

# 16

## MARCH TO AUGUST 2008: SYSTEMIC RISK CONCERNS

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JP Morgan’s federally assisted acquisition of Bear Stearns averted catastrophe—for the time being. The Federal Reserve had found new ways to lend cash to the financial system, and some investors and lenders believed the Bear episode had set a precedent for extraordinary government intervention. Investors began to worry less about a recession and more about inflation, as the price of oil continued to rise (hitting almost \$144 per barrel in July). At the beginning of 2008, the stock market had fallen almost 15% from its peak in the fall of 2007. Then, in May 2008, the Dow Jones climbed to 13,058, within 8% of the record 14,164 set in October 2007. The cost of protecting against the risk of default by financial institutions—reflected in the prices of credit default swaps—declined from the highs of March and April. “In hindsight, the markets were surprisingly stable and almost seemed to be neutral a month after Bear Stearns, leading all the way up to September,” said David Wong, Morgan Stanley’s treasurer.<sup>1</sup> Taking advantage of the brief respite in investor concern, the top ten American banks and the four remaining big investment banks, anticipating losses, raised just under \$100 billion and \$40 billion, respectively, in new equity by the end of June.

Despite this good news, bankers and their regulators were haunted by the speed of Bear Stearns’s demise. And they knew that the other investment banks shared Bear’s weaknesses: leverage, reliance on overnight funding, dependence on securitization markets, and concentrations in illiquid mortgage securities and other troubled assets. In particular, the run on Bear had exposed the dangers of tri-party repo agreements and the counterparty risk caused by derivatives contracts.

And the word on the street—despite the assurances of Lehman CEO Dick Fuld at

an April shareholder meeting that “the worst is behind us”<sup>2</sup>—was that Bear would not be the only failure.

### THE FEDERAL RESERVE: “WHEN PEOPLE GOT SCARED”

The most pressing danger was the potential failure of the repo market—a market that “grew very, very quickly with no single regulator having a purview of it,” former Treasury Secretary Henry Paulson would tell the FCIC.<sup>3</sup> Market participants believed that the tri-party repo market was a relatively safe and durable source of collateralized short-term financing. It was on precisely this understanding that Bear had shifted approximately \$30 billion of its unsecured funding into repos in 2007. But now it was clear that repo funding could be just as vulnerable to runs as were other forms of short-term financing.

The repo runs of 2007, which had devastated hedge funds such as the two Bear Stearns Asset Management funds and mortgage originators such as Countrywide, had seized the attention of the financial community, and the run on Bear Stearns was similarly eye-opening. Market participants and regulators now better appreciated how the quality of repo collateral had shifted over time from Treasury notes and securities issued by Fannie Mae and Freddie Mac to highly rated non-GSE mortgage-backed securities and collateralized debt obligations (CDOs).<sup>4</sup> At its peak before the crisis, this riskier collateral accounted for as much as 30% of the total posted.<sup>5</sup> In April 2005, the Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 had dramatically expanded protections for repo lenders holding collateral, such as mortgage-related securities, that was riskier than government or highly rated corporate debt. These protections gave lenders confidence that they had clear, immediate rights to collateral if a borrower should declare bankruptcy. Nonetheless, Jamie Dimon, the CEO of JP Morgan, told the FCIC, “When people got scared, they wouldn’t finance the nonstandard stuff at all.”<sup>6</sup>

To the surprise of both borrowers and regulators, high-quality collateral was not enough to ensure access to the repo market. Repo lenders cared just as much about the financial health of the borrower as about the quality of the collateral. In fact, even for the same collateral, repo lenders demanded different haircuts from different borrowers.<sup>7</sup> Despite the bankruptcy provisions in the 2005 act, lenders were reluctant to risk the hassle of seizing collateral, even good collateral, from a bankrupt borrower. Steven Meier of State Street testified to the FCIC: “I would say the counterparties are a first line of defense, and we don’t want to go through that uncomfortable process of having to liquidate collateral.”<sup>8</sup> William Dudley of the New York Fed told the FCIC, “At the first sign of trouble, these investors in tri-party repo tend to run rather than take the collateral that they’ve lent against. . . . So high-quality collateral itself is not sufficient when and if an institution gets in trouble.”<sup>9</sup>

Moreover, if a borrower in the repo market defaults, money market funds—frequent lenders in this market—may have to seize collateral that they cannot legally own. For example, a money market fund cannot hold long-term securities, such as

agency mortgage-backed securities. Typically, if a fund takes possession of such collateral, it liquidates the securities immediately, even—as was the case during the crisis—into a declining market. As a result, funds simply avoided lending against mortgage-related securities. In the crisis, investors didn’t consider secured funding to be much better than unsecured, according to Darryll Hendricks, a managing director and global head of risk methodology at UBS, as well as the head of a private-sector task force on the repo market organized by the New York Fed.<sup>10</sup>

As noted, the Fed had announced a new program, the Term Securities Lending Facility (TSLF), on the Tuesday before Bear’s collapse, but it would not be available until March 27. The TSLF would lend a total of up to \$200 billion of Treasury securities at any one time to the investment banks and other primary dealers—the securities affiliates of the large commercial banks and investment banks that trade with the New York Fed, such as Citigroup, Morgan Stanley, or Merrill Lynch—for up to 28 days. The borrowers would trade highly rated securities, including debt in government-sponsored enterprises, in return for Treasuries. The primary dealers could then use those Treasuries as collateral to borrow cash in the repo market. Like the Term Auction Facility for commercial banks, described earlier, the TSLF would run as a regular auction to reduce the stigma of borrowing from the Fed. However, after Bear’s collapse, Fed officials recognized that the situation called for a program that could be up and running right away. And they concluded that the TSLF alone would not be enough.

So, the Fed would create another program first. On the Sunday of Bear’s collapse, the Fed announced the new Primary Dealer Credit Facility—again invoking its authority under 13(3) of the Federal Reserve Act—to provide cash, not Treasuries, to investment banks and other primary dealers on terms close to those that depository institutions—banks and thrifts—received through the Fed’s discount window. The move came “just about 45 minutes” too late for Bear, Jimmy Cayne, its former CEO, told the FCIC.<sup>11</sup>

Unlike the TSLF, which would offer Treasuries for 28 days, the PDCF offered overnight cash loans in exchange for collateral. In effect, this program could serve as an alternative to the overnight tri-party repo lenders, potentially providing hundreds of billions of dollars of credit. “So the idea of the PDCF then was . . . anything that the dealer couldn’t finance—the securities that were acceptable under the discount window—if they couldn’t get financing in the market, they could get financing from the Federal Reserve,” said Seth Carpenter, deputy associate director in the Division of Monetary Affairs at the Federal Reserve Board. “And that way, you don’t have to worry. And by providing that support, other lenders know that they’re going to be able to get their money back the next day.”<sup>12</sup>

By charging the Federal Reserve’s discount rate and adding additional fees for regular use, the Federal Reserve encouraged dealers to use the PDCF only as a last resort. In its first week of operation, this program immediately provided over \$340 billion in cash to Bear Stearns (as bridge financing until the JP Morgan deal officially closed), Lehman Brothers, and the securities affiliate of Citigroup, among others. However, as the immediate post-Bear concerns subsided, use of the facility declined

after April and ceased completely by late July.<sup>13</sup> Because the dealers feared that markets would see reliance on the PDCF as an indication of severe distress, the facility carried a stigma similar to the Fed's discount window. "Paradoxically, while the PDCF was created to mitigate the liquidity flight caused by the loss of confidence in an investment bank, use of the PDCF was seen both within Lehman, and possibly by the broader market, as an event that could trigger a loss of confidence," noted the Lehman bankruptcy examiner.<sup>14</sup>

On May 2, the Fed broadened the kinds of collateral allowed in the TSLF to include other triple-A-rated asset-backed securities, such as auto and credit card loans. In June, the Fed's Dudley urged in an internal email that both programs be extended at least through the end of the year. "PDCF remains critical to the stability of some of the [investment banks]," he wrote. "Amounts don't matter here, it is the fact that the PDCF underpins the tri-party repo system."<sup>15</sup> On July 30, the Fed extended both programs through January 30, 2009.

#### JP MORGAN: "REFUSING TO UNWIND . . . WOULD BE UNFORGIVABLE"

The repo run on Bear also alerted the two repo clearing banks—JP Morgan, the main clearing bank for Lehman and Merrill Lynch, as it had been for Bear Stearns, and BNY Mellon, the main clearing bank for Goldman Sachs and Morgan Stanley—to the risks they were taking.

Before Bear's collapse, the market had not really understood the colossal exposures that the tri-party repo market created for these clearing banks. As explained earlier, the "unwind/rewind" mechanism could leave JP Morgan and BNY Mellon with an enormous "intraday" exposure—an interim exposure, but no less real for its brevity. In an interview with the FCIC, Dimon said that he had not become fully aware of the risks stemming from his bank's tri-party repo clearing business until the Bear crisis in 2008.<sup>16</sup> A clearing bank had two concerns: First, if repo lenders abandoned an investment bank, it could be pressured into taking over the role of the lenders. Second, and worse—if the investment bank defaulted, it could be stuck with unwanted securities. "If they defaulted intraday, we own the securities and we have to liquidate them. That's a huge risk to us," Dimon explained.<sup>17</sup>

To address those risks in 2008, for the first time both JP Morgan and BNY Mellon started to demand that intraday loans to tri-party repo borrowers—mostly the large investment banks—be overcollateralized.

The Fed increasingly focused on the systemic risk posed by the two repo clearing banks. In the chain-reaction scenario that it envisioned, if either JP Morgan or BNY Mellon chose not to unwind its trades one morning, the money funds and other repo lenders could be stuck with billions of dollars in repo collateral. Those lenders would then be in the difficult position of having to sell off large amounts of collateral in order to meet their own cash needs, an action that in turn might lead to widespread fire sales of repo collateral and runs by lenders.<sup>18</sup>

The PDCF provided overnight funding, in case money market funds and other

repo lenders refused to lend as they had in the case of Bear Stearns, but it did not protect against clearing banks' refusing exposure to an investment bank during the day.

On July 11, Fed officials circulated a plan, ultimately never implemented, that addressed the possibility that one of the two clearing banks would become unwilling or unable to unwind its trades.<sup>19</sup> The plan would allow the Fed to provide troubled investment banks, such as Lehman Brothers, with \$200 billion in tri-party repo financing during the day—essentially covering for JP Morgan or BNY Mellon if the two clearing banks would not or could not provide that level of financing.<sup>20</sup> Fed officials made a case for the proposal in an internal memo: "Should a dealer lose the confidence of its investors or clearing bank, their efforts to pull away from providing credit could be disastrous for the firm and also cast widespread doubt about the instrument as a nearly risk free, liquid overnight investment."<sup>21</sup>

But the New York Fed's new plan shouldn't be necessary as long as the PDCF was there to back up the overnight lenders, argued Patrick Parkinson, then deputy director of the Federal Reserve Board's Division of Research and Statistics. "We should tell [JP Morgan] that with the PDCF in place refusing to unwind is unnecessary and would be unforgiveable," he emailed Dudley and others.<sup>22</sup>

A week later, on July 20, Parkinson wrote to Fed Governor Kevin Warsh and Fed General Counsel Scott Alvarez that JP Morgan, because of its clearing role, was "likely to be the first to realize that the money funds and other investors that provide tri-party financing to [Lehman Brothers] are pulling back significantly." Parkinson described the chain-reaction scenario, in which a clearing bank's refusal to unwind would lead to a widespread fire sale and market panic. "Fear of these consequences is, of course, why we facilitated Bear's acquisition by JPMC," he said.<sup>23</sup>

Still, it was possible that the PDCF could prove insufficient to dissuade JP Morgan from refusing to unwind Lehman's repos, Parkinson said. Because a large portion of Lehman's collateral was ineligible to be funded by the PDCF, and because Lehman could fail during the day (before the repos were settled), JP Morgan still faced significant risks. Parkinson noted that even if the Fed lent as much as \$200 billion to Lehman, the sum might not be enough to ensure the firm's survival in the absence of an acquirer: if the stigma associated with PDCF borrowing caused other funding counterparties to stop providing funding to Lehman, the company would fail.<sup>24</sup>

#### THE FED AND THE SEC: "WEAK LIQUIDITY POSITION"

Among the four remaining investment banks, one key measure of liquidity risk was the portion of total liabilities that the firms funded through the repo market: 15% to 20% for Lehman and Merrill Lynch, 10% to 15% for Morgan Stanley, and about 10% for Goldman Sachs.<sup>25</sup> Another metric was the reliance on overnight repo (which mature in one day) or open repo (which can be terminated at any time). Despite efforts among the investment banks to reduce the portion of their repo financing that was overnight or open, the ratio of overnight and open repo funding to total repo funding still exceeded 40% for all but Goldman Sachs. Comparing the period between March and May to the period between July and August, Lehman's percentage fell

from 45% to 40%, Merrill Lynch's fell from 46% to 43%, Morgan Stanley's fell from 70% to 55%, and Goldman's fell from 18% to 10%.<sup>26</sup> Another measure of risk was the haircuts on repo loans—that is, the amount of excess collateral that lenders demanded for a given loan. Fed officials kept tabs on the haircuts demanded of investment banks, hedge funds, and other repo borrowers. As Fed analysts later noted, “With lenders worrying that they could lose money on the securities they held as collateral, haircuts increased—doubling for some agency mortgage securities and increasing significantly even for borrowers with high credit ratings and on relatively safe collateral such as Treasury securities.”<sup>27</sup>

On the day of Bear's demise, in an effort to get a better understanding of the investment banks, the New York Fed and the SEC sent teams to work on-site at Lehman Brothers, Merrill Lynch, Goldman Sachs, and Morgan Stanley. According to Erik Sirri, director of the SEC's Division of Trading and Markets, the initial rounds of meetings covered the quality of assets, funding, and capital.<sup>28</sup>

Fed Chairman Ben Bernanke would testify before a House committee that the Fed's primary role at the investment banks in 2008 was not as a regulator but as a lender through the new emergency lending facilities.<sup>29</sup> Two questions guided the Fed's analyses: First, was each investment bank liquid—did it have access to the cash needed to meet its commitments? Second, was it solvent—was its net equity (the value of assets minus the value of liabilities) sufficient to cover probable losses?<sup>30</sup>

The U.S. Treasury also dispatched so-called SWAT teams to the investment banks in the spring of 2008. The arrival of officials from the Treasury and the Fed created a full-time on-site presence—something the SEC had never had. Historically, the SEC's primary concern with the investment banks had been liquidity risk, because these firms were entirely dependent on the credit markets for funding.<sup>31</sup> The SEC already required these firms to implement so-called liquidity models, designed to ensure that they had sufficient cash available to sustain themselves on a stand-alone basis for a minimum of one year without access to unsecured funding and without having to sell a substantial amount of assets. Before the run on Bear in the repo market, the SEC's liquidity stress scenarios—also known as stress tests—had not taken account of the possibility that a firm would lose access to secured funding. According to the SEC's Sirri, the SEC never thought that a situation would arise where an investment bank couldn't enter into a repo transaction backed by high-quality collateral including Treasuries. He told the FCIC that as the financial crisis worsened, the SEC began to see liquidity and funding risks as the most critical for the investment banks, and the SEC encouraged a reduction in reliance on unsecured commercial paper and an extension of the maturities of repo loans.<sup>32</sup>

The Fed and the SEC collaborated in developing two new stress tests to determine the investment banks' ability to withstand a potential run or a systemwide disruption in the repo market. The stress scenarios, called “Bear Stearns” and “Bear Stearns Light,” were developed jointly with the remaining investment banks. In May, Lehman, for example, would be \$84 billion short of cash in the more stringent Bear Stearns scenario and \$15 billion short under Bear Stearns Light.<sup>33</sup>

The Fed conducted another liquidity stress analysis in June. While each firm ran

different scenarios that matched its risk profile, the supervisors tried to maintain comparability between the tests. The tests assumed that each firm would lose 100% of unsecured funding and a fraction of repo funding that would vary with the quality of its collateral. The stress tests, under just one estimated scenario, concluded that Goldman Sachs and Morgan Stanley were relatively sound. Merrill Lynch and Lehman Brothers failed: the two banks came out \$22 billion and \$15 billion short of cash, respectively; each had only 78% of the liquidity it would need under the stress scenario.<sup>34</sup>

The Fed's internal report on the stress tests criticized Merrill's "significant amount of illiquid fixed income assets" and noted that "Merrill's liquidity pool is low, a fact [the company] does not acknowledge." As for Lehman Brothers, the Fed concluded that "Lehman's weak liquidity position is driven by its relatively large exposure to overnight [commercial paper], combined with significant overnight secured [repo] funding of less liquid assets."<sup>35</sup> These "less liquid assets" included mortgage-related securities—now devalued. Meanwhile, Lehman ran stress tests of its own and passed with billions in "excess cash."<sup>36</sup>

Although the SEC and the Fed worked together on the liquidity stress tests, with equal access to the data, each agency has said that for months during the crisis, the other did not share its analyses and conclusions. For example, following Lehman's failure in September, the Fed told the bankruptcy examiner that the SEC had declined to share two horizontal (cross-firm) reviews of the banks' liquidity positions and exposures to commercial real estate. The SEC's response was that the documents were in "draft" form and had not been reviewed or finalized. Adding to the tension, the Fed's on-site personnel believed that the SEC on-site personnel did not have the background or expertise to adequately evaluate the data.<sup>37</sup> This lack of communication was remedied only by a formal memorandum of understanding (MOU) to govern information sharing. According to former SEC Chairman Christopher Cox, "One reason the MOU was needed was that the Fed was reluctant to share supervisory information with the SEC, out of concern that the investment banks would not be forthcoming with information if they thought they would be referred to the SEC for enforcement."<sup>38</sup> The MOU was not executed until July 2008, more than three months after the collapse of Bear Stearns.

#### DERIVATIVES: "EARLY STAGES OF ASSESSING THE POTENTIAL SYSTEMIC RISK"

The Fed's Parkinson advised colleagues in an internal August 8 email that the systemic risks of the repo and derivatives markets demanded attention: "We have given considerable thought to what might be done to avoid a fire sale of tri-party repo collateral. (That said, the options under existing authority are not very attractive—lots of risk to Fed/taxpayer, lots of moral hazard.) We still are at the early stages of assessing the potential systemic risk from close-out of OTC derivatives transactions by an investment bank's counterparties and identifying potential mitigants."<sup>39</sup>

The repo market was huge, but as discussed in earlier chapters, it was dwarfed by



## Notional Amount and Gross Market Value of OTC Derivatives Outstanding

IN TRILLIONS OF DOLLARS, SEMI-ANNUAL

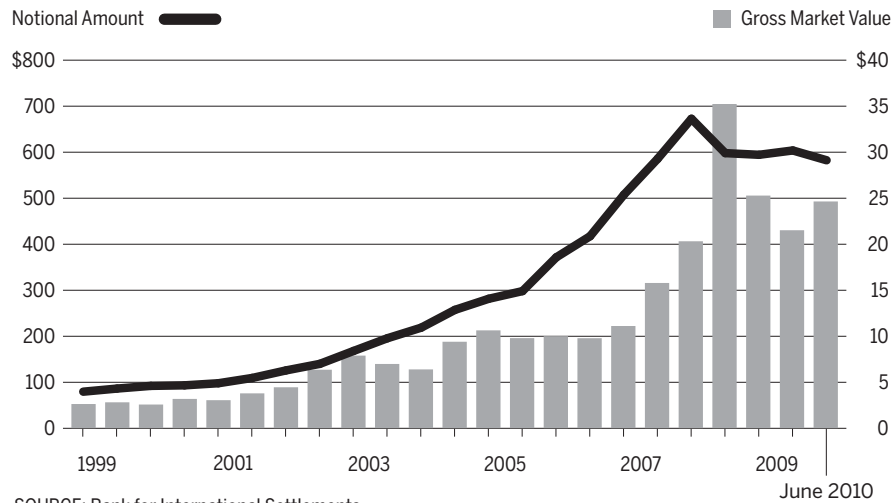


Figure 16.1

the global derivatives market. At the end of June 2008, the notional amount of the over-the-counter derivatives market was \$673 trillion and the gross market value was \$20 trillion (see figure 16.1). Adequate information about the risks in this market was not available to market participants or government regulators like the Federal Reserve. Because the market had been deregulated by statute in 2000, market participants were not subject to reporting or disclosure requirements and no government agency had oversight responsibility. While the Office of the Comptroller of the Currency did report information on derivatives positions from commercial banks and bank holding companies, it did not collect such information from the large investment banks and insurance companies like AIG, which were also major OTC derivatives dealers. During the crisis the lack of such basic information created heightened uncertainty.

At this point in the crisis, regulators also worried about the interlocking relationships that derivatives created among the small number of large financial firms that act as dealers in the OTC derivatives business. A derivatives contract creates a credit relationship between parties, such that one party may have to make large and unexpected payments to the other based on sudden price or rate changes or loan defaults. If a party is unable to make those payments when they become due, that failure may



cause significant financial harm to its counterparty, which may have offsetting obligations to third parties and depend on prompt payment. Indeed, most OTC derivatives dealers hedge their contracts with offsetting contracts; thus, if they are owed payments on one contract, they most likely owe similar amounts on an offsetting contract, creating the potential for a series of losses or defaults. Since these contracts numbered in the millions and allowed a party to have virtually unlimited leverage, the possibility of sudden large and devastating losses in this market could pose a significant danger to market participants and the financial system as a whole.

The Counterparty Risk Management Policy Group, led by former New York Fed President E. Gerald Corrigan and consisting of the major securities firms, had warned that a backlog in paperwork confirming derivatives trades and master agreements exposed firms to risk should corporate defaults occur.<sup>40</sup> With urging from New York Fed President Timothy Geithner, by September 2006, 14 major market participants had significantly reduced the backlog and had ended the practice of assigning trades to third parties without the prior consent of their counterparties.<sup>41</sup>

Large derivatives positions, and the resulting counterparty credit and operational risks, were concentrated in a very few firms. Among U.S. bank holding companies, the following institutions held enormous OTC derivatives positions as of June 30, 2008: \$94.5 trillion in notional amount for JP Morgan, \$37.7 trillion for Bank of America, \$35.8 trillion for Citigroup, \$4.1 trillion for Wachovia, and \$3.9 trillion for HSBC. Goldman Sachs and Morgan Stanley, which began to report their holdings only after they became bank holding companies in 2008, held \$45.9 and \$37.0 trillion, respectively, in notional amount of OTC derivatives in the first quarter of 2009.<sup>42</sup> In 2008, the current and potential exposure to derivatives at the top five U.S. bank holding companies was on average three times greater than the capital they had on hand to meet regulatory requirements. The risk was even higher at the investment banks. Goldman Sachs, just after it changed its charter, had derivatives exposure more than 10 times capital. These concentrations of positions in the hands of the largest bank holding companies and investment banks posed risks for the financial system because of their interconnections with other financial institutions.

Broad classes of OTC derivatives markets showed stress in 2008. By the summer of 2008, outstanding amounts of some types of derivatives had begun to decline sharply. As we will see, over the course of the second half of 2008, the OTC derivatives market would undergo an unprecedented contraction, creating serious problems for hedging and price discovery.

The Fed was uneasy in part because derivatives counterparties had played an important role in the run on Bear Stearns. The novations by derivatives counterparties to assign their positions away from Bear—and the rumored refusal by Goldman to accept Bear as a derivatives counterparty—were still a fresh memory across Wall Street. Chris Mewbourne, a portfolio manager at PIMCO, told the FCIC that the ability to novate ceased to exist and this was a key event in the demise of Bear Stearns.<sup>43</sup>

Credit derivatives in particular were a serious source of worry. Of greatest interest were the sellers of credit default swaps: the monoline insurers and AIG, which back-

stopped the market in CDOs. In addition, the credit rating agencies' decision to issue a negative outlook on the monoline insurers had jolted everyone, because they guaranteed hundreds of billions of dollars in structured products. As we have seen, when their credit ratings were downgraded, the value of all the assets they guaranteed, including municipal bonds and other securities, necessarily lost some value in the market, a drop that affected the conservative institutional investors in those markets. In the vernacular of Wall Street, this outcome is the knock-on effect; in the vernacular of Main Street, the domino effect; in the vernacular of the Fed, systemic risk.

#### BANKS: "THE MARKETS WERE REALLY, REALLY DICEY"

By the fall of 2007, signs of strain were beginning to emerge among the commercial banks. In the fourth quarter of 2007, commercial banks' earnings declined to a 16-year low, driven by write-downs on mortgage-backed securities and CDOs and by record provisions for future loan losses, as borrowers had increasing difficulty meeting their mortgage payments—and even greater difficulty was anticipated. The net charge-off rate—the ratio of failed loans to total loans—rose to its highest level since 2002, when the economy was coming out of the post-9/11 recession. Earnings continued to decline in 2008—at first, more for big banks than small banks, in part because of write-downs related to their investment banking-type activities, including the packaging of mortgage-backed securities, CDOs, and collateralized loan obligations. Declines in market values required banks to write down the value of their holdings of these securities. As previously noted, several of the largest banks had also provided support to off-balance-sheet activities, such as money market funds and commercial paper programs, bringing additional assets onto their balance sheets—assets that were losing value fast. Supervisors had begun to downgrade the ratings of many smaller banks in response to their high exposures in residential real estate construction, an industry that virtually went out of business as financing dried up in mid-2007. By the end of 2007, the FDIC had 76 banks, mainly smaller ones, on its "problem list"; their combined assets totaled \$22.2 billion.<sup>44</sup> (When large banks started to be downgraded, in early 2008, they stayed off the FDIC's problem list, as supervisors rarely give the largest institutions the lowest ratings.)<sup>45</sup>

The market for nonconforming mortgage securitizations (those backed by mortgages that did not meet Fannie Mae's or Freddie Mac's underwriting or mortgage size guidelines) had also vanished in the fourth quarter of 2007. Not only did these nonconforming loans prove harder to sell, but they also proved less attractive to keep on balance sheet, as house price forecasts looked increasingly grim. Already, house prices had fallen about 7% for the year, depending on the measure. In the first quarter of 2008, real estate loans in the banking sector showed the smallest quarterly increase since 2003.<sup>46</sup> IndyMac reported a 21% decline in loan production for that quarter from a year earlier, because it had stopped making nonconforming loans. Washington Mutual, the largest thrift, discontinued all remaining lending through its subprime mortgage channel in April 2008.

But those actions could not reduce the subprime and Alt-A exposure that these

large banks and thrifts already had. And on these assets, the markdowns continued in 2008. Regulators began to focus on solvency, urging the banks to raise new capital. In January 2008, Citigroup secured a total of \$14 billion in capital from Kuwait, Singapore, Saudi Prince Alwaleed bin Talal, and others. In April, Washington Mutual raised \$7 billion from an investor group led by the buyout firm TPG Capital. Wachovia raised \$6 billion in capital at the turn of the year and then an additional \$8 billion in April 2008. Despite the capital raises, though, the downgrades by banking regulators continued.

“The markets were really, really dicey during a significant part of this period, starting with August 2007,” Roger Cole, then-director of the Division of Banking Supervision and Regulation at the Federal Reserve Board, told the FCIC.<sup>47</sup> The same was true for the thrifts. Michael Solomon, a managing director in risk management manager in the Office of Thrift Supervision (OTS), told the FCIC, “It was hard for businesses, particularly small, midsized thrifts—to keep up with [how quickly the ratings downgrades occurred during the crisis] and change their business models and not get stuck without the chair when the music stopped . . . They got caught. The rating downgrades started and by the time the thrift was able to do something about it, it was too late . . . Business models . . . can’t keep up with what we saw in 2008.”<sup>48</sup>

As the commercial banks’ health worsened in 2008, examiners downgraded even large institutions that had maintained favorable ratings and required several to fix their risk management processes. These ratings downgrades and enforcement actions came late in the day—often just as firms were on the verge of failure. In cases that the FCIC investigated, regulators either did not identify the problems early enough or did not act forcefully enough to compel the necessary changes.

### *Citigroup: “Time to come up with a new playbook”*

For Citigroup, supervisors at the New York Fed, who examined the bank holding company, and at the Office of the Comptroller of the Currency, who oversaw the national bank subsidiary, finally downgraded the company and its main bank to “less than satisfactory” in April 2008—five months after the firm’s announcement in November 2007 of billions of dollars in write-downs related to its mortgage-related holdings. The supervisors put the company under new enforcement actions in May and June. Only a year earlier, both the Fed and the OCC had upgraded the company, after lifting all remaining restrictions and enforcement actions related to complex transactions that it had structured for Enron and to the actions of its subprime subsidiary CitiFinancial, discussed in an earlier chapter. “The risk management assessment for 2006 is reflective of a control environment where the risks facing Citigroup continue to be managed in a satisfactory manner,” the New York Fed’s rating upgrade, delivered in its annual inspection report on April 9, 2007, had noted. “During 2006, all formal restrictions and enforcement actions between the Federal Reserve and Citigroup were lifted. Board and senior management remain actively engaged in improving relevant processes.”<sup>49</sup>

But the market disruption had jolted Citigroup’s supervisors. In November 2007,

the New York Fed led a team of international supervisors, the Senior Supervisors Group, in evaluating 11 of the largest firms to assess lessons learned from the financial crisis up to that point. Much of the toughest language was reserved for Citigroup. "The firm did not have an adequate, firm-wide consolidated understanding of its risk factor sensitivities," the supervisors wrote in an internal November 19 memo describing meetings with Citigroup management. "Stress tests were not designed for this type of extreme market event. . . . Management had believed that CDOs and leveraged loans would be syndicated, and that the credit risk in super senior AAA CDOs was negligible."<sup>50</sup>

In retrospect, Citigroup had two key problems: a lack of effective enterprise-wide management to monitor and control risks and a lack of proper infrastructure and internal controls with respect to the creation of CDOs. The OCC appears to have identified some of these issues as early as 2005 but did not effectively act to rectify them. In particular, the OCC assessed both the liquidity puts and the super-senior tranches as part of its reviews of the bank's compliance with the post-Enron enforcement action, but it did not examine the risks of these exposures. As for the issues it did spot, the OCC failed to take forceful steps to require mandatory corrective action, and it relied on management's assurances in 2006 that the executives would strive to meet the OCC's goals for improving risk management.

In contrast, documents obtained by the FCIC from the New York Fed give no indication that its examination staff had any independent knowledge of those two core problems. An evaluation of the New York Fed's supervision of Citigroup, conducted by examiners from other Reserve Banks (the December 2009 Operations Review of the New York Fed, which covered the previous four years), concluded:

The supervision program for Citigroup has been less than effective. Although the dedicated supervisory team is well qualified and generally has sound knowledge of the organization, there have been significant weaknesses in the execution of the supervisory program. The team has not been proactive in making changes to the regulatory ratings of the firm, as evidenced by the double downgrades in the firm's financial component and related subcomponents at year-end 2007. Additionally, the supervisory program has lacked the appropriate level of focus on the firm's risk oversight and internal audit functions. As a result, there is currently significant work to be done in both of these areas. Moreover, the team has lacked a disciplined and proactive approach in assessing and validating actions taken by the firm to address supervisory issues.<sup>51</sup>

Timothy Geithner, secretary of the Treasury and former president of the Federal Reserve Bank of New York, reflected on the Fed's oversight of Citigroup, telling the Commission, "I do not think we did enough as an institution with the authority we had to help contain the risks that ultimately emerged in that institution."<sup>52</sup>

In January 2008, an OCC review of the breakdown in the CDO business noted that the risk in the unit had grown rapidly since 2006, after the OCC's and Fed's

lifting of supervisory agreements associated with various control problems at Citigroup. In April 2008, the Fed and OCC downgraded their overall ratings of the company and its largest bank subsidiary from 2 (satisfactory) to 3 (less than satisfactory), reflecting weaknesses in risk management that were now apparent to the supervisors.

Both Fed and OCC officials cited the Gramm-Leach-Bliley Act of 1999 as an obstacle that prevented each from obtaining a complete understanding of the risks assumed by large financial firms such as Citigroup. The act made it more difficult—though not impossible—for regulators to look beyond the legal entities under their direct purview into other areas of a large firm. Citigroup, for example, had many regulators across the world; even the securitization businesses were dispersed across subsidiaries with different supervisors—including those from the Fed, OCC, SEC, OTS, and state agencies.

In May and June 2008, Citigroup entered into memoranda of understanding with both the New York Fed and OCC to resolve the risk management weaknesses that the events of 2007 had laid bare. In the ensuing months, Fed and OCC officials said, they were satisfied with Citigroup's compliance with their recommendations. Indeed, in speaking to the FCIC, Steve Manzari, the senior relationship manager for Citigroup at the New York Fed from April to September 2008, complimented Citigroup on its assertiveness in executing its regulators' requests: aggressively replacing management, raising capital from investors in late 2007, and putting in place a number of much needed "internal fixes." However, Manzari went on, "Citi was trapped in what was a pretty vicious . . . systemic event," and for regulators "it was time to come up with a new playbook."<sup>53</sup>

### *Wachovia: "The Golden West acquisition was a mistake"*

At Wachovia, which was supervised by the OCC as well as the OTS and the Federal Reserve, a 2007 end-of-year report showed that credit losses in its subsidiary Golden West's portfolio of "Pick-a-Pay" adjustable-rate mortgages, or option ARMs, were expected to rise to about 1% of the portfolio for 2008; in 2006, losses in this portfolio had been less than 0.1%. It would soon become clear that the higher estimate for 2008 was not high enough. The company would hike its estimate of the eventual losses on the portfolio to 9% by June and to 22% by September.

Facing these and other growing concerns, Wachovia raised additional capital. Then, in April, Wachovia announced a loss of \$350 million for the first three months of the year. Depositors withdrew about \$15 billion in the following weeks, and lenders reduced their exposure to the bank, shortening terms, increasing rates, and reducing loan amounts.<sup>54</sup> By June, according to Angus McBryde, then Wachovia's senior vice president for Treasury and Balance Sheet Management, management had launched a liquidity crisis management plan in anticipation of an even more adverse market reaction to second-quarter losses that would be announced in July.<sup>55</sup>

On June 2, Wachovia's board ousted CEO Ken Thompson after he had spent 32 years at the bank, 8 of them at its helm.<sup>56</sup> At the end of the month, the bank announced that it would stop originating Golden West's Pick-a-Pay products and would

waive all fees and prepayment penalties associated with them. On July 22, Wachovia reported an \$8.9 billion second-quarter loss. The new CEO, Robert Steel, most recently an undersecretary of the treasury, announced a plan to improve the bank's financial condition: raise capital, cut the stock dividend, and lay off 10% to 12% of the staff.

The rating agencies and supervisors ignored those reassurances. On the same day as the announcement, S&P downgraded the bank, and the Fed, after years of "satisfactory" ratings, downgraded Wachovia to 3, or "less than satisfactory." The Fed noted that 2008 projections showed losses that could wipe out the recently raised capital: 2008 losses alone could exceed \$3 billion, an amount that could cause a further ratings downgrade.<sup>57</sup> The Fed directed Wachovia to reevaluate and update its capital plans and its liquidity management. Despite having consistently rated Wachovia as "satisfactory" right up to the summer meltdown, the Fed now declared that many of Wachovia's problems were "long-term in nature and result[ed] from delayed investment decisions and a desire to have business lines operate autonomously."<sup>58</sup>

The Fed bluntly criticized the board and senior management for "an environment with inconsistent and inadequate identification, escalation and coverage of all risk-taking activities, including deficiencies in stress testing" and "little accountability for errors." Wachovia management had not completely understood the level of risk across the company, particularly in certain nonbank investments, and management had delayed fixing these known deficiencies. In addition, the company's board had not sufficiently questioned investment decisions.<sup>59</sup> Nonetheless, the Fed concluded that Wachovia's liquidity was currently adequate and that throughout the market disruption, management had minimized exposure to overnight funding markets.

On August 4, the OCC downgraded Wachovia Bank and assessed its overall risk profile as "high." The OCC noted many of the same issues as the Fed, and added particularly strong remarks about the acquisition of Golden West, identifying that mortgage portfolio and associated real estate foreclosures as the heart of Wachovia's problem. The OCC noted that the board had "acknowledged that the Golden West acquisition was a mistake."<sup>60</sup>

The OCC wrote that the market was focused on the company's weakened condition and that some large fund providers had already limited their exposure to Wachovia. Like the Fed, however, the OCC concluded that the bank's liquidity was adequate, unless events undermined market confidence.<sup>61</sup> And, like the Fed, the OCC approved of the new management and a new, more hands-on oversight role for the board of directors.

Yet Wachovia's problems would continue, and in the fall regulators would scramble to find a buyer for the troubled bank.

### *Washington Mutual: "Management's persistent lack of progress"*

Washington Mutual, often called WaMu, was the largest thrift in the country, with over \$300 billion in assets at the end of 2007. At the time, \$59 billion of the home loans on its balance sheet were option ARMs, two times its capital and reserves, with



concentrated exposure in California. The reason WaMu liked option ARMs was simple: in 2005, in combination with other nontraditional mortgages such as subprime loans, they had generated returns up to 8 times those on GSE mortgage-backed securities.<sup>62</sup> But that was then. WaMu was forced to write off \$1.9 billion for the fourth quarter of 2007 and another \$1.1 billion in the first quarter of 2008, mostly related to its portfolio of option ARMs.

In response to these losses, the Office of Thrift Supervision, WaMu's regulator, requested that the thrift address concerns about asset quality, earnings, and liquidity—issues that the OTS had raised in the past but that had not been reflected in supervisory ratings. “It has been hard for us to justify doing much more than constantly nagging (okay, ‘chastising’) through ROE [Reports of Examination] and meetings, since they have not really been adversely impacted in terms of losses,”<sup>63</sup> the OTS's lead examiner at the company had commented in a 2005 email. Indeed, the nontraditional mortgage portfolio had been performing very well through 2005 and 2006.

But with WaMu now taking losses, the OTS determined on February 27, 2008, that its condition required a downgrade in its rating from a 2 to a 3, or “less than satisfactory.”<sup>64</sup> In March, the OTS advised that WaMu undertake “strategic initiatives”—that is, either find a buyer or raise new capital. In April, WaMu secured a \$7 billion investment from a consortium led by the Texas Pacific Group, a private equity firm.<sup>65</sup>

But bad news continued for thrifts. On July 14, the OTS closed IndyMac Bank in Pasadena, California, making that company the largest-ever thrift to fail. On July 22, 2008, WaMu reported a \$3.3 billion loss in the second quarter. WaMu's depositors withdrew \$10 billion over the next two weeks.<sup>66</sup> And the Federal Home Loan Bank of San Francisco—which, as noted, had historically served with the other 11 Federal Home Loan Banks as an important source of funds for WaMu and others—began to limit WaMu's borrowing capacity. The OTS issued more downgrades in various assessment categories, while maintaining the overall rating at 3.

As the insurer of many of WaMu's deposits, the FDIC had a stake in WaMu's condition, and it was not as generous as the OTS in its assessment. It had already dropped WaMu's rating significantly in March 2008, indicating a “high level of concern.”<sup>67</sup>

The FDIC expressly disagreed with the OTS's decision to maintain the 3 overall rating, recommending a 4 instead.<sup>68</sup> Ordinarily, 4 would have triggered a formal enforcement action, but none was forthcoming. In an August 2008 interview, William Isaac, who was chairman of the FDIC from 1981 until 1985, noted that the OTS and FDIC had competing interests. OTS, as primary regulator, “tends to want to see if they can rehabilitate the bank and doesn't want to act precipitously as a rule.” On the other hand, “The FDIC's job is to handle the failures, and it—generally speaking—would rather be tougher . . . on the theory that the sooner the problems are resolved, the less expensive the cleanup will be.”<sup>69</sup>

FDIC Chairman Sheila Bair underscored this tension, telling the FCIC that “our examiners, much earlier, were very concerned about the underwriting quality of WaMu's mortgage portfolio, and we were actively opposed by the OTS in terms of going in and letting our [FDIC] examiners do loan-level analysis.”<sup>70</sup>



The Treasury's inspector general would later criticize OTS's supervision of Washington Mutual: "We concluded that OTS should have lowered WaMu's composite rating sooner and taken stronger enforcement action sooner to force WaMu's management to correct the problems identified by OTS. Specifically, given WaMu management's persistent lack of progress in correcting OTS-identified weaknesses, we believe OTS should have followed its own policies and taken formal enforcement action rather than informal enforcement action."<sup>71</sup>

### *Regulators: "A lot of that pushback"*

In these examples and others that the Commission studied, regulators either failed or were late to identify the mistakes and problems of commercial banks and thrifts or did not react strongly enough when they were identified. In part, this failure reflects the nature of bank examinations conducted during periods of apparent financial calm when institutions were reporting profits. In addition to their role as enforcers of regulation, regulators acted something like consultants, working with banks to assess the adequacy of their systems. This function was, to a degree, a reflection of the supervisors' "risk-focused" approach. The OCC *Large Bank Supervision Handbook* published in January 2010 explains, "Under this approach, examiners do not attempt to restrict risk-taking but rather determine whether banks identify, understand, and control the risks they assume."<sup>72</sup> As the crisis developed, bank regulators were slow to shift gears.

Senior supervisors told the FCIC it was difficult to express their concerns forcefully when financial institutions were generating record-level profits. The Fed's Roger Cole told the FCIC that supervisors did discuss issues such as whether banks were growing too fast and taking too much risk, but ran into pushback. "Frankly a lot of that pushback was given credence on the part of the firms by the fact that—like a Citigroup was earning \$4 to \$5 billion a quarter. And that is really hard for a supervisor to successfully challenge. When that kind of money is flowing out quarter after quarter after quarter, and their capital ratios are way above the minimums, it's very hard to challenge."<sup>73</sup>

Supervisors also told the FCIC that they feared aggravating a bank's already-existing problems. For the large banks, the issuance of a formal, public supervisory action taken under the federal banking statutes marked a severe regulatory assessment of the bank's risk practices, and it was rarely employed for banks that were determined to be going concerns. Richard Spillenkothen, the Fed's head of supervision until early 2006, attributed supervisory reluctance to "a belief that the traditional, nonpublic (behind-the-scenes) approach to supervision was less confrontational and more likely to induce bank management to cooperate; a desire not to inject an element of contentiousness into what was felt to be a constructive or equitable relationship with management; and a fear that financial markets would overreact to public actions, possibly causing a run." Spillenkothen argued that these concerns were relevant but that "at times they can impede effective supervision and delay the implementation of needed corrective action. One of the lessons of this crisis . . . is that the working presumption should be earlier and stronger supervisory follow up."<sup>74</sup>

Douglas Roeder, the OCC's senior deputy comptroller for Large Bank Supervision from 2001 to 2010, said that the regulators were hampered by inadequate information from the banks but acknowledged that regulators did not do a good job of intervening at key points in the run-up to the crisis. He said that regulators, market participants, and others should have balanced their concerns about safety and soundness with the need to let markets work, noting, "We underestimated what systemic risk would be in the marketplace."<sup>75</sup>

Regulators also blame the complexity of the supervisory system in the United States. The patchwork quilt of regulators created opportunities for banks to shop for the most lenient regulator, and the presence of more than one supervisor at an organization. For example, a large firm like Citigroup could have the Fed supervising the bank holding company, the OCC supervising the national bank subsidiary, the SEC supervising the securities firm, and the OTS supervising the thrift subsidiary—creating the potential for both gaps in coverage and problematic overlap. Successive Treasury secretaries and Congressional leaders have proposed consolidation of the supervisors to simplify this system over the years. Notably, Secretary Henry Paulson released the "Blueprint for a Modernized Financial Regulatory Structure" on March 31, 2008, two weeks after the Bear rescue, in which he proposed getting rid of the thrift charter, creating a federal charter for insurance companies (now regulated only by the states), and merging the SEC and CFTC. The proposals did not move forward in 2008.<sup>76</sup>

#### COMMISSION CONCLUSIONS ON CHAPTER 16

The Commission concludes that the banking supervisors failed to adequately and proactively identify and police the weaknesses of the banks and thrifts or their poor corporate governance and risk management, often maintaining satisfactory ratings on institutions until just before their collapse. This failure was caused by many factors, including beliefs that regulation was unduly burdensome, that financial institutions were capable of self-regulation, and that regulators should not interfere with activities reported as profitable.

Large commercial banks and thrifts, such as Wachovia and IndyMac, that had significant exposure to risky mortgage assets were subject to runs by creditors and depositors.

The Federal Reserve realized far too late the systemic danger inherent in the interconnections of the unregulated over-the-counter (OTC) derivatives market and did not have the information needed to act.