Overview

Introduction

In 2008, the United States was confronted with its most severe financial crisis since the Great Depression. The financial crisis, in turn, resulted in a prolonged economic contraction—the Great Recession—with effects that spread throughout the global economy. Many books and papers have been written on the causes and implications of the financial crisis of 2008 and 2009.

This volume reviews the experience of the FDIC from 2008 to 2013, a period during which it was confronted with not one but two interconnected and overlapping crises. First, the financial crisis in 2008 and 2009 threatened large financial institutions of all kinds, both inside and outside the traditional banking system, and thus endangered the financial system itself. Second, a banking crisis, accompanied by swiftly increasing numbers of both troubled and failed insured depository institutions, began in 2008 and continued until 2013. For a chronology of significant events over this period, see the timeline that appears at the end of this overview.

The two crises put the FDIC in the position of having to face multiple challenges simultaneously. In response to the financial crisis, the basic problem was the need to contain systemic risk and restore financial stability. To achieve this, the FDIC took unprecedented actions using emergency authorities. In response to the banking crisis, the FDIC had to deal with challenges relating to bank supervision, the management of the Deposit Insurance Fund, and the resolution of failed banks—challenges similar to those the FDIC had faced in the banking and thrift crisis of the 1980s and early 1990s.

This study examines the FDIC's response to both crises and seeks to contribute to an understanding of what occurred and also to present some lessons the FDIC has learned from its experience. The study is divided into two parts. Part 1 focuses on the financial crisis of 2008–2009—its causes and the FDIC's response—and Part 2 focuses on the FDIC's response to the banking crisis of 2008–2013.

As delineated in the first chapter of Part 1, the causes of the financial crisis lay partly in the housing boom and bust of the mid-2000s; partly in the degree to which the U.S. and global financial systems had become highly concentrated, interconnected, and opaque; and partly in the innovative products and mechanisms that combined to link homebuyers in the United States with financial firms and investors across the world. As delineated in the remaining two chapters of Part 1, the financial crisis that followed the housing market's collapse was so severe that, for the first time, the U.S. government turned to a statutory provision that had been put in place as part of the Federal Deposit Insurance Corporation Improvement Act of 1991 to help it deal with systemic risks.

This provision prohibited assistance to failing banks if FDIC funds would be used to protect uninsured depositors and other creditors—but the act also contained a provision allowing an exception to the prohibition when the failure of an institution would pose a systemic risk.[1] In 2008, by relying on the provision that allowed a systemic risk exception, the FDIC was able to take two actions that maintained financial institutions' access to funding: the FDIC guaranteed bank debt and, for certain types of transaction accounts, provided an unlimited deposit insurance guarantee. In addition, the FDIC and the other federal regulators used the systemic risk exception to extend extraordinary support to some of the largest financial institutions in the country in order to prevent their disorderly failure.

Accompanying the financial crisis was the banking crisis, which challenged every aspect of the FDIC's operations, not only because of its severity but also because of the speed with which problems unfolded. Focused on specifically in Part 2 of this study are (1) bank supervision (how significant was industry risk, what were the characteristics of troubled and failed banks, what role was played by bank examinations and other supervisory efforts before and during the crisis, and how effective were these efforts); (2) management of the Deposit Insurance Fund and the methodology used for assessing banks for deposit insurance coverage, both before and during the crisis (what changes were made and what extraordinary measures were required); and (3) the resolution of the hundreds of banks that failed during the six-year period (what methods did the FDIC pursue and how effective were they).

In the remainder of this overview, a brief account of the magnitude of the problems the FDIC faced is followed by synopses of the study's six chapters, a brief conclusion, a postscript about the banking industry in 2017, and a timeline of the crisis period.

The Magnitude of the Problems

It is important to recall just how significant both of these crises were. The financial crisis and the recession with which it was associated were the worst economic dislocation since the Great Depression. There were large losses in economic output and large declines in employment, household wealth, and other economic indicators. Not only did the U.S. economy lose 8.8 million jobs, but half of those losses occurred within the six months that immediately followed the height of the financial crisis in the autumn of 2008. In 2009, the year when foreclosures peaked, 2.8 million mortgage loans were in foreclosure, almost four times the number in 2005.[2] The cumulative net cost to the U.S. economy has been estimated by the U.S. Government Accountability Office and

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1 See pp. xii-xiii for further explanation of the systemic risk exception.

2 These are FDIC estimates based on data from the Mortgage Bankers Association and the American Housing Survey.

others to range from more than $10 trillion to $14 trillion in today's dollars, or up to roughly 80 percent of an entire year's gross domestic product.[3]

As for the financial crisis, its severity was reflected in the size of the government's emergency response. The Federal Reserve initiated numerous programs designed to provide short-term liquidity to banks and other financial institutions as well as to borrowers and investors. In the six weeks following the September 15, 2008, bankruptcy of the investment bank Lehman Brothers, the Federal Reserve's balance sheet doubled to about $2 trillion.[4] On September 19, the Department of the Treasury announced that it would provide a guarantee for money market mutual funds, standing behind more than $3.5 trillion in assets.[5] On October 3, Congress authorized $700 billion to fund the Troubled Asset Relief Program (TARP), and about $245 billion of that would be used to shore up the capital of financial institutions.[6] Ten days later the FDIC announced its Temporary Liquidity Guarantee Program that would eventually guarantee more than $600 billion in debt issued by financial institutions and their affiliates.[7] At the level of individual firms, JPMorgan Chase's acquisition of the investment bank Bear Stearns in May 2008 was facilitated by a $29 billion loan from the Federal Reserve Bank of New York.[8] The multinational insurance corporation American International Group (AIG) initially was rescued with an $85 billion credit facility, also from the Federal Reserve Bank of New York.[9] Fannie Mae and Freddie Mac, two government-sponsored enterprises that support the mortgage market, were taken into government conservatorships that the U.S. Treasury would eventually support with a total investment of $189.5 billion.[10]

The banking crisis, too, was severe. From 2008 through 2013 almost 500 banks failed, at a cost of approximately $73 billion to the Deposit Insurance Fund (DIF). Among these failures was that of IndyMac, in June 2008, which, with losses of about $12 billion, remains the most expensive failure in FDIC history; and, in September 2008, that of Washington Mutual, which, with $307 billion in assets, remains the largest failure in

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[3] U.S. Government Accountability Office, *Financial Regulatory Reform: Financial Crisis Losses and Potential Impact of the Dodd-Frank Act*, GAO 13-180, February 14, 2013, https://www.gao.gov/products/GAO-13-180.

[4] Changes in the Fed's balance sheet are detailed at https://www.federalreserve.gov/monetarypolicy/bst_recenttrends.htm.

[5] The Treasury's program is described at https://www.treasury.gov/press-center/press-releases/Pages/hp1161.aspx; for assets in money market mutual funds in 2008, see https://fred.stlouisfed.org/series/MMMFFAQ027S.

[6] A discussion of TARP investments in banks can be found at https://www.treasury.gov/initiatives/financial-stability/TARP-Programs/bank-investment-programs/Pages/default.aspx.

[7] See chapter 2 of this volume.

[8] For the Bear Stearns transaction, see https://www.federalreserve.gov/regreform/reform-bearstearns.htm.

[9] For the initial aid to AIG, as well as additional government actions to assist the firm, see https://www.newyorkfed.org/aboutthefed/aig.

[10] https://www.fhfa.gov/Conservatorship/pages/history-of-fannie-mae--freddie-conservatorships.aspx.

FDIC history. Although these and other large banks failed, most of the failed institutions were community banks, often in parts of the country where the subprime mortgage crisis and the recession made real estate problems more severe than elsewhere. And although the number of failures during this period was considerably lower than it had been in the 1980s and early 1990s, this crisis unfolded much more rapidly. The DIF fell to the lowest point in its history, a negative $20.9 billion on an accounting basis, by year-end 2009. Less than two years earlier, in March 2008, it had reached what was then an all-time high of $52.8 billion.[11] During the same period (between March 2008 and year-end 2009), the number of problem banks rose from 90 to just over 700. Problem banks would peak in early 2011 at almost 900, constituting nearly 12 percent of all FDIC-insured institutions.[12]

The large numbers of troubled and failed banks and the need to successfully manage the FDIC's funding requirements contributed to a substantial increase in workload across all operational areas of the FDIC.

Part 1: Financial Crisis and Response

The first chapter in Part 1 explores the causes of the financial crisis. The remaining two chapters focus on the ways in which the FDIC confronted the systemic consequences of that crisis in 2008 and 2009.

Chapter 1. Origins of the Crisis

The U.S. financial crisis of 2008 followed a boom and bust cycle in the housing market that originated several years earlier and exposed vulnerabilities in the financial system. The downturn began as a housing crisis that initially seemed concentrated in certain states but eventually led to a nationwide decline in house prices. The financial system had been integral to the housing boom and was highly exposed to the housing market. Thus, when the housing downturn proved to be exceptionally severe, it threatened to drag down the financial system with it in the absence of significant government intervention. The collapse of the U.S. housing market in 2007 and the accompanying financial crisis resulted in a prolonged economic contraction—the Great Recession—the effects of which spread throughout the global economy.

The nationwide housing expansion of the early 2000s was rooted in a combination of factors, including a extended period of low interest rates. By mid-2003, both long-term

[11] See chapter 5 of this volume.

[12] See chapter 4 of this volume.

mortgage rates and the federal funds rate (the rate at which depository institutions lend reserve balances to each other overnight and which affects other market interest rates) had declined to levels not seen in at least a generation.[13] One response to low interest rates was an acceleration in U.S. home price appreciation to double-digit rates for the first time since 1980.[14] Another response was a series of mortgage market developments that dramatically weakened credit standards in mortgage lending; the weakened standards were reflected most prominently in subprime, Alt-A, and hybrid ARM instruments. These market developments were associated with a glut of savings held by investors seeking high-yield assets; a complex and opaque securitization process that bundled mortgages into mortgage-backed securities; the use of poorly understood derivative products; and speculation based on the presumption that housing prices would continue to increase.

Other factors were in play as well in the years leading up to and during the housing market expansion. Financial innovation and deregulation contributed to an environment in which the U.S. and global financial systems became far more concentrated, more interconnected, and, in retrospect, far less stable than they had been in previous decades. The conversion of housing assets to financial assets through the development of various mortgage securities and derivatives created risks that were not well understood and that exposed institutions with higher leverage to greater losses in the event mortgage defaults were to increase. The factors that helped fuel a housing boom therefore made the U.S. financial system more vulnerable to collapse in times of stress.

Initial signs of the housing collapse to come emerged in 2006, as the housing market expansion slowed. The slowdown eliminated the expectation of future investment gains and, along with it, the ability of borrowers to refinance. Without the expectation of rising prices, lenders were unwilling to originate new mortgages. As interest rates rose and house prices began to fall, many homeowners became unable to meet mortgage payments on their existing loans or refinance into a new loan, and mortgage defaults rose rapidly.

Yet, through the end of 2006, most macroeconomic indicators continued to suggest that the U.S. economy would proceed uninterrupted on its path of moderate growth. There was little in the way of financial data to suggest that the U.S. and global economies were on the verge of a financial system meltdown. In hindsight, however, we know that by the mid-2000s the United States was experiencing a housing price bubble of historic proportions, and by 2006 the first signs of trouble were already apparent. In 2007, when the bubble burst, the financial systems of the world's most advanced economies were brought relatively quickly to the brink of collapse.

How did this happen? Ultimately, as house prices declined nationwide and mortgage defaults began rising, the value of all the mortgage-backed securities deteriorated. The rise

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13 In July 2003, the federal funds rate declined to 1.01 percent, its lowest level in 45 years. In June 2003, the Freddie Mac 30-year conventional mortgage rate fell to 5.21 percent, the lowest level in the 32-year history of the Primary Mortgage Market Survey.

14 S&P CoreLogic Case-Shiller U.S. Home Price Index.

in defaults, by undermining the value of trillions of dollars of mortgage-backed securities, severely disrupted the securitization funding mechanism itself. That mechanism—the securitization system that generated mortgage-backed securities from mortgages—had become opaque and very complex, and the financial institutions involved were highly leveraged. These securities were further used to create various mortgage assets and derivatives intended to diversify the risk. However, the lack of transparency and the complexity of the securities masked the risk, and the high leverage left investors with little capital to cushion loss. Moreover, the financial institutions had underpriced risk, having been lulled into complacency by the prolonged period of economic stability that preceded the onset of problems. When mortgage defaults began to rise, the system's interconnectedness, complexity, lack of transparency, and high leverage exacerbated the effects of the crisis. Eventually, many of the largest financial institutions suffered catastrophic losses on their portfolios of mortgage-related assets, and these losses resulted in severe liquidity shortages. Even financial institutions without large exposures to mortgage assets or derivatives were affected because they were deeply interconnected with the financial system in which these exposures played so significant a role.

Observing the devastating cascade of falling house prices, subprime mortgage defaults, bankruptcies, and write-downs in the value of mortgage assets, investors and creditors lost confidence in the financial markets. The credit markets froze, and at the same time many overleveraged financial institutions were forced to sell assets at fire-sale prices, further reducing liquidity. Under the accounting rules of the time, these asset sales only precipitated further rounds of asset write-downs. Eventually, the situation became so dire that government interventions on an unprecedented scale were undertaken to break the downward spiral of defaults and to restore confidence in, and functionality to, the financial marketplace.

Chapter 2. The Temporary Liquidity Guarantee Program: A Systemwide Systemic Risk Exception

In the fall of 2008, credit markets—particularly short-term markets—were essentially frozen. Many banks and bank holding companies found it hard to roll over debt at a reasonable cost. In early October, as these problems continued to worsen in many nations, the G7 finance ministers announced a plan that focused on maintaining liquidity, strengthening capital, and preserving market stability. As a result, many advanced economies chose to both guarantee debt issued by financial institutions and expand deposit insurance guarantees.

The U.S. government needed to find not only a mechanism by which bank debt could be guaranteed but also the resources that would be needed to stand behind that guarantee. The mechanism was provided by the systemic risk exception (SRE) established under the Federal Deposit Insurance Corporation Improvement Act of 1991. The act generally required the FDIC to resolve failed banks in a manner that was least costly to the Deposit Insurance Fund and required the FDIC not to deviate from this least-cost requirement in order to protect uninsured depositors and other creditors. But the act also included the SRE provision that permitted the suspension of this "least cost" requirement if the FDIC Board and the Federal Reserve Board each voted to recommend the exception to the Secretary of the Treasury, who, in consultation with the President, then determined that the exception was warranted. Invoking the SRE required a consensus that closing the bank in question would have "serious adverse effects on economic conditions and financial stability" and that providing assistance under the SRE would "avoid or mitigate such adverse effects."[15]

A broad interpretation of the SRE gave policymakers an avenue through which the FDIC could (1) extend its guarantee to newly issued debt instruments of FDIC-insured institutions, their holding companies, and their affiliates; and (2) provide unlimited deposit insurance coverage of non-interest-bearing transaction accounts. The extension of the FDIC guarantee to the newly issued debt instruments would come under a program to be called the Debt Guarantee Program (DGP). The unlimited deposit insurance coverage would come under a program to be called the Transaction Account Guarantee Program (TAGP). Together, the DGP and TAGP made up the FDIC's Temporary Liquidity Guarantee Program (TLGP), which was designed to preserve and enhance the liquidity of the banking system during a time of crisis.

It should be noted that the TLGP was integral to a wider U.S. government response to systemic risk in the banking system. At the same time that the FDIC was developing the TLGP, the Department of the Treasury, using an authority and funding provided by Congress, used the TARP to inject capital into the nation's banks. The Federal Reserve added the Commercial Paper Funding Facility (CPFF) to the series of programs it had been undertaking since 2007 to provide liquidity to borrowers and investors. The programs launched by the FDIC, the Treasury, and the Federal Reserve were designed to work together to restore liquidity to the financial system.

Policymakers had to decide how the specifics of the FDIC's TLGP would be implemented. This was particularly true for the debt guarantee component, as it was unprecedented and thus created challenges for the agency. How broad should the guarantee be? Should it cover debt already outstanding? Should it cover debt issued by bank holding companies and affiliates as well as by insured depository institutions? Should fees be assessed for participation, and if so, how much should be charged? Policymakers reached a consensus that only newly issued debt would be guaranteed, that bank holding company debt would be eligible but that participation by thrift holding companies would be limited, and that applications for debt guarantees by nonbank affiliates would have to

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[15] 12 U.S.C. §1823 (G) (1994).

be approved by the FDIC. It was also agreed that low but meaningful fees for the FDIC guarantee were appropriate. The program was designed to be funded by the banking industry and not by taxpayers or the DIF.

For the two programs to be in place on October 14, 2008—the day the TLGP would be announced—the FDIC had to work swiftly. As noted above, the debt guarantee component created the most complex challenges because the FDIC had never administered a program that guaranteed nondeposit liabilities. But through a consultative process with the banking industry as well as expedited rulemaking that provided for public notice and comment, the FDIC was able to significantly improve the program during its initial months.

Participation in both of these programs was voluntary. After the first month, during which all eligible entities were covered, eligible entities were able to opt out of either one of the programs or both. Initially, more than half of the eligible entities remained in the DGP, but a far greater proportion of insured institutions remained in the TAGP. In the end, just over 100 mostly large entities issued guaranteed debt.

The DGP capped guaranteed debt issuance in a way that would allow participants to roll over existing debt and have some capacity to allow debt issuance to grow modestly. Initially, the DGP was to end on June 30, 2009, and the guarantee was to expire on June 30, 2012, but the FDIC extended the program to facilitate an orderly exit. The end-date was moved to October 31, 2009, and the guarantee period to December 31, 2012. In May 2009, guaranteed debt outstanding peaked at about $350 billion.

The FDIC at first proposed a flat pricing mechanism but quickly changed to a sliding scale based on debt maturity. Some economists have suggested that the FDIC's pricing method could have been more sophisticated and that the method used led to a larger subsidy than was necessary. But it is important to note that pricing was not the only tool with which the FDIC addressed risk: considerations of safety and soundness led the FDIC to restrict or prohibit the DGP participation of more than 1,600 insured institutions and 1,400 bank holding companies.

The TAGP guaranteed, until year-end 2009, all funds held in non-interest-bearing transaction accounts at participating banks, but the program was extended twice, first through June 30, 2010, and then through year-end 2010. This was the first time the FDIC had offered deposit coverage over the statutory amount, and the increase was designed to avoid runs at healthy banks. The TAGP charged fees for participation, first a flat rate but then, with the first extension, at a rate that depended on risk as reflected by an institution's deposit insurance assessment category.[16]

Had fees from the TLGP been insufficient to cover the program's expenses, the FDIC would have had to levy an assessment on all insured depository institutions to make good the loss. However, in the end the TLGP's fees greatly exceeded the program's costs: the

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[16] Assessment categories are discussed in chapter 5 of this volume.

FDIC collected $10.4 billion in DGP fees but lost only $153 million because of defaults. For the TAGP the FDIC collected $1.2 billion in fees, and at year-end 2016 the program's costs were $1.5 billion.

The DGP reopened short- and medium-term debt markets to financial institutions, enabling these institutions to address their financing needs during a period of unprecedented turmoil in the financial system. The DGP lowered the firms' cost of funding because DGP debt received the same ratings that U.S. government securities received. The program allowed debt markets to stabilize, and starting in early 2009, banks were able gradually to increase the amount of non-guaranteed debt they issued, so that by a year after its creation, the DGP was terminated without difficulty.

The TAGP made a difference by stabilizing deposit funding for banks. Many banks, particularly community banks, depend on transaction account deposits as a source of funds, but because of the crisis there was a substantial risk that businesses and municipalities that maintained such accounts would withdraw large amounts of deposits. The TAGP significantly lessened that risk.

Chapter 3. Use of Systemic Risk Exceptions for Individual Institutions during the Financial Crisis

In late 2008 and early 2009, the systemic risk exception was invoked in response to serious financial difficulties at three of the nation's largest banking organizations: Wachovia Corporation (Wachovia), Citigroup, Inc. (Citigroup), and Bank of America Corporation (Bank of America, or BofA).[17]

Wachovia. As of June 2008, Wachovia had the fourth-largest volume of banking assets in the United States and was the largest holder of payment-option adjustable rate mortgages (ARMs). On September 25, 2008, Washington Mutual (WaMu), the nation's second-largest holder of payment-option ARMs, failed. Wachovia was already having difficulty meeting its liquidity needs, and WaMu's failure added to existing concerns among Wachovia's depositors and creditors, placing additional funding stress on the institution. On Friday September 26, the day after WaMu's failure, Wachovia informed its lead federal supervisor, the Office of the Comptroller of the Currency (OCC), that it would be unable to obtain the funds needed to pay creditor claims. Wachovia also identified Citigroup and Wells Fargo as potential buyers.

This situation highlighted the constraints that were placed on the FDIC's resolution options when responding to the failure of a large, complex institution during a time of severe financial market distress. Although the FDIC had successfully resolved more than

[17] The SRE that was recommended for Bank of America (on January 15, 2009) was never formally implemented.

2,000 failed banks in the past, it determined that letting Wachovia fail could be highly problematic for the nation's economy. Under a standard "least cost" resolution, the FDIC would be responsible for resolving the banking subsidiary, but the holding company and other subsidiaries would be resolved under bankruptcy law. Shareholders would likely be wiped out and creditors would suffer significant losses, in some cases leading directly to losses at other financial institutions. Moreover, imposing losses on Wachovia commercial paper held by money market mutual funds, one of which had recently "broken the buck" (meaning that the fund's net asset value dropped below the desired and normally maintained target of one dollar per share), could have led to a general loss of confidence in financial institutions that might cause short-term funding markets to virtually cease.[18] The purchase offers from both Citigroup and Wells Fargo, however, called for assistance that would not impose losses on Wachovia shareholders or other nondeposit creditors. Recognizing the risk that a least-cost resolution could amplify the systemic financial crisis that was then underway, the FDIC and other policymakers concluded it was necessary to invoke the SRE and provide assistance to debtholders and shareholders in addition to insured depositors.

On September 29, the FDIC and the Federal Reserve Board (FRB) recommended invoking the SRE for the first time since it was created under the Federal Deposit Insurance Corporation Improvement Act of 1991. After consultation with the President, the Secretary of the Treasury concurred with this recommendation, and financial assistance under the SRE was approved. The FDIC Board, estimating that the Citigroup proposal would result in no net loss to the DIF, chose the Citigroup bid over the Wells Fargo bid as the least costly of the available methods for avoiding the serious adverse systemic effects that would have resulted from Wachovia's failure. The Citigroup bid included a government guarantee on a pool of approximately $312 billion in assets. Citigroup and Wachovia signed a short exclusivity agreement to complete an open-bank acquisition with an assistance package from the FDIC.

Shortly thereafter, however, on October 2, Wells Fargo made a new offer to acquire all of Wachovia's operations. This offer required no assistance from the FDIC, and it provided Wachovia shareholders a higher price than the Citigroup proposal would have provided. This new proposal by Wells Fargo benefited from a Treasury ruling two days earlier that limited the tax consequences of the acquisition. Before the end of the day on October 2, Wachovia's board had approved the merger with Wells Fargo.

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18 FDIC, "Memorandum to the FDIC Board of Directors Regarding Wachovia," September 29, 2008, http://fcic-static.law.stanford.edu/cdn_media/fcic-docs/2008-09-29_Memo_to_the_FDIC_Board_of_Directors.pdf.

The successful acquisition of Wachovia negated any need for FDIC assistance, and no assistance was provided under the SRE. Wachovia was able to continue normal operations, and the projected adverse effects of a least-cost resolution were averted. Nevertheless, invoking the SRE set an important precedent by signaling to financial markets that the government was willing to take action to avert systemic problems in the banking industry.

Citigroup. In 2008, Citigroup was one of the largest financial institutions in the world. As of September 30, 2008, Citigroup had total consolidated assets of just over $2 trillion, with approximately $1.2 trillion in assets in its lead bank subsidiary, Citibank, N.A. (Citibank). Citigroup's vulnerability lay in its exposure to credit and market losses coupled with its dependence on international operations for funding.[19] Citigroup had significant amounts of commercial paper and other debt outstanding, and it was a major participant in payment, clearing, and central counterparty arrangements.

On October 9, Citigroup announced it would stop pursuing the previously announced acquisition of Wachovia. On October 16, Citigroup reported a net loss of $2.8 billion for the third quarter of 2008.[20] Despite Citigroup's receipt of substantial government support through broad-based Treasury, Federal Reserve, and FDIC programs such as the TARP, Federal Reserve lending, and the DGP, respectively, the company's financial condition continued to deteriorate through early November.

By November 20, the banking agencies and the Treasury had begun discussing additional, institution-specific assistance that would involve an SRE. The next day, the cost of insurance against a Citigroup default on its bonds more than doubled. Regulators projected that if deposit outflows continued, Citibank would be unable to pay its obligations or meet expected deposit outflows by the following week.

The banking agencies and the Treasury agreed that the potential failure of Citigroup presented a serious systemic risk. On November 23, the FDIC and the FRB each recommended that the Secretary of the Treasury invoke the SRE to allow open-bank assistance for Citigroup. There was no viable acquirer for an institution with the size, complexity, and global operations of Citigroup. The Secretary of the Treasury, having consulted earlier with the President, concurred with the recommendation for an SRE. Late on November 23, the Treasury, the FDIC, and the FRB announced an interagency assistance package for Citigroup that included a $20 billion capital injection by the Treasury as well as loss protection on a $306 billion pool of Citigroup's assets, backed by the Treasury, the FDIC, and the Federal Reserve Bank of New York. As compensation for

[19] FDIC, "Memorandum to the FDIC Board of Directors Regarding Citigroup," November 23, 2008, http://fcic-static.law.stanford.edu/cdn_media/fcic-docs/2008-11-23%20FDIC%20Board%20of%20Directors%20Memo%20re%20Citi.pdf.

[20] Citigroup, Inc., Third Quarter 2008 Earnings Review Presentation, October 16, 2008, http://www.citigroup.com/citi/investor/data/p081016a.pdf?ieNocache=975.

the guarantee, Citigroup issued $7 billion in stock and warrants to the Treasury and the FDIC. The agreement also imposed restrictions on Citigroup's dividend payments and executive compensation, and requirements for loan modifications.[21]

The announcement that the SRE would be invoked and government assistance would follow had the intended effect of stabilizing Citigroup and preventing its failure. Citigroup was able to continue operating, and the announcement gave the private sector confidence to continue providing liquidity to the company.

Bank of America. As of September 30, 2008, Bank of America owned eight insured banks and four significant non-insured subsidiaries. With $1.4 trillion in total assets and as the largest holder of insured deposits, BofA's largest bank subsidiary, Bank of America, N.A., was the second-largest bank in the United States.[22] By the end of 2008, two of its prominent acquisitions were having a severely negative effect on the bank's financial performance. In January 2008, BofA had announced its $2.5 billion acquisition of subprime mortgage lender Countrywide Financial, a deal that would eventually cost the bank much more than $2.5 billion once the full extent of Countrywide's mortgage losses became evident. On September 15, 2008, BofA had announced that it would acquire Merrill Lynch, the weakest of the remaining major investment banks after the failure of Lehman Brothers (which filed for bankruptcy on that same day). Although BofA seriously considered renegotiating or canceling the acquisition because of larger than anticipated losses at Merrill Lynch, BofA ultimately completed the acquisition, absorbing significant losses as a result.[23]

On January 9, 2009, anticipating that BofA would announce fourth-quarter results below market expectations during the earnings call scheduled for January 16, officials at the Federal Reserve and the Treasury approached the FDIC to discuss whether the FDIC would participate in providing government assistance to BofA beyond that already provided through broad-based programs in 2008.

The banking agencies and the Treasury believed that a failure would be systemic because of BofA's size and the volume of its counterparty transactions. If BofA proved unable to meet its obligations, the markets for short-term interbank lending, bank senior and subordinated debt, and derivative products, among others, could be disrupted, increasing the likelihood of deposit runs at banks. Moreover, given BofA's strong reputation, the banking agencies and the Treasury feared that its failure could lead to a belief that wider

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[21] U.S. Department of the Treasury, Federal Reserve Board, and Federal Deposit Insurance Corporation, "Joint Statement by Treasury, Federal Reserve, and the FDIC on Citigroup," November 23, 2008.

[22] FDIC, "Memorandum to the FDIC Board of Directors Regarding Bank of America," January 15, 2009, http://fcic-static.law.stanford.edu/cdn_media/fcic-docs/2009-01-15%20Memo%20to%20the%20FDIC%20board%20of%20directors%20from%20Mitchell%20Glassman,%20Sandra%20Thompson,%20Arthur%20Murton,%20and%20John%20Thomas%20re%20Bank%20of%20America.pdf.

[23] Financial Crisis Inquiry Commission (FCIC), *The Financial Crisis Inquiry Report* (2011), 383.

problems existed in the banking industry and could significantly undermine broader business and consumer confidence, thus weakening the overall economy.[24]

On January 15, 2009, the FDIC and the FRB each recommended that the Secretary of the Treasury invoke the SRE.[25] The next day, the banking agencies announced an interagency assistance package that was very similar to the one provided to Citigroup. The package consisted of a capital injection by the Treasury of $20 billion through the TARP; $10 billion in loss protection on a pool of BofA's assets, provided by the Treasury and the FDIC; and the agreement of the Federal Reserve Bank of New York to provide a nonrecourse loan to cover 90 percent of any losses that exceeded $21.1 billion. As compensation for the guarantee, the Treasury and the FDIC together would receive $4 billion in preferred stock and warrants. The FDIC's portion of risk would be limited in recognition that most of the exposures lay within the investment banking entities and not within Bank of America's insured depository institutions. BofA would be subject to dividend and executive compensation restrictions and would be required to implement a mortgage loan modification program on the guaranteed assets.

Bank of America, the FDIC, the FRB, and the Treasury began negotiating the specific terms of the asset guarantee portion of the package. However, in May, before the parties could finalize terms and before the Secretary of the Treasury formally approved an SRE, BofA asked to terminate the asset guarantee. In September, BofA paid $425 million to the government as compensation for the benefits it received from the perception that the government would guarantee its assets.[26] Although the Secretary of the Treasury never formally approved an official systemic risk determination for BofA, the January 16 public announcement of planned assistance had nevertheless benefited the bank.

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The announcement of each of the three SREs stabilized funding and liquidity at the individual institution for which it was approved and for the broader financial system. But the severity of the financial crisis and the extraordinary government assistance that followed led Congress to enact a number of financial reforms. The 2010 Dodd-Frank Wall Street Reform and Consumer Protection Act was intended in part to avoid a repeat of the need to provide taxpayer support to open financial institutions—support that has the effect of protecting the shareholders, creditors, and management of those institutions.

The reforms sought to reduce not only the likelihood that systemically significant financial companies would fail in the future but also the adverse effects if such a failure did occur. Specifically, the reforms imposed higher standards for capital, liquidity, and

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[24] FDIC, "Memorandum to the FDIC Board of Directors Regarding Bank of America."

[25] As discussed in chapter 3, the Secretary of the Treasury never made a formal SRE determination for Bank of America.

[26] "Bank of America Termination Agreement," September 21, 2009.

margin requirements on large banking organizations. The act also provided expanded authorities to enable the FDIC to carry out the orderly liquidation of large, complex financial companies. In addition, the act amended the SRE provision of the 1991 law and constrained the use of the exception going forward.

Part 2: Banking Crisis and Response

The three chapters in Part 2 examine the FDIC's key operations—bank supervision, deposit insurance pricing and Deposit Insurance Fund management, and failed-bank resolution—before the banking crisis and in response to it.

Chapter 4. Bank Supervision

From the perspective of bank supervision, a good starting point for tracing the history of the 2008–2013 crisis is the end of the banking and thrift crisis of the 1980s and early 1990s. Important legislative changes that were enacted during and shortly after that earlier crisis established new mandates for FDIC safety-and-soundness supervisors, and resulted in accelerated consolidation within the banking and financial industry. In this new landscape, banks would embark on a significant expansion of lending activity, particularly real estate lending, and would do so in a way that gave rise to significant new risks. The FDIC, in turn, would make important changes to its supervisory programs and its processes for assessing risk.

One of the most important legislative changes triggered by the earlier bank crisis was the Federal Deposit Insurance Corporation Improvement Act of 1991, which established new mandates requiring the banking agencies to take prompt corrective action to resolve the problems of insured depository institutions at the least possible long-term loss to the Deposit Insurance Fund. Prominent among these Prompt Corrective Action (PCA) mandates was a set of restrictions that the banking agencies were either required to impose, or permitted to impose, on undercapitalized banks. Required or discretionary limitations on undercapitalized banks included dividend restrictions, requirements to establish a capital restoration plan, limits on growth, and other limitations. The PCA mandate became an important element of bank supervision before and during the recent crisis, and remains so today.

Another important legislative change was the Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994, which expanded the interstate branching and affiliation authorities of banking organizations, thereby accelerating the consolidation trend that had been underway since the mid-1980s. Finally, in 1999, the Gramm-Leach-Bliley Act removed most federal restrictions on affiliations between banks, investment banks, and insurance companies. These changes contributed to an increase in the size and interconnectedness of financial institutions.

During the generally prosperous decade preceding the crisis, banks enjoyed record profits fueled by rapid growth in lending, particularly real estate lending. Large institutions' profitability was driven in part by the origination of subprime and alternative mortgage products, by the creation and sale of securities backed by such mortgages, or both. Many smaller institutions greatly increased their holdings of, and concentrations in, loans to finance the acquisition, development, and construction of real estate (ADC loans). The rapid growth of these two asset classes—nontraditional mortgage products and ADC loans—was at the root of the problems that banks would experience during the crisis.

As the banking industry's risk profile evolved, so did the FDIC's bank supervision program and its processes for analyzing risk. Most of the changes were driven by two broad objectives. First was a desire to learn from the experience of the 1980s and early 1990s by focusing examinations on banks' risk management practices and the timely correction of deficiencies where those existed. The FDIC made organizational changes and other efforts to improve the quality of its risk analysis capabilities and its expertise regarding more-complex banking activities, and in particular its understanding of risks posed by the largest banking organizations. The second broad objective driving changes in bank supervision during the inter-crisis years was the desire to reduce the burden associated with examinations for small banks believed to have a low risk profile. The FDIC's commitment to this objective was reflected in reductions in the number of hours and the staffing that were devoted to examinations, and in the streamlined examination procedures used for many small banks.

The stresses that led to the crisis first appeared in the summer of 2006, when the Case-Shiller national index of home prices began what would be a nearly six-year decline, losing 27 percent of its value over that period. In 2008, concerns about the value of mortgage-related assets were the main cause of the liquidity crisis experienced by many large financial institutions. For smaller banks, the effects of a declining housing market and the accompanying recession were gradual at first, but in 2009 and 2010 the number of failed and problem banks—most of them under $10 billion in asset size—increased exponentially.

In all, 489 FDIC-insured banks failed during the crisis years 2008 through 2013. Typical characteristics of the banks that failed included heightened concentrations of ADC lending, rapid asset growth, heightened reliance on funding sources other than stable core deposits, and relatively lower capital-to-asset ratios. In addition, banks chartered in 2000 or after failed at substantially higher rates than banks chartered before 2000.

The factors contributing to bank failures in the crisis and to the resulting losses to the DIF were documented by Material Loss Reviews (MLRs) conducted by the FDIC Office of Inspector General (OIG). Mandated by Section 38 of the Federal Deposit Insurance

Act, MLRs are undertaken for failed banks that imposed losses on the DIF of at least $50 million.[27] These audits have two objectives: (1) to determine the causes of the failure and the resulting material loss to the DIF, and (2) to evaluate the FDIC's supervision of the institutions, including the FDIC's implementation of the requirements of PCA. Reviews of crisis-era failures documented the decisive role played by bank governance—including the quality of a bank's loan underwriting and credit administration, its risk limits, and its internal controls—in determining the risk profile of the bank and its susceptibility to fraud or insider abuse. The reviews also highlighted the importance of on-site examination in evaluating a bank's internal risk management practices and requiring corrective action when needed. The OIG has also reported that surviving banks were more likely to have been responsive to such recommendations for corrective action.[28]

In fact, the FDIC's bank examiners and supervisors made significant efforts during the crisis to work with troubled banks to help them return to health. Given the rapidly deteriorating conditions facing the banking industry, however, deploying sufficient examination resources to ensure the FDIC had accurately identified the institutions most at risk became a challenge. One way the FDIC addressed this challenge was by supplementing the examination force with employees who were hired for a time-limited term. Many of these term employees had substantial experience in bank supervision. By 2010, 494 term employees hired to assist with safety-and-soundness examinations were on board at the FDIC. More than 75 percent of them were loan review specialists; others were specialists in investigations, information technology, and the Bank Secrecy Act/Anti-Money Laundering. Some of the term employees were retired FDIC employees, who were rehired under a special authority granted by the federal Office of Personnel Management. Some of these rehired individuals were able to pass along the benefit of their extensive examination and bank supervision experience by helping with the training of pre-commissioned examiners.

For institutions whose quarterly financial reports suggested potential problems, waiting as long as 24 to 36 months for the next scheduled FDIC examination was not a feasible supervisory strategy. For such institutions where an examination was not already scheduled in the near term, the FDIC often conducted a visitation focused on asset quality. These visitations frequently resulted in downgrades to examination ratings and the establishment of corrective action plans.[29] Formal and informal enforcement actions, and in some cases letters provided to a bank's board of directors at the conclusion of the examination, clearly communicated the steps needed to address the problems of troubled institutions.

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[27] This threshold for requiring an MLR was established as of January 1, 2014.

[28] FDIC Office of Inspector General, "Acquisition, Development and Construction Loan Concentration Study," Office of Audits and Evaluations Report no. EVAL-13-001, 2013.

[29] The FDIC (and the other federal banking agencies) assigns ratings to banks at the conclusion of a safety-and-soundness examination. The ratings are on a scale of 1 to 5, with "1" being the best and "5" the worst. The rating and the report of examination convey to bank management the FDIC's view of the condition of the bank and the corrective actions, if any, that the bank needs to undertake.

New institutions were disproportionally represented among troubled banks. New institutions typically operate with losses during their first few years of operation as they build up their business, and are more vulnerable to an economic downturn. In addition, during the pre-crisis period some of these institutions significantly departed from the business plans that were the basis for their approved deposit insurance applications, thereby increasing their risk profile and making the likelihood of failure greater. To address the risks at these institutions, the FDIC lengthened the period—going from three years to seven years—during which new institutions would be subject to heightened oversight, including review and approval of their business plans and annual examinations.

Holding-company structures sometimes posed special issues. For some insured-bank subsidiaries of holding companies, heightened supervisory vigilance was needed to insulate the bank from its affiliates. The liability structure of many bank holding companies sometimes made it difficult for them to raise capital when it was most needed. In a number of instances, however, the sale and full recovery of insured banks occurred even as their parent holding company entered bankruptcy. The FDIC's ability to require banks in a holding company to reimburse the FDIC for some or all of the cost of failures of affiliated banks was helpful in reducing failure costs, and in fact the FDIC's ability to require such reimbursement gave financial incentives to troubled institutions to raise capital or find merger partners to avoid failures.

During the course of the crisis, several private equity investors expressed an interest in purchasing or investing in failed banks. In 2009, the FDIC's Board of Directors adopted a Statement of Policy (SOP) to provide guidance about such acquisitions or investments. Supervision staff determined the readiness of proposed ownership groups in relation to the statutory requirements for deposit insurance, and if the purchase or investment went ahead, supervision staff evaluated the activities of the institutions relative to the principles contained in the SOP.

The FDIC's supervisory efforts during the crisis made a beneficial difference to the ultimate outcomes for troubled banks. The FDIC identifies "problem banks" as those with examination ratings of 4 or 5—the two lowest ratings, which refer to institutions that exhibit deficiencies in practices or performance so severe that failure is either a distinct possibility (4 rating) or likely (5 rating) unless the deficiencies are corrected. Historically as well as in this crisis, most problem banks have not failed. Instead, a substantial majority have taken the steps needed to address their problems and have survived or been acquired without FDIC assistance. Between January 1, 2008, and March 31, 2017, 1,783 insured depository institutions were designated as problem institutions at one time or another. By the end of this period, 523 had failed; 112 remained in problem status; 294 had merged with other institutions without FDIC assistance; and 854 were no longer problem banks.

Nonetheless, as the FDIC concluded through self-assessments and the results of MLRs, the supervisory response to the risks building up at banks during the pre-crisis years should have been more forceful. For many banks that failed during the crisis, FDIC examiners drew attention to the risk management deficiencies or issues that ultimately led to the bank's failure, often well before the failure. Recommendations to address the deficiencies typically were included in the examination report that was transmitted to the bank. However, not until the bank's financial condition deteriorated did those recommendations translate to rating downgrades or enforcement actions. The FDIC has taken a number of steps to ensure that this lesson is incorporated into day-to-day bank supervision, including training examiners in the importance of proactive supervision to address deficiencies in risk management at an early stage, providing for a more comprehensive analysis of a bank's credit and funding concentrations in reports of examination, and improving guidance to FDIC bank supervision staff on matters requiring attention by banks' boards of directors.

A number of lessons for bank supervisors suggest themselves in light of the crisis. First, prosperous times can mask a building up of significant risks in banking. Before the crisis, a nationwide collapse in housing prices was viewed by most observers as highly unlikely, in part because such a thing had not happened in many decades. This suggests a second lesson, that past performance is not a guide to future performance—and therefore that bank supervisors must guard against complacency.

The crisis demonstrated that the choices banks made during the pre-crisis years about how aggressively to pursue earnings growth had significant consequences. The rapid onset of the crisis after years of record-breaking bank earnings was a reminder that higher returns are achieved only by taking higher risks. In this respect, the crisis illustrated that key financial metrics, such as rapid growth or concentrations in riskier loan categories or potentially volatile funding sources, can give indications about which banks are taking more risks, and that these metrics warrant serious consideration by bank supervisors.

There also are lessons to be learned from the crisis about the importance of risk management in banks, of the examination process in reviewing banks' operations, and of bank supervisors' response to identified risks. One such lesson is that the quality of banks' internal controls and management of risks drove outcomes at individual banks. Given the importance of how banks are managed, another key lesson is that only on-site examinations can provide enough information for bank supervisors to evaluate the safety and soundness of an insured depository institution and the adequacy of its practices for managing risk. And, as just suggested, a central lesson of the crisis is that supervisors should require corrective action when a bank's risk management is deficient.

Finally, the crisis served as a reminder of the importance of certain programmatic aspects of bank supervision. First, new banks require extra supervisory attention, because they typically operate with losses during their early years as they build their business, and consequently they are more susceptible to downturns. Second, large banks require extra supervisory attention because of the generally greater complexity of their operations and the outsized risks they can pose to the Deposit Insurance Fund and the U.S. economy. Third, changes to the supervision program itself should be managed carefully and incrementally, to promote the steady focus required for effective supervision. Last, and perhaps above all, bank supervision and examination require expertise. The FDIC's seasoned examination and supervision staff played an important part in the success of its response to the crisis. This experience therefore highlights the ongoing importance of the hiring and training of new examiners, and of efforts to ensure they can benefit from the knowledge and experience of those who came before them.

Chapter 5. Deposit Insurance: Fund Management and Risk-Based Deposit Insurance Assessments

The FDIC manages the Deposit Insurance Fund (DIF, or the fund) by determining the proper size of the fund and of the DIF reserve ratio (the ratio of the fund balance to estimated insured deposits), and setting the overall range of assessment rates needed to achieve that size. Within this range of assessment rates, the FDIC charges banks different rates for the differing risks they pose to the fund. The banking crisis severely depleted the fund, quickly sending it more than $20 billion into the red and requiring the FDIC to respond to the difficulties this entailed.

The FDIC's strategies for managing the fund (including ensuring that it has sufficient liquid assets to protect insured depositors at failed banks) and for setting risk-based assessment rates changed greatly between 2006 and 2016. After a decade of statutory restrictions on the FDIC's authority to manage the fund and charge assessments based on risk, in 2006—on the eve of the banking crisis—the agency took advantage of greater statutory latitude to revise the risk-based assessment system, and the advent of the banking crisis led the FDIC to make adaptive changes in its fund management strategy. The deposit insurance reforms authorized by the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (Dodd-Frank) and the lessons learned during the banking crisis have allowed the FDIC to substantially revamp its approach both to fund management and to risk-based assessments.

Leading Up to the Crisis (1996–2007). As late as March 2008, the DIF balance stood at a historic high of $52.8 billion. Yet for much of the previous decade, statutory constraints on the FDIC's authority to assess most banks had served to limit growth in the DIF reserve ratio, despite few bank failures. The Federal Deposit Insurance Reform Act of 2005 restored the FDIC's authority to assess all insured institutions, giving the FDIC greater discretion to manage the size of the fund. As a result, in 2007 the FDIC began charging premiums to all banks using updated risk-based pricing methods that, for the first time, included separate assessment methods for small banks and large banks. At the end of 2007, however, the fund reserve ratio was relatively unchanged compared with a year earlier because of a statutory requirement that the FDIC provide credits to offset the premiums of many banks that had helped rebuild the insurance funds in the early to middle 1990s.

Responding to the Crisis (2008–2009). In the second quarter of 2008, the DIF reserve ratio dropped below the statutory minimum of 1.15 percent of estimated insured deposits. It continued to decline precipitously as the number of banks that were failing or were in danger of failing climbed to levels unseen since the bank and thrift crisis of the late 1980s and early 1990s. In October 2008, as required by statute, the FDIC adopted a restoration plan that increased assessment rates for all banks at the start of 2009 in an effort to raise the reserve ratio to 1.15 percent within five years. In the ensuing months, the enormous stresses on financial institutions prompted the FDIC to twice extend the time frame of the plan (ultimately, to eight years) and impose a one-time special assessment on all banks. Instead of imposing a special assessment, the FDIC could have borrowed from the Treasury, which it had done in the early 1990s during the bank and thrift crisis, but it chose not to borrow. Borrowing would not have helped maintain a positive fund balance, or net worth, whereas a special assessment would.

Despite higher assessment rates and the special assessment, mounting losses from actual failures as well as reserves set aside for anticipated failures caused the fund balance to fall below zero in the second half of 2009 and hit a low point of negative $20.9 billion by the end of the year.

With the rise in actual and projected failures, by September 2009 the DIF's liquidity needs threatened to exceed its liquid assets as early as 2010. If this potential squeeze on the liquid assets of the DIF were not addressed, it threatened to compromise the FDIC's ability to pay depositors promptly. To address this issue, the FDIC adopted a novel approach that required the banking industry to prepay its quarterly risk-based assessments for the fourth quarter of 2009 and for the next three years. In contrast to a special assessment, a prepaid assessment did not impair bank earnings and capital under applicable accounting rules. The prepayment was counted on the banks' balance sheets as an asset that was reduced each quarter as each prepaid assessment came due.

Because banks were holding significant amounts of cash at the time, the FDIC believed that most of the prepayments would be drawn from banks' available cash and excess reserves at the Federal Reserve without significantly affecting banks' lending activities. This approach not only generated sufficient liquidity for the DIF to weather the crisis, but it also earned widespread banking industry support. Again, the FDIC had decided not to use its authority to borrow from the Treasury to meet liquidity needs. Prepaid assessments ensured that the DIF remained directly industry funded; and prepayments, unlike Treasury borrowing, accrued no interest.

During the crisis, the FDIC also made several changes in the framework for risk-based assessments. Among these changes were several adjustments to a bank's assessment rate based on the bank's holdings of secured liabilities, brokered deposits, and unsecured debt. These adjustments were intended to account for liabilities that would increase or decrease losses to the fund if a bank failed.

Post-Crisis Reforms (2010–2016). The Dodd-Frank Act, enacted in 2010, raised the minimum reserve ratio to 1.35 percent but extended the time frame to reach the new minimum until September 30, 2020. Dodd-Frank also expanded the FDIC's authority to manage the fund. This expanded authority enabled the FDIC to adopt, in 2010, a comprehensive, long-term DIF management plan that would make the fund more likely to be able to withstand a future crisis. To implement the plan, the FDIC suspended dividends indefinitely (as allowed by Dodd-Frank) and set the target reserve ratio at 2 percent—consistent with what the agency estimated would have been required to maintain both a positive balance and stable assessment rates from 1950 through 2010. Pursuant to the plan, the FDIC set overall assessment rates at a level that would remain moderate and steady throughout economic and credit cycles, thus reducing pro-cyclical volatility (i.e., reducing the need to charge the most during periods of crisis, when banks can least afford to pay). In lieu of dividends, overall assessment rates will decrease once the reserve ratio reaches its 2 percent target.

Dodd-Frank included provisions designed to reallocate between small and large banks the costs of supporting the DIF. First, it redefined the assessment base from domestic deposits to average consolidated total assets minus average tangible equity. This redefinition decreased the proportion of total assessments paid by small banks and increased the proportion paid by large banks, since smaller banks typically fund more of their assets with domestic deposits than do larger banks. Second, Dodd-Frank required that the FDIC, when setting assessments, offset the effect on small banks of increasing the minimum reserve ratio to 1.35 percent. The FDIC implemented this requirement by imposing quarterly surcharges on banks over $10 billion in assets once the reserve ratio reached 1.15 percent—to close the remaining gap to the 1.35 percent minimum—and crediting small banks for the portion of their regular assessments that was used to meet the new minimum level.

In another change, this one independent of Dodd-Frank, the FDIC updated its risk-based pricing methods, incorporating data and experiences from the banking crisis to better estimate the risks that banks pose to the DIF. Specifically, the revised pricing methodology for large banks uses supervisory ratings and updated financial measures to predict performance during periods of stress, along with the relative magnitude of losses in the event of a failure. The revised methodology for established small banks uses supervisory ratings and updated financial measures to estimate the probability of failure over three years. Both methodologies rely heavily on data obtained during the crisis, and backtesting shows that they would have performed significantly better than the methodologies they replaced.

In the wake of this crisis (the second banking crisis since 1980), the financial reforms of 2010 provided the FDIC with new authorities allowing the agency to institute a long-term fund management plan designed to (1) reduce the pro-cyclical effect of deposit insurance assessments, and (2) maintain a positive fund balance even when many banks fail. Implementation of the long-term plan will make assessment costs predictable for banks and will improve public confidence in the banking system.

Chapter 6. Bank Resolutions and Receiverships

After more than a decade of modest failure activity, the financial crisis of 2008 resulted in 489 bank failures from 2008 through 2013. Among the failures was Washington Mutual, a $307 billion institution that was (and remains) the largest failure in the history of the FDIC. Because failed-bank resolution is an important way that the FDIC fulfills its mission "to maintain stability and public confidence in the nation's financial system"[30] and because the choices and processes associated with bank resolution have profound effects on the DIF's losses, bank customers, and the local economy, the FDIC focused a great deal of energy on this task. Despite challenges, the FDIC accomplished its primary resolution and receivership responsibilities: to protect all insured depositors at failed banks and to meet statutory mandates.

Before the crisis, the FDIC undertook several initiatives to prepare for a potential increase in bank failures. These initiatives included readiness exercises, large-bank resolution simulations, rulemaking to clarify bank closing processes and provide timely access to critical information about failing banks, and enhancements to the FDIC's IT systems and business processes. Although many of these initiatives were helpful, they were not fully successful, for two reasons. First, the crisis was greater than anticipated and—importantly—unfolded more quickly than anticipated. Second, the FDIC was shorthanded during the early phase of the crisis, and from 2008 to 2010 some scarce resources were necessarily diverted from resolution activities to infrastructure development.[31]

As the scale of the crisis became clear, however, the FDIC Division of Resolutions and Receiverships (DRR) took a number of steps to quickly ramp up its staffing. Before mid-2008, authorized DRR staff numbered just 227, but by the end of 2010 the number of positions exceeded 2,100. A key element of this staff expansion was a heavy reliance on temporary employees, who constituted more than 80 percent of DRR employees in 2011. A few of these temporary employees were veterans of the bank and thrift crisis of 1980 through 1994 and were therefore highly experienced. Much as the FDIC had relied on consolidated offices (that is, field offices located where there were a lot of failed banks) in the 1980–1994 crisis, in the recent crisis the FDIC established temporary satellite offices (TSOs) in California, Florida, and Illinois. The TSOs placed resources for bank resolution and asset disposition closer to where most of the failures took place, helping to improve communication with the parties involved and to minimize travel costs.

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[30] See https://www.fdic.gov/about/strategic/strategic/mission.html for the FDIC's mission, vision, and values.

[31] Infrastructure development included hiring staff, opening new offices, developing and updating contracts, and developing and updating IT systems.

The FDIC had several options for resolving failed banks, including a payout and a variety of purchase and assumption (P&A) agreements.[32] The FDIC marketed the failed-bank franchises (that is, the operating units of the failed banks) to healthy, well-run institutions, seeking acquirers that would take over some or all of the failed banks' assets and deposits. If a potential acquirer submitted a bid that met the FDIC's criteria, a P&A agreement was chosen; otherwise, the FDIC executed a payout.

The FDIC made choices about the best P&A transactions to offer potential acquirers in light of multiple constraints and trade-offs. Some of the key constraints were statutory requirements about the prompt closure of failed banks and cost-effective resolution. Some of the key trade-offs involved DIF capital losses, the DIF cash position, potential disruption to bank customers and local markets, FDIC staffing requirements, and the financial and operational risks imposed on the FDIC. During the 1980–1994 crisis the FDIC and the Resolution Trust Corporation (RTC) had retained and managed a large volume of failed-bank assets—an undertaking that proved to be costly and operationally complex. Based on this experience, the FDIC sought to return assets to the private sector quickly. Therefore, the FDIC tried whenever possible to offer P&A transactions that would allow a large volume of assets to be sold to acquirers on the same day that the bank failed. As the crisis evolved, the FDIC refined and adjusted its offerings in light of changes in market conditions and feedback from potential acquirers.

During the 2008–2013 crisis, the FDIC's primary offering to potential acquirers of failed banks was a P&A agreement where the FDIC agreed to share losses on loans and real estate.[33] In most cases, the FDIC's share of the loss was 80 percent, and the acquiring bank would absorb the remaining 20 percent of losses. The FDIC sold 304 (62 percent) of the failed banks using this strategy.

Although the marketing of failed-bank franchises was an important component of the FDIC's resolution activities, it was just the first step in the receivership process that wound up the affairs of the failed banks. The FDIC's receivership responsibilities were broad, and included liquidating *all* the failed banks' assets and addressing *all* the claims against the failed banks. The FDIC managed $87.5 billion in assets that were retained in receiverships (because they were not acquired under a P&A transaction) and as of year-end 2016, it had liquidated all but $3.2 billion of the assets. Most of the assets were liquidated using cash sales, securitizations, and joint ventures that were structured as Limited Liability Companies (LLCs). The FDIC also identified valid claims against the receiverships, and used the funds that the receiverships collected to pay receivership claims as required by

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[32] In a payout, the FDIC pays insured depositors directly and sells the failed bank's assets to recover its costs and satisfy other legitimate claims of the receivership. In a P&A, a healthy bank (called the acquirer) purchases some or all of the failed bank's assets and assumes some or all of the failed bank's liabilities.

[33] Principal losses and certain types of expenses were covered. In a few cases, certain securities were also covered. Coverage was excluded for consumer loans at many banks, and for single-family loans at some banks.

statute. In addition, the FDIC administered the loss-share and LLC contracts to protect its interests and ensure that acquirers and LLC partners met their responsibilities under these risk-sharing arrangements. The FDIC relied heavily on contractors to manage the receiverships, service the loans retained in receivership, and sell the assets.

During the crisis, the FDIC learned several lessons related to its resolution and receivership function. First, because the FDIC's mission requires prompt action during periods of financial crisis and because every financial crisis is unique and can unfold quickly, robust readiness planning—which includes adequate staff levels, contracts for critical services, scalable IT systems, and roadmaps for staff and infrastructure expansion—is important at all times. Because national servicers are especially beneficial during large-scale crises, readiness plans should consider them as well.

Second, loss-share resolutions allowed the FDIC to sell assets promptly during the crisis and also benefit from subsequent price improvements. They allowed for asset management by private-sector institutions, conserved DIF cash, minimized FDIC staff needs, and reduced disruption to bank customers and local communities.

Third, the FDIC's use of structured contracts (securitizations and LLCs) as a means to sell assets held in receivership worked well. By retaining some or all of the risk from these asset sales, the FDIC received better prices than it would have received if the assets had been sold outright using cash sales at the time of failure, and the FDIC benefited from subsequent improvements in asset market values.

Finally, because of the FDIC's exposure to risk from the loss-share program, careful oversight of the loss-share agreements was important.

Good information and a well-informed staff are invaluable when a crisis erupts. There may be opportunities to conduct research, or leverage the research of other parties, to improve the FDIC's ability to make good decisions during crisis periods. One area that merits attention is the trade-offs involved in resolving failed banks (minimizing costs; minimizing disruption from failures; minimizing the FDIC's liquidity needs, operational risk, and financial risk; and encouraging market discipline). Other topics for further research include the costs and benefits associated with prompt asset sales; the use and design of risk-sharing contracts; the potential development of early-warning tools that might be used to trigger readiness plans for resolutions and receiverships; and the effects of market power wielded by asset buyers during distress periods when there are only a few potential buyers, as well as options for mitigating the adverse effects of that market power. Finally, it would be beneficial to examine options for expanding seller financing as a way to improve asset sale prices.

Conclusion

The financial crisis of 2008 through 2009 and the banking crisis of 2008 through 2013 presented the FDIC with unprecedented challenges. The systemic threat posed by the financial crisis demanded creative and innovative responses from the FDIC and other financial regulatory agencies, while the speed and severity of the banking crisis stretched to the limit the FDIC's capacity to supervise problem institutions, manage the Deposit Insurance Fund, and implement orderly resolutions for failed financial institutions.

There are many lessons to be learned from the FDIC's experience. The purpose of this volume is to clearly describe that experience for the public record, and to allow others to evaluate and gain insight from that history.

Postscript: The Banking Industry in 2017

As this history is being written, the U.S. banking industry has put the crisis behind it and is in a position of strength. As of June 30, 2017, there were 105 banks on the FDIC's problem bank list, the lowest quarter-end number since March 31, 2008, when there were 90. Noncurrent loans for insured banks were at the lowest level as a percentage of loans since the third quarter of 2007. Insured banks earned a record $48.3 billion in the second quarter of 2017. Earnings were at their highest level relative to average assets since the second quarter of 2007. At the same time, insured banks are supporting the credit needs of the U.S. economy. Annualized loan growth at U.S. banks during the three years 2014–2016 averaged 5.7 percent—outpacing nominal GDP growth in each year.

Particularly noteworthy for the safety and soundness of the banking industry and for financial stability more generally is the fact that large banking organizations have substantially more capital and liquidity than they had entering the crisis. Bank holding companies with assets greater than $250 billion have about twice the capital and more than twice the liquid assets relative to their asset size than they had entering the crisis. The tier 1 leverage ratio of these institutions increased from 4.46 percent at year-end 2007 to 9.01 percent at mid-2017, while their ratio of liquid assets to total assets increased from about 8.6 percent to 22.6 percent during the same period.[34] The improved capital and liquidity of these institutions is largely attributable to capital and liquidity regulations the federal banking agencies issued in response to the crisis.

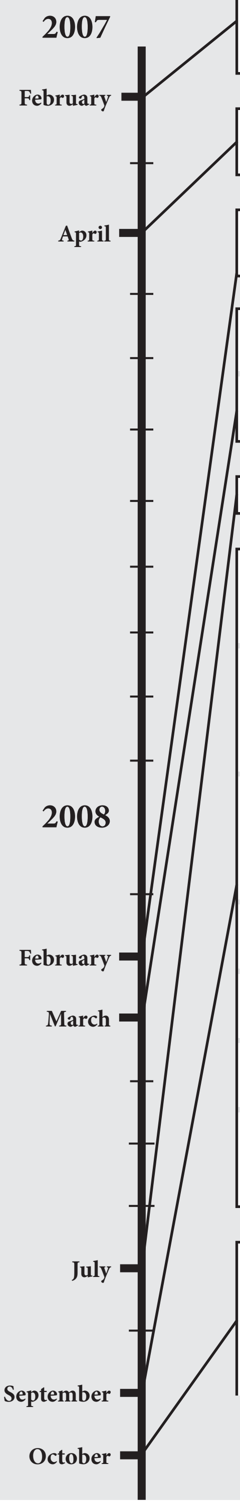
In addition, there is now in place an enhanced FDIC capability to manage the orderly failure of a systemically important financial institution without taxpayer support.

[34] "Liquid assets" for purposes of this discussion refers to cash, federal funds sold, Treasury securities, agency debt securities, and agency mortgage-backed securities.

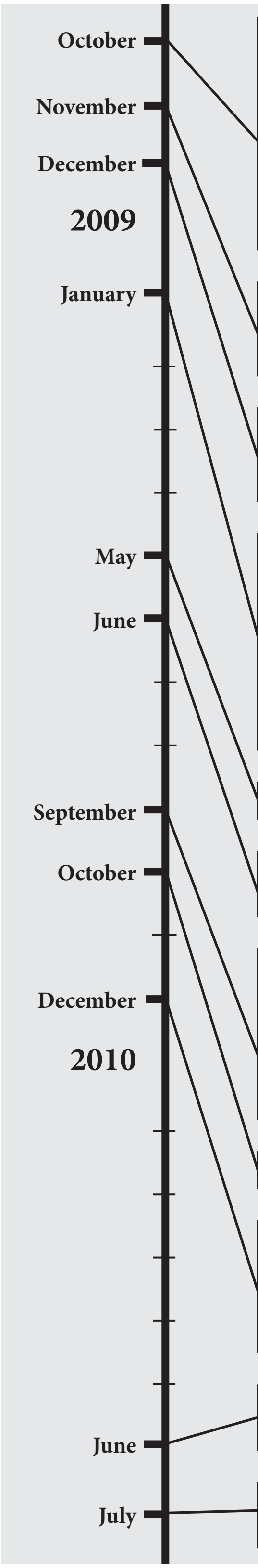
The improved condition of the banking industry should not be a cause for complacency, however. The build-up of risk during the pre-crisis years documented in this history should be a reminder to banks and their regulators of the risks that can develop during a period of banking industry prosperity. As the current business cycle has progressed, more banks have reduced their liquid asset holdings while taking on more credit risk in their loan portfolios, with some banks financing loan growth with a greater proportion of potentially volatile funding sources. In the event of a sustained increase in interest rates, some banks could be faced with declines in the values of their holdings of long-term bonds and mortgages or with increased funding costs, or both. Other risks include those from large derivatives exposures, developments in foreign banking and financial systems, and potential cyber-events.

As we learned during the crisis, a safe and sound banking industry is essential to the successful functioning of a nation's economy, but it cannot be taken for granted. We also learned how quickly and unexpectedly conditions can change. It is striking how much progress has been made since the crisis years of 2008–2013 in fostering a strong U.S. banking industry that supports our economy. Preserving these gains will require continued vigilance on the part of bank regulators.

Crisis and Response Timeline



Feb. 27, 2007	The Federal Home Loan Mortgage Corporation (Freddie Mac) announces that it will no longer buy the most risky subprime mortgages and mortgage-related securities.
Apr.2, 2007	New Century Financial Corporation, a leading subprime mortgage lender, files for bankruptcy.
Feb. 17, 2008	Northern Rock is taken into state ownership by the Treasury of the United Kingdom.
Mar. 14, 2008	JPMorgan Chase acquires Bear Stearns with government assistance.
Mar. 16, 2008	The Federal Reserve creates the Primary Dealer Credit Facility to aid market liquidity.
July 11, 2008	IndyMac Bank fails.
Sept. 7, 2008	The Federal Housing Finance Agency (FHFA) places Fannie Mae and Freddie Mac in government conservatorship.
Sept. 15, 2008	Lehman Brothers Holdings Inc. files for Chapter 11 bankruptcy protection. Bank of America announces its intent to purchase Merrill Lynch & Co.
Sept. 16, 2008	AIG obtains $85 billion under a temporary liquidity facility from the Federal Reserve. The Reserve Primary Fund, a large money market fund, announces it “broke the buck.”
Sept. 19, 2008	U.S. Treasury temporarily guarantees money market funds against losses up to $50 billion.
Sept. 21, 2008	Goldman Sachs and Morgan Stanley become bank holding companies.
Sept. 25, 2008	Washington Mutual Bank fails and JPMorgan Chase acquires its deposits and assets.
Sept. 29, 2008	Systemic Risk Exception (SRE) is recommended and approved for Citigroup to acquire Wachovia. Citigroup/Wachovia deal is announced but never completed.
Oct. 3, 2008	The Emergency Economic Stabilization Act of 2008 authorizes the $700 billion Temporary Asset Relief Program (TARP) and temporarily increases deposit insurance coverage to $250,000. Wells Fargo announces its acquisition of Wachovia.



Oct. 14, 2008	The FDIC announces SRE for the Temporary Liquidity Guarantee Program (TLGP) and creates the Debt Guarantee Program (DGP) and the Transaction Account Guarantee Program (TAGP). The Federal Reserve announces the Commercial Paper Funding Facility (CPFF). The U.S. Treasury Department announces the Capital Purchase Program (CPP) under TARP.
Nov. 23, 2008	SRE is recommended and approved to provide assistance to Citigroup, and the U.S. Treasury provides capital investment via TARP.
Dec. 31, 2008	By year-end, 25 insured depository institutions (IDIs) fail, and at year-end the number of problem IDIs has risen to 252, up from 76 at year-end 2007.
Jan. 1, 2009	FDIC implements a 7 basis point increase in deposit insurance assessment rates. Bank of America announces the completed acquisition of Merrill Lynch.
Jan. 16, 2009	SRE is recommended and approved to provide assistance to Bank of America, and the U.S. Treasury provides capital investment via TARP.
May 7, 2009	Stress tests of 19 largest BHCs completed.
June 30, 2009	The FDIC announces a special assessment of $5.5 billion; this will temporarily boost the DIF balance.
Sept. 1, 2009	The FDIC extends the TAGP, scheduled to expire in December, to June 30, 2010.
Sept. 21, 2009	Bank of America terminates the SRE assistance agreement.
Sept. 30, 2009	The DIF balance and reserve ratio become negative.
Oct. 31, 2009	The DGP expires.
Dec. 30, 2009	$45.7 billion prepaid assessment strengthens DIF portfolio liquidity.
Dec. 31, 2009	By year-end, 140 IDIs fail, and at year-end the number of problem IDIs has risen to 702.
June 28, 2010	The FDIC extends the TAGP to December 31, 2010, when the program ends.
July 21, 2010	The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 is enacted.

Dec. 20, 2010 The FDIC Board sets the Designated Reserve Ratio at 2 percent for the year 2011 (where it remained through 2017).

Dec. 31, 2010 By year-end, 157 IDIs fail, the most of any year during the crisis. At year-end, the number of problem IDIs has risen to 884.

December
2011

June 30, 2011 The DIF balance and reserve ratio turn positive.

June

Dec. 31, 2011 By year-end, 92 IDIs fail and the number of problem IDIs at year-end has dropped slightly from the year before, to 813.

December
2012

Dec. 31, 2012 By year-end, 51 IDIs fail, a third the number that failed in 2010. The number of problem IDIs at year-end has dropped to 651.

December
2013
January

Jan. 1, 2013 There is no longer any outstanding debt guaranteed by the FDIC's DGP.

Dec. 31, 2013 By year-end, just 24 IDIs fail, one fewer than during the first year of the banking crisis. At year-end, the number of problem IDIs has dropped to 467. The number of failures and problem institutions continue to drop through 2016.

December

Sources: FDIC and Federal Reserve Bank of St. Louis, Financial Crisis Timeline, https://www.stlouisfed.org/Financial-Crisis.