick Walsh. "Public vs. Private Ownership: The Current State of the Debate." World Bank Policy Research Working Paper. 2000.

Shleifer, Andrei, and Robert W. Vishny. "Liquidation Values and Debt Capacity: A Market Equilibrium Approach." *Journal of Finance* 47, no. 6 (1992): 1343–66.

———. "Fire Sales in Finance and Macroeconomics." *Journal of Economic Perspectives* 25, no. 1 (2011): 29–48.

Speigel, Mark M. "The Disposition of Failed Japanese Bank Assets: Lessons from the U.S. Savings and Loan Crisis." Federal Reserve Bank of San Francisco *Economic Review,* 2002, 1–15. https://www.frbsf.org/economic-research/files/article1-2.pdf.

Stanton, Thomas H. "Lessons Learned: Obtaining Value from Federal Asset Sales." *Public Budgeting & Finance,* Spring 2003, 22–44.

Subramanian, Guhan. *Negotiauctions: New Dealmaking Strategies for a Competitive Marketplace*. 2010.

Turmoil in U.S. Credit Markets: Recent Actions Regarding Government Sponsored Entities, Investment Banks and Other Financial Institutions, Before the Senate Banking, Housing, and Urban Affairs Committee. 110th Cong. (September 23, 2008) (testimony by Henry M. Paulson Jr., Secretary of the Treasury). https://www.gpo.gov/fdsys/pkg/CHRG-110shrg50400/html/CHRG-110shrg50400.htm.

U.S. General Accounting Office (GAO). "1992 Bank Resolutions: FDIC Chose Methods Determined Least Costly, but Needs to Improve Process." GAO/GGD-94-107. 1994. http://www.gao.gov/assets/160/154294.pdf.

U.S. Government Accountability Office (GAO). "Report to Congressional Committees, Federal Deposit Insurance Corporation, Human Capital and Risk Assessment Programs Appear Sound, but Evaluations of Their Effectiveness Should Be Improved." GAO-07-255. 2007. https://www.gao.gov/assets/260/256532.pdf.

———. "Causes and Consequences of Recent Bank Failures." GAO-13-71. 2013. https://www.gao.gov/assets/660/651154.pdf.

U.S. House of Representatives. Report Number 102-330. "Federal Deposit Insurance Corporation Improvement Act of 1991, To accompany H.R. 3768." November 19, 1991.

U.S. Senate. Report Number 102–167. "Federal Deposit Insurance Corporation Improvement Act of 1991, To accompany S. 543." October 1, 1991.

U.S. Small Business Administration. "Limited Liability Company." www.sba.gov/starting-business/choose-your-business-structure/limited-liability-company.

Waites, Joe. "Why Lenders Can't Do Workouts." *American Banker,* February 4, 2010.