

**FINANCIAL CRISIS  
INQUIRY COMMISSION**

**DISSENTING STATEMENT**

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# INTRODUCTION

## *Why a Dissent?*

The question I have been most frequently asked about the Financial Crisis Inquiry Commission (the “FCIC” or the “Commission”) is why Congress bothered to authorize it at all. Without waiting for the Commission’s insights into the causes of the financial crisis, Congress passed and the President signed the Dodd-Frank Act (DFA), far reaching and highly consequential regulatory legislation. Congress and the President acted without seeking to understand the true causes of the wrenching events of 2008, perhaps following the precept of the President’s chief of staff—“Never let a good crisis go to waste.” Although the FCIC’s work was not the full investigation to which the American people were entitled, it has served a useful purpose by focusing attention again on the financial crisis and whether—with some distance from it—we can draw a more accurate assessment than the media did with what is often called the “first draft of history.”

To avoid the next financial crisis, we must understand what caused the one from which we are now slowly emerging, and take action to avoid the same mistakes in the future. If there is doubt that these lessons are important, consider the ongoing efforts to amend the Community Reinvestment Act of 1977 (CRA). Late in the last session of the 111<sup>th</sup> Congress, a group of Democratic congressmembers introduced HR 6334. This bill, which was lauded by House Financial Services Committee Chairman Barney Frank as his “top priority” in the lame duck session of that Congress, would have extended the CRA to all “U.S. nonbank financial companies,” and thus would apply, to even more of the national economy, the same government social policy mandates responsible for the mortgage meltdown and the financial crisis. Fortunately, the bill was not acted upon. Because of the recent election, it is unlikely that supporters of H.R. 6334 will have the power to adopt similar legislation in the next Congress, but in the future other lawmakers with views similar to Barney Frank’s may seek to mandate similar requirements. At that time, the only real bulwark against the government’s use of private entities for social policy purposes will be a full understanding of how these policies were connected to the financial crisis of 2008.

Like Congress and the Administration, the Commission’s majority erred in assuming that it knew the causes of the financial crisis. Instead of pursuing a thorough study, the Commission’s majority used its extensive statutory investigative authority to seek only the facts that supported its initial assumptions—that the crisis was caused by “deregulation” or lax regulation, greed and recklessness on Wall Street, predatory lending in the mortgage market, unregulated derivatives and a financial system addicted to excessive risk-taking. The Commission did not seriously investigate any other cause, and did not effectively connect the factors

it investigated to the financial crisis. The majority's report covers in detail many elements of the economy before the financial crisis that the authors did not like, but generally failed to show how practices that had gone on for many years suddenly caused a world-wide financial crisis. In the end, the majority's report turned out to be a just so story *about* the financial crisis, rather than a report on what *caused* the financial crisis.

### ***What Caused the Financial Crisis?***

George Santayana is often quoted for the aphorism that “Those who cannot remember the past are condemned to repeat it.” Looking back on the financial crisis, we can see why the study of history is often so contentious and why revisionist histories are so easy to construct. There are always many factors that could have caused an historical event; the difficult task is to discern which, among a welter of possible causes, were the significant ones—the ones without which history would have been different. Using this standard, I believe that the *sine qua non* of the financial crisis was U.S. government housing policy, which led to the creation of 27 million subprime and other risky loans—half of all mortgages in the United States—which were ready to default as soon as the massive 1997-2007 housing bubble began to deflate. If the U.S. government had not chosen this policy path—fostering the growth of a bubble of unprecedented size and an equally unprecedented number of weak and high risk residential mortgages—the great financial crisis of 2008 would never have occurred.

Initiated by Congress in 1992 and pressed by HUD in both the Clinton and George W. Bush Administrations, the U.S. government's housing policy sought to increase home ownership in the United States through an intensive effort to reduce mortgage underwriting standards. In pursuit of this policy, HUD used (i) the affordable housing requirements imposed by Congress in 1992 on the government-sponsored enterprises (GSEs) Fannie Mae and Freddie Mac, (ii) its control over the policies of the Federal Housing Administration (FHA), and (iii) a “Best Practices Initiative” for subprime lenders and mortgage banks, to encourage greater subprime and other high risk lending. HUD's key role in the growth of subprime and other high risk mortgage lending is covered in detail in Part III.

Ultimately, all these entities, as well as insured banks covered by the CRA, were compelled to compete for mortgage borrowers who were at or below the median income in the areas in which they lived. This competition caused underwriting standards to decline, increased the numbers of weak and high risk loans far beyond what the market would produce without government influence, and contributed importantly to the growth of the 1997-2007 housing bubble.

When the bubble began to deflate in mid-2007, the low quality and high risk loans engendered by government policies failed in unprecedented numbers. The effect of these defaults was exacerbated by the fact that few if any investors—including housing market analysts—understood at the time that Fannie Mae and Freddie Mac had been acquiring large numbers of subprime and other high risk loans in order to meet HUD's affordable housing goals.

Alarmed by the unexpected delinquencies and defaults that began to appear in mid-2007, investors fled the multi-trillion dollar market for mortgage-backed

securities (MBS), dropping MBS values—and especially those MBS backed by subprime and other risky loans—to fractions of their former prices. Mark-to-market accounting then required financial institutions to write down the value of their assets—reducing their capital positions and causing great investor and creditor unease. The mechanism by which the defaults and delinquencies on subprime and other high risk mortgages were transmitted to the financial system as a whole is covered in detail in Part II.

In this environment, the government's rescue of Bear Stearns in March of 2008 temporarily calmed investor fears but created a significant moral hazard; investors and other market participants reasonably believed after the rescue of Bear that all large financial institutions would also be rescued if they encountered financial difficulties. However, when Lehman Brothers—an investment bank even larger than Bear—was allowed to fail, market participants were shocked; suddenly, they were forced to consider the financial health of their counterparties, many of which appeared weakened by losses and the capital writedowns required by mark-to-market accounting. This caused a halt to lending and a hoarding of cash—a virtually unprecedented period of market paralysis and panic that we know as the financial crisis of 2008.

### ***Weren't There Other Causes of the Financial Crisis?***

Many other causes of the financial crisis have been cited, including some in the report of the Commission's majority, but for the reasons outlined below none of them alone—or all in combination—provides a plausible explanation of the crisis.

*Low interest rates and a flow of funds from abroad.* Claims that various policies or phenomena—such as low interest rates in the early 2000s or financial flows from abroad—were responsible for the growth of the housing bubble, do not adequately explain either the bubble or the destruction that occurred when the bubble deflated. The U.S. has had housing bubbles in the past—most recently in the late 1970s and late 1980s—but when these bubbles deflated they did not cause a financial crisis. Similarly, other developed countries experienced housing bubbles in the 2000s, some even larger than the U.S. bubble, but when their bubbles deflated the housing losses were small. Only in the U.S. did the deflation of the most recent housing bubble cause a financial meltdown and a serious financial crisis. The reason for this is that only in the U.S. did subprime and other risky loans constitute half of all outstanding mortgages when the bubble deflated. It wasn't the size of the bubble that was the key; it was its content. The 1997-2007 U.S. housing bubble was in a class by itself. Nevertheless, demand by investors for the high yields offered by subprime loans stimulated the growth of a market for securities backed by these loans. This was an important element in the financial crisis, although the number of mortgages in this market was considerably smaller than the number fostered directly by government policy. Without the huge number of defaults that arose out of U.S. housing policy, defaults among the mortgages in the private market would not have caused a financial crisis.

*Deregulation or lax regulation.* Explanations that rely on lack of regulation or deregulation as a cause of the financial crisis are also deficient. First, no significant deregulation of financial institutions occurred in the last 30 years. The repeal of a

portion of the Glass-Steagall Act, frequently cited as an example of deregulation, had no role in the financial crisis.<sup>1</sup> The repeal was accomplished through the Gramm-Leach-Bliley Act of 1999, which allowed banks to affiliate for the first time since the New Deal with firms engaged in underwriting or dealing in securities. There is no evidence, however, that any bank got into trouble because of a securities affiliate. The banks that suffered losses because they held low quality mortgages or MBS were engaged in activities—mortgage lending—always permitted by Glass-Steagall; the investment banks that got into trouble—Bear Stearns, Lehman and Merrill Lynch—were not affiliated with large banks, although they had small bank affiliates that do not appear to have played any role in mortgage lending or securities trading. Moreover, the Federal Deposit Insurance Corporation Improvement Act of 1991 (FDICIA) substantially *increased* the regulation of banks and savings and loan institutions (S&Ls) after the S&L debacle in the late 1980s and early 1990s, and it is noteworthy that FDICIA—the most stringent bank regulation since the adoption of deposit insurance—failed to prevent the financial crisis.

*The shadow banking business.* The large investment banks—Bear, Lehman, Merrill, Goldman Sachs and Morgan Stanley—all encountered difficulty in the financial crisis, and the Commission majority’s report lays much of the blame for this at the door of the Securities and Exchange Commission (SEC) for failing adequately to supervise them. It is true that the SEC’s supervisory process was weak, but many banks and S&Ls—stringently regulated under FDICIA—also failed. This casts doubt on the claim that if investment banks had been regulated like commercial banks—or had been able to offer insured deposits like commercial banks—they would not have encountered financial difficulties. The reality is that the business model of the investment banks was quite different from banking; it was to finance a short-term trading business with short-term liabilities such as repurchase agreements (often called repos). This made them especially vulnerable in the panic that occurred in 2008, but it is not evidence that the existence of investment banks, or the quality of their regulation, was a *cause* of the financial crisis.

*Failures of risk management.* Claims that there was a general failure of risk management in financial institutions or excessive leverage or risk-taking are part of what might be called a “hindsight narrative.” With hindsight, it is easy to condemn managers for failing to see the dangers of the housing bubble or the underpricing of risk that now looks so clear. However, the FCIC interviewed hundreds of financial experts, including senior officials of major banks, bank regulators and investors. It is not clear that any of them—including the redoubtable Warren Buffett—were sufficiently confident about an impending crisis that they put real money behind their judgment. Human beings have a tendency to believe that things will continue to go in the direction they are going, and are good at explaining why this must be so. Blaming the crisis on the failure to foresee it is facile and of little value for policymakers, who cannot legislate prescience. The fact that virtually all participants in the financial system failed to foresee this crisis—as they failed to foresee every other crisis—does not tell us anything about why this crisis occurred or what we should do to prevent the next one.

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<sup>1</sup> See, e.g., Peter J. Wallison, “Deregulation and the Financial Crisis: Another Urban Myth,” *Financial Services Outlook*, American Enterprise Institute, October 2009.

*Securitization and structured products.* Securitization—often pejoratively described as the “originate to distribute process”—has also been blamed for the financial crisis. But securitization is only a means of financing. If securitization was a cause of the financial crisis, so was lending. Are we then to condemn lending? For decades, without serious incident, securitization has been used to finance car loans, credit card loans and jumbo mortgages that were not eligible for acquisition by Fannie Mae and Freddie Mac. The problem was not securitization itself, it was the weak and high risk loans that securitization financed. Under the category of securitization, it is necessary to mention the role of collateralized debt obligations, known as CDOs. These instruments were “toxic assets” because they were ultimately backed by the subprime mortgages that began to default in huge numbers when the bubble deflated, and it was difficult to determine where those losses would ultimately settle. CDOs, accordingly, for all their dramatic content, were just another example of the way in which subprime and other high risk loans were distributed throughout the world’s financial system. The question still remains why so many weak loans were created, not why a system that securitized good assets could also securitize bad ones.

*Credit default swaps and other derivatives.* Despite a diligent search, the FCIC never uncovered evidence that unregulated derivatives, and particularly credit default swaps (CDS), was a significant contributor to the financial crisis through “interconnections.” The only company known to have failed because of its CDS obligations was AIG, and that firm appears to have been an outlier. Blaming CDS for the financial crisis because one company did not manage its risks properly is like blaming lending generally when a bank fails. Like everything else, derivatives can be misused, but there is no evidence that the “interconnections” among financial institutions alleged to have caused the crisis were significantly enhanced by CDS or derivatives generally. For example, Lehman Brothers was a major player in the derivatives market, but the Commission found no indication that Lehman’s failure to meet its CDS and other derivatives obligations caused significant losses to any other firm, including those that had written CDS on Lehman itself.

*Predatory lending.* The Commission’s report also blames predatory lending for the large build-up of subprime and other high risk mortgages in the financial system. This might be a plausible explanation if there were evidence that predatory lending was so widespread as to have produced the volume of high risk loans that were actually originated. In predatory lending, unscrupulous lenders take advantage of unwitting borrowers. This undoubtedly occurred, but it also appears that many people who received high risk loans were predatory borrowers, or engaged in mortgage fraud, because they took advantage of low mortgage underwriting standards to benefit from mortgages they knew they could not pay unless rising housing prices enabled them to sell or refinance. The Commission was never able to shed any light on the extent to which predatory lending occurred. Substantial portions of the Commission majority’s report describe abusive activities by some lenders and mortgage brokers, but without giving any indication of how many such loans were originated. Further, the majority’s report fails to acknowledge that most of the buyers for subprime loans were government agencies or private companies complying with government affordable housing requirements.

## *Why Couldn't We Reach Agreement?*

After the majority's report is published, many people will lament that it was not possible to achieve a bipartisan agreement on the facts. It may be a surprise that I am asking the same question. If the Commission's investigation had been an objective and thorough investigation, many of the points I raise in this dissent would have been known to the other commissioners before reading this dissent, and perhaps would have been influential with them. Similarly, I might have found facts that changed my own view. But the Commission's investigation was not structured or carried out in a way that could ever have garnered my support or, I believe, the support of the other Republican members.

One glaring example will illustrate the Commission's lack of objectivity. In March 2010, Edward Pinto, a resident fellow at the American Enterprise Institute (AEI) who had served as chief credit officer at Fannie Mae, provided to the Commission staff a 70-page, fully sourced memorandum on the number of subprime and other high risk mortgages in the financial system immediately before the financial crisis. In that memorandum, Pinto recorded that he had found over 25 million such mortgages (his later work showed that there were approximately 27 million).<sup>2</sup> Since there are about 55 million mortgages in the U.S., Pinto's research indicated that, as the financial crisis began, *half* of all U.S. mortgages were of inferior quality and liable to default when housing prices were no longer rising. In August, Pinto supplemented his initial research with a paper documenting the efforts of the Department of Housing and Urban Development (HUD), over two decades and through two administrations, to increase home ownership by reducing mortgage underwriting standards.<sup>3</sup>

This research raised important questions about the role of government housing policy in promoting the high risk mortgages that played such a key role in both the mortgage meltdown and the financial panic that followed. Any objective investigation of the causes of the financial crisis would have looked carefully at this research, exposed it to the members of the Commission, taken Pinto's testimony, and tested the accuracy of Pinto's research. But the Commission took none of these steps. Pinto's research was never made available to the other members of the FCIC, or even to the commissioners who were members of the subcommittee charged with considering the role of housing policy in the financial crisis.

Accordingly, the Commission majority's report ignores hypotheses about the causes of the financial crisis that any objective investigation would have considered, while focusing solely on theories that have political currency but far less plausibility. This is not the way a serious and objective inquiry should have been carried out, but that is how the Commission used its resources and its mandate.

There were many other deficiencies. The scope of the Commission's work was determined by a list of public hearings that was handed to us in early December 2009. At that point the Commission members had never discussed the possible causes of the crisis, and we were never told why those particular subjects were important or were chosen as the key issues for a set of hearings that would form the backbone

<sup>2</sup> Edward Pinto, "Triggers of the Financial Crisis" (Triggers memo), <http://www.aei.org/paper/100174>.

<sup>3</sup> Edward Pinto, "[Government Housing Policies in the Lead-up to the Financial Crisis: A Forensic Study](http://www.aei.org/docLib/Government-Housing-Policies-Financial-Crisis-Pinto-102110.pdf)," <http://www.aei.org/docLib/Government-Housing-Policies-Financial-Crisis-Pinto-102110.pdf>.

of all the Commission's work. The Commission members did not get together to discuss or decide on the causes of the financial crisis until July, 2010, well after it was too late to direct the activities of the staff. The Commission interviewed hundreds of witnesses, and the majority's report is full of statements such as "Smith told the FCIC that...." However, unless the meeting was public, the commissioners were not told that an interview would occur, did not know who was being interviewed, were not encouraged to attend, and of course did not have an opportunity to question these sources or understand the contexts in which the quoted statements were made. The Commission majority's report uses these opinions as substitutes for data, which is notably lacking in their report; opinions in general are not worth much, especially in hindsight and when given without opportunity for challenge.

The Commission's authorizing statute required that the Commission report on or before December 15, 2010. The original plan was for us to start seeing drafts of the report in April. We didn't see any drafts until November. We were then given an opportunity to submit comments in writing, but never had an opportunity to go over the wording as a group or to know whether our comments were accepted. We received a complete copy of the majority's report, for the first time, on December 15. It was almost 900 double-spaced pages long. The date for approval of the report was eight days later, on December 23. That is not the way to achieve a bipartisan report, or the full agreement of any group that takes the issues seriously.

This dissenting statement is organized as follows: Part I summarizes the main points of the dissent. Part II describes how the failure of subprime and other high risk mortgages drove the growth of the bubble and weakened financial institutions around the world when these mortgages began to default. Part III outlines in detail the housing policies of the U.S. government that were primarily responsible for the fact that approximately one half of all U.S. mortgages in 2007 were subprime or otherwise of low quality. Part IV is a brief conclusion.



# SUMMARY

Although there were many contributing factors, the housing bubble of 1997-2007 would not have reached its dizzying heights or lasted as long, nor would the financial crisis of 2008 have ensued, but for the role played by the housing policies of the United States government over the course of two administrations. As a result of these policies, by the middle of 2007, there were approximately 27 million subprime and Alt-A mortgages in the U.S. financial system—half of all mortgages outstanding—with an aggregate value of over \$4.5 trillion.<sup>4</sup> These were unprecedented numbers, far higher than at any time in the past, and the losses associated with the delinquency and default of these mortgages fully account for the weakness and disruption of the financial system that has become known as the financial crisis.

Most subprime and Alt-A mortgages are high risk loans. A subprime mortgage is a loan to a borrower who has blemished credit, usually signified by a FICO credit score lower than 660.<sup>5</sup> Typically, a subprime borrower has failed in

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<sup>4</sup> Unless otherwise indicated, all estimates for the number of subprime and Alt-A mortgages outstanding, as well as the use of specific terms such as loan to value ratios and delinquency rates, come from research done by Edward Pinto, a resident fellow at the American Enterprise Institute. Pinto is also a consultant to the housing finance industry and a former chief credit officer of Fannie Mae. Much of this work is posted on both my and Pinto's scholar pages at AEI as follows: <http://www.aei.org/docLib/Pinto-Sizing-Total-Exposure.pdf>, which accounts for all 27 million high risk loans; <http://www.aei.org/docLib/Pinto-Sizing-Total-Federal-Contributions.pdf>, which covers the portion of these loans that were held or guaranteed by federal agencies and the four large banks that made these loans under CRA; and <http://www.aei.org/docLib/Pinto-High-LTV-Subprime-Alt-A.pdf>, which covers the acquisition of these loans by government agencies from the early 1990s. The information in these memoranda is fully cited to original sources. These memoranda were the data exhibits to a Pinto memorandum submitted to the FCIC in January 2010, and revised and updated in March 2010 (collectively, the "Triggers memo").

<sup>5</sup> One of the confusing elements of any study of the mortgage markets is the fact that the key definitions have never been fully agreed upon. For many years, Fannie Mae treated as subprime loans only those that it purchased from subprime originators. *Inside Mortgage Finance*, a common source of data on the mortgage market, treated and recorded as subprime only those loans reported as subprime by the originators or by Fannie and Freddie. Other loans were recorded as prime, even if they had credit scores that would have classified them as subprime. However, a FICO credit score of less than 660 is generally regarded as a subprime loan, no matter how originated. That is the standard, for example, used by the Office of the Comptroller of the Currency. In this statement and in Pinto's work on this issue, loans that are classified as subprime by their originators are called "self-denominated" subprime loans, and loans to borrowers with FICO scores of less than 660 are called subprime by characteristic. Fannie and Freddie reported only a very small percentage of their loans as subprime, so in effect the subprime loans acquired by Fannie and Freddie should be added to the self-denominated subprime loans originated by others in order to derive something closer to the number and principal amount of the subprime loans outstanding in the financial system at any given time. One of the important elements of Edward Pinto's work was to show that Fannie and Freddie, for many years prior to the financial crisis, were buying loans that should have been classified as subprime because of the borrowers' credit scores and not simply because they were originated by subprime lenders. Fannie and Freddie did not do this until after they were taken over by the federal government. This lack of disclosure on the part of the GSEs appears to have been a factor in the failure of many market observers to foresee the potential severity of the mortgage defaults when the housing bubble deflated in 2007.

the past to meet other financial obligations. Before changes in government policy in the early 1990s, most borrowers with FICO scores below 660 did not qualify as prime borrowers and had difficulty obtaining mortgage credit other than through the Federal Housing Administration (FHA), the government's original subprime lender, or through a relatively small number of specialized subprime lenders.

An Alt-A mortgage is one that is deficient by its terms. It may have an adjustable rate, lack documentation about the borrower, require payment of interest only, or be made to an investor in rental housing, not a prospective homeowner. Another key deficiency in many Alt-A mortgages is a high loan-to-value ratio—that is, a low downpayment. A low downpayment for a home may signify the borrower's lack of financial resources, and this lack of “skin in the game” often means a reduced borrower commitment to the home. Until they became subject to HUD's affordable housing requirements, beginning in the early 1990s, Fannie and Freddie seldom acquired loans with these deficiencies.

Given the likelihood that large numbers of subprime and Alt-A mortgages would default once the housing bubble began to deflate in mid- 2007—with devastating effects for the U.S. economy and financial system—the key question for the FCIC was to determine why, beginning in the early 1990s, mortgage underwriting standards began to deteriorate so significantly that it was possible to create 27 million subprime and Alt-A mortgages. The Commission never made a serious study of this question, although understanding why and how this happened must be viewed as one of the central questions of the financial crisis.

From the beginning, the Commission's investigation was limited to validating the standard narrative about the financial crisis—that it was caused by deregulation or lack of regulation, weak risk management, predatory lending, unregulated derivatives and greed on Wall Street. Other hypotheses were either never considered or were treated only superficially. In criticizing the Commission, this statement is not intended to criticize the staff, which worked diligently and effectively under difficult circumstances, and did extraordinarily fine work in the limited areas they were directed to cover. The Commission's failures were failures of management.

## **1. GOVERNMENT POLICIES RESULTED IN AN UNPRECEDENTED NUMBER OF RISKY MORTGAGES**

Three specific government programs were primarily responsible for the growth of subprime and Alt-A mortgages in the U.S. economy between 1992 and 2008, and for the decline in mortgage underwriting standards that ensued.

*The GSEs' Affordable Housing Mission.* The fact that high risk mortgages formed almost half of all U.S. mortgages by the middle of 2007 was not a chance event, nor did it just happen that banks and other mortgage originators decided on their own to offer easy credit terms to potential homebuyers beginning in the 1990s.

In 1992, Congress enacted Title XIII of the Housing and Community Development Act of 1992<sup>6</sup> ( the GSE Act), legislation intended to give low and

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<sup>6</sup> Public Law 102-550, 106 Stat. 3672, H.R. 5334, enacted October 28, 1992.

moderate income<sup>7</sup> borrowers better access to mortgage credit through Fannie Mae and Freddie Mac. This effort, probably stimulated by a desire to increase home ownership, ultimately became a set of regulations that required Fannie and Freddie to reduce the mortgage underwriting standards they used when acquiring loans from originators. As the Senate Committee report said at the time, “The purpose of [the affordable housing] goals is to facilitate the development in both Fannie Mae and Freddie Mac of an ongoing business effort that will be fully integrated in their products, cultures and day-to-day operations to service the mortgage finance needs of low-and-moderate-income persons, racial minorities and inner-city residents.”<sup>8</sup> The GSE Act, and its subsequent enforcement by HUD, set in motion a series of changes in the structure of the mortgage market in the U.S. and more particularly the gradual degrading of traditional mortgage underwriting standards. Accordingly, in this dissenting statement, I will refer to the subprime and Alt-A mortgages that were acquired because of the affordable housing AH goals, as well as other subprime and Alt-A mortgages, as non-traditional mortgages, or NTMs

The GSE Act was a radical departure from the original conception of the GSEs as managers of a secondary market in prime mortgages. Fannie Mae was established as a government agency in the New Deal era to buy mortgages from banks and other loan originators, providing them with new funds with which to make additional mortgages. In 1968, it was authorized to sell shares to the public and became a government-sponsored enterprise (GSE)<sup>9</sup>—a shareholder-owned company with a government mission to maintain a liquid secondary market in mortgages. Freddie Mac was chartered by Congress as another GSE in 1970. Fannie and Freddie carried out this mission effectively until the early 1990s, and in the process established conservative lending standards for the mortgages they were willing to purchase, including such elements as downpayments of 10 to 20 percent, and minimum credit standards for borrowers.

The GSE Act, however, created a new “mission” for Fannie Mae and Freddie Mac—a responsibility to support affordable housing—and authorized HUD to establish and administer what was in effect a mortgage quota system in which a certain percentage of all Fannie and Freddie mortgage purchases had to be loans to low-and- moderate income (LMI) borrowers—defined as persons with income at or below the median income in a particular area or to borrowers living in certain low income communities. The AH goals put Fannie and Freddie into direct competition with the FHA, which was then and is today an agency within HUD that functions as the federal government’s principal subprime lender.

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<sup>7</sup> Low income is usually defined as 80 percent of area median income (AMI) and moderate income as 100 percent of AMI.

<sup>8</sup> Report of the Committee on Banking Housing and Urban Affairs, United States Senate to accompany S. 2733. Report 102-282, May 15, 1992, pp. 34-5.

<sup>9</sup> Fannie and Freddie were considered to be government sponsored enterprises because they had been chartered by Congress and were given various privileges (such as exemption from the Securities Act of 1933 and the Securities Exchange Act of 1934) and a line of credit at the Treasury that signaled a special degree of government support. As a result, the capital markets (which continued to call them “Agencies”) assumed that in the event of financial difficulties the government would stand behind them. This implied government backing gave them access to funding that was lower cost than any AAA borrower and often only a few basis points over the applicable Treasury rate.

Over the next 15 years, HUD consistently enhanced and enlarged the AH goals. In the GSE Act, Congress had initially specified that 30 percent of the GSEs' mortgage purchases meet the AH goals. This was increased to 42 percent in 1995, and 50 percent in 2000. By 2008, the main LMI goal was 56 percent, and a special affordable subgoal had been added requiring that 27 percent of the loans acquired by the GSEs be made to borrowers who were at or below 80 percent of area median income (AMI). Table 10, page 510, shows that Fannie and Freddie met the goals in almost every year between 1996 and 2008.

There is very little data available concerning Fannie and Freddie's acquisitions of subprime and Alt-A loans in the early 1990s, so it is difficult to estimate the GSEs' year-by-year acquisitions of these loans immediately after the AH goals went into effect. However, Pinto estimates the total value of these purchases at approximately \$4.1 trillion (see Table 7, page 504). As shown in Table 1, page 456, on June 30, 2008, immediately prior to the onset of the financial crisis, the GSEs held or had guaranteed 12 million subprime and Alt-A loans. This was 37 percent of their total mortgage exposure of 32 million loans, which in turn was approximately 58 percent of the 55 million mortgages outstanding in the U.S. on that date. Fannie and Freddie, accordingly, were by far the dominant players in the U.S. mortgage market before the financial crisis and their underwriting standards largely set the standards for the rest of the mortgage financing industry.

*The Community Reinvestment Act.* In 1995, the regulations under the Community Reinvestment Act (CRA)<sup>10</sup> were tightened. As initially adopted in 1977, the CRA and its associated regulations required only that insured banks and S&Ls reach out to low-income borrowers in communities they served. The new regulations, made effective in 1995, for the first time required insured banks and S&Ls to demonstrate that they were actually making loans in low-income communities and to low-income borrowers.<sup>11</sup> A qualifying CRA loan was one made to a borrower at or below 80 percent of the AMI, and thus was similar to the loans that Fannie and Freddie were required to buy under HUD's AH goals.

In 2007, the National Community Reinvestment Coalition (NCRC), an umbrella organization for community activist organizations, reported that between 1997 and 2007 banks that were seeking regulatory approval for mergers committed in agreements with community groups to make over \$4.5 trillion in CRA loans.<sup>12</sup> A substantial portion of these commitments appear to have been converted into mortgage loans, and thus would have contributed substantially to the number of subprime and other high risk loans outstanding in 2008. For this reason, they deserved Commission investigation and analysis. Unfortunately, as outlined in Part III, this was not done.

Accordingly, the GSE Act put Fannie and Freddie, FHA, and the banks that were seeking CRA loans into competition for the same mortgages—loans to borrowers at or below the applicable AMI.

*HUD's Best Practices Initiative.* In 1994, HUD added another group to this list when it set up a "Best Practices Initiative," to which 117 members of the Mortgage

<sup>10</sup> Pub.L. 95-128, Title VIII of the Housing and Community Development Act of 1977, 91 Stat. 1147, 12 U.S.C. § 2901 *et seq.*

<sup>11</sup> <http://www.fdic.gov/regulations/laws/rules/2000-6500.html>.

<sup>12</sup> See [http://www.community-wealth.org/\\_pdfs/articles-publications/cdfs/report-silver-brown.pdf](http://www.community-wealth.org/_pdfs/articles-publications/cdfs/report-silver-brown.pdf).

Bankers Association eventually adhered. As shown later, this program was explicitly intended to encourage a reduction in underwriting standards so as to increase access by low income borrowers to mortgage credit. Countrywide was by far the largest member of this group and by the early 2000s was also competing, along with others, for the same NTMs sought by Fannie and Freddie, FHA, and the banks under the CRA .

With all these entities seeking the same loans, it was not likely that all of them would find enough borrowers who could meet the traditional mortgage lending standards that Fannie and Freddie had established. It also created ideal conditions for a decline in underwriting standards, since every one of these competing entities was seeking NTMs not for purposes of profit but in order to meet an obligation imposed by the government. The obvious way to meet this obligation was simply to reduce the underwriting standards that impeded compliance with the government's requirements.

Indeed, by the early 1990s, traditional underwriting standards had come to be seen as an obstacle to home ownership by LMI families. In a 1991 Senate Banking Committee hearing, Gail Cincotta, a highly respected supporter of low-income lending, observed that "Lenders will respond to the most conservative standards unless [Fannie Mae and Freddie Mac] are aggressive and convincing in their efforts to expand historically narrow underwriting."<sup>13</sup>

In this light, it appears that Congress set out deliberately in the GSE Act not only to change the culture of the GSEs, but also to set up a mechanism that would reduce traditional underwriting standards over time, so that home ownership would be more accessible to LMI borrowers. For example, the legislation directed the GSEs to study "The implications of implementing underwriting standards that—(A) establish a downpayment requirement for mortgagors of 5 percent or less;<sup>14</sup> (B) allow the use of cash on hand as a source of downpayments; and (C) approve borrowers who have a credit history of delinquencies if the borrower can demonstrate a satisfactory credit history for at least the 12-month period ending on the date of the application for the mortgage."<sup>15</sup> None of these elements was part of traditional mortgage underwriting standards as understood at the time.

I have been unable to find any studies by Fannie or Freddie in response to this congressional direction, but HUD treated these cues as a mandate to use the AH goals as a mechanism for eroding the traditional standards. HUD was very explicit about this, as shown in Part II. In the end, the goal was accomplished by gradually expanding the requirements and enlarging the AH goals over succeeding years, so that the only way Fannie and Freddie could meet the AH goals was by purchasing increasing numbers of subprime and Alt-A mortgages, and particularly mortgages with low or no downpayments. Because the GSEs were the dominant players in the mortgage market, their purchases also put competitive pressure on the other entities that were subject to government control—FHA and the banks

<sup>13</sup> Allen Fishbein, "Filling the Half-Empty Glass: The Role of Community Advocacy in Redefining the Public Responsibilities of Government-Sponsored Housing Enterprises", Chapter 7 of *Organizing Access to Capital: Advocacy and the Democratization of Financial Institutions*, 2003, Gregory Squires, editor.

<sup>14</sup> At that time the GSEs' minimum downpayment was 5 percent, and was accompanied by conservative underwriting. The congressional request was to break through that limitation.

<sup>15</sup> GSE Act, Section 1354(a).

under CRA—to reach deeper into subprime lending in order to find the mortgages they needed to comply with their own government requirements. This was also true of the mortgage banks—the largest of which was Countrywide—that were bound to promote affordable housing through HUD’s Best Practices Initiative.

By 2008, the result of these government programs was an unprecedented number of subprime and other high risk mortgages in the U.S. financial system. Table 1 shows which agencies or firms were holding the credit risk of these mortgages—or had distributed it to investors through mortgage-backed securities (MBS)—immediately before the financial crisis began. As Table 1 makes clear, government agencies, or private institutions acting under government direction, either held or had guaranteed 19.2 million of the NTM loans that were outstanding at this point. By contrast, about 7.8 million NTMs had been distributed to investors through the issuance of private mortgage-backed securities, or PMBS,<sup>16</sup> primarily by private issuers such as Countrywide and other subprime lenders.

The fact that the credit risk of two-thirds of all the NTMs in the financial system was held by the government or by entities acting under government control demonstrates the central role of the government’s policies in the development of the 1997-2007 housing bubble, the mortgage meltdown that occurred when the bubble deflated, and the financial crisis and recession that ensued. Similarly, the fact that only 7.8 million NTMs were held by investors and financial institutions in the form of PMBS shows that this group of NTMs were less important as a cause of the financial crisis than the government’s role. The Commission majority’s report focuses almost entirely on the 7.8 million PMBS, and is thus an example of its determination to ignore the government’s role in the financial crisis.

Table 1.<sup>17</sup>

Entity	No. of Subprime and Alt-A Loans	Unpaid Principal Amount
Fannie Mae and Freddie Mac	12 million	\$1.8 trillion
FHA and other Federal*	5 million	\$0.6 trillion
CRA and HUD Programs	2.2 million	\$0.3 trillion
<b>Total Federal Government</b>	<b>19.2 million</b>	<b>\$2.7 trillion</b>
Other (including subprime and Alt-A PMBS issued by Countrywide, Wall Street and others)	7.8 million	\$1.9 trillion
<b>Total</b>	<b>27 million</b>	<b>\$4.6 trillion</b>

\*Includes Veterans Administration, Federal Home Loan Banks and others.

To be sure, the government’s efforts to increase home ownership through the AH goals succeeded. Home ownership rates in the U.S. increased from approximately 64 percent in 1994 (where it had been for 30 years) to over 69 percent in 2004.<sup>18</sup> Almost everyone in and out of government was pleased with this—a long term goal

<sup>16</sup> In the process known as securitization, securities backed by a pool of mortgages (mortgage-backed securities, or MBS) and issued by private sector firms were known as private label securities (distinguishing them from securities issued by the GSEs or Ginnie Mae) or private MBS (PMBS).

<sup>17</sup> See Edward Pinto’s analysis in Exhibit 2 to the Triggers Memo, April 21, 2010, p.4. <http://www.aei.org/docLib/Pinto-Sizing-Total-Federal-Contributions.pdf>

<sup>18</sup> Census Bureau data.

of U.S. housing policy—until the true costs became clear with the collapse of the housing bubble in 2007. Then an elaborate process of shifting the blame began.

## 2. THE GREAT HOUSING BUBBLE AND ITS EFFECTS

Figure 1 below, based on the data of Robert J. Shiller, shows the dramatic growth of the 1997-2007 housing bubble in the United States. By mid-2007, home prices in the U.S. had increased substantially for ten years. The growth in real dollar terms had been almost 90 percent, ten times greater than any other housing bubble in modern times. As discussed below, there is good reason to believe that the 1997-2007 bubble grew larger and extended longer in time than previous bubbles because of the government’s housing policies, which artificially increased the demand for housing by funneling more money into the housing market than would have been available if traditional lending standards had been maintained and the government had not promoted the growth of subprime lending.

Figure 1. The Bubble According to Shiller



That the 1997-2007 bubble lasted about twice as long as the prior housing bubbles is significant in itself. Mortgage quality declines as a housing bubble grows and originators try to structure mortgages that will allow buyers to meet monthly payments for more expensive homes; the fact that the most recent bubble was so long-lived was an important element in its ultimate destructiveness when it deflated. Why did this bubble last so long? Housing bubbles deflate when delinquencies and defaults begin to appear in unusual numbers. Investors and creditors realize that the risks of a collapse are mounting. One by one, investors cash in and leave. Eventually, the bubble tops out, those who are still in the game run for the doors, and a deflation in prices sets in. Generally, in the past, this process took three or four years. In the case of the most recent bubble, it took ten. The reason for this longevity is that one

major participant in the market was not in it for profit and was not worried about the risks to itself or to those it was controlling. It was the U.S. government, pursuing a social policy—increasing homeownership by making mortgage credit available to low and moderate income borrowers—and requiring the agencies and financial institutions it controlled or could influence through regulation to keep pumping money into housing long after the bubble, left to itself, would have deflated.

Economists have been vigorously debating whether the Fed's monetary policy in the early 2000s caused the bubble by keeping interest rates too low for too long. Naturally enough, Ben Bernanke and Alan Greenspan have argued that the Fed was not at fault. On the other hand, John Taylor, author of the Taylor rule, contends that the Fed's violation of the Taylor rule was the principal cause of the bubble. Raghuram Rajan, a professor at the Chicago Booth School of Business, argues that the Fed's low interest rates caused the bubble, but that the Fed actually followed this policy in order to combat unemployment rather than deflation.<sup>19</sup> Other theories blame huge inflows of funds from emerging markets or from countries that were recycling the dollars they received from trade surpluses with the U.S. These debates, however, may be missing the point. It doesn't matter where the funds that built the bubble actually originated; the important question is why they were transformed into the NTMs that were prone to failure as soon as the great bubble deflated.

Figure 2 illustrates clearly that the 1997-2007 bubble was built on a foundation of 27 million subprime and Alt-A mortgages and shows the relationship between the cumulative growth in the dollar amount of NTMs and the growth of the bubble over time. It includes both GSE and CRA contributions to the number of outstanding NTMs above the normal baseline of 30 percent,<sup>20</sup> and estimated CRA lending under the merger-related commitments of the four large banks—Bank of America, Wells Fargo, Citibank and JPMorgan Chase—that, with their predecessors, made most of the commitments. As noted above, these commitments were made in connection with applications to federal regulators for approvals of mergers or acquisitions. The dollar amounts involved were taken from a 2007 report by the NCRC,<sup>21</sup> and adjusted for announced loans and likely rates of lending. The cumulative estimated CRA

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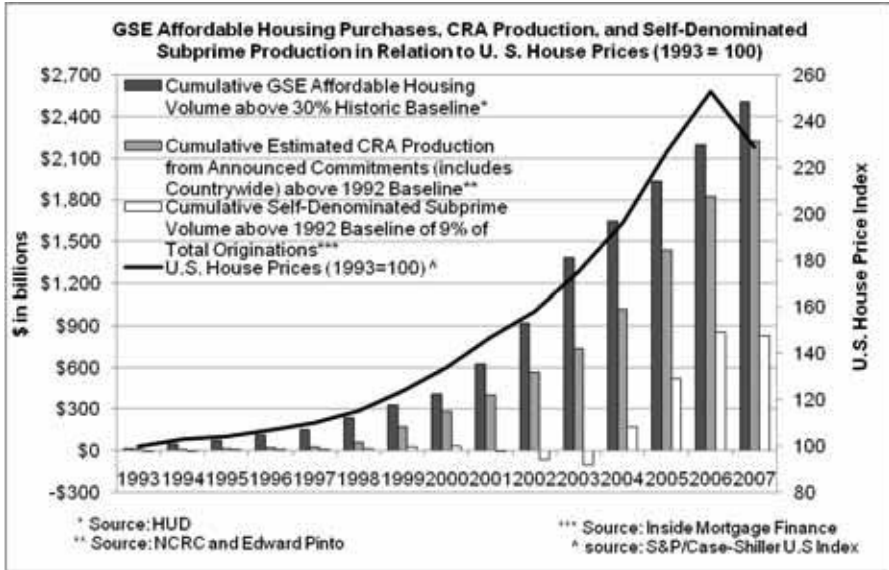
<sup>19</sup> See, Bernanke testimony before the FCIC, September 2, 2010, Alan Greenspan, in "The Crisis," Second Draft: March 9, 2010, Taylor, in testimony before the FCIC on October 20, 2009, John B. Taylor, *Getting Off Track*, Hoover Institution Press, 2009; and Raghuram Rajan, *Fault Lines: How Hidden Fractures Still Threaten the World Economy*, Princeton University Press, 2010, pp. 108-110.

<sup>20</sup> It appears that the GSEs' normal intake of mortgages included about 30 percent that were made to borrowers who were at or below the median income in the area in which they lived and were thus eligible for AH credit. It was only when the AH goals rose above this level, beginning in 1995, that government policy required the GSEs to acquire more AH qualifying loans than they would have purchased as a matter of course. In the case of the CRA contributions, the baseline is 1992, and includes the commitments made by the four largest banks and their predecessors listed in the NCRC report, adjusted for the loans actually announced by the banks after that date.

<sup>21</sup> In 2007, the National Community Reinvestment Coalition published a report on principal amount of CRA loans that banks had committed to make in connection with merger applications. The report claimed that these commitments exceeded \$4.5 trillion. The original report was removed from the NCRC's website, but can still be found at <http://www.community-wealth.org/pdfs/articles-publications/cdfs/report-silver-brown.pdf>. A portion of these commitments were in fact fulfilled through CRA qualifying loans. A full discussion of these commitments and the number of loans made pursuant to them is contained in Section III.

production line also includes almost \$1 trillion in NTM lending by Countrywide Financial under HUD’s Best Practices Initiative.<sup>22</sup>

Figure 2. The Effect of Government Policies on the Growth of the Bubble



It is not true that every bubble--even a large bubble-- has the potential to cause a financial crisis when it deflates. This is clear in Table 2 below, prepared by Professor Dwight Jaffee of the Haas Business School at U.C. Berkley. The table shows that in other developed countries—many of which also had large bubbles during the 1997-2007 period—the losses associated with mortgage delinquencies and defaults when these bubbles deflated were far lower than the losses suffered in the U.S. when the 1997-2007 deflated.

<sup>22</sup> See note 144.

Table 2.<sup>23</sup> Troubled Mortgages, Western Europe and the United States

	≥ 3 Month Arrears %	Impaired or Doubtful %	Foreclosures	Year
Belgium	0.46%			2009
Denmark	0.53%			2009
France		0.93%		2008
Ireland	3.32%			2009
Italy		3.00%		2008
Portugal	1.17%			2009
Spain		3.04%	0.24%	2009
Sweden		1.00%		2009
UK	2.44%		0.19%	2009
<hr/>				
U.S. All Loans	9.47%		4.58%	2009
U.S. Prime	6.73%		3.31%	2009
U.S. Subprime	25.26%		15.58%	2009

Source: European Mortgage Federation (2010) and Mortgage Bankers Association for U.S. Data.

The underlying reasons for the outcomes in Professor Jaffee's data were provided in testimony before the Senate Banking Committee in September 2010 by Dr. Michael Lea, Director of the Corky McMillin Center for Real Estate at San Diego State University:

The default and foreclosure experience of the U.S. market has been far worse than in other countries. Serious default rates remain less than 3 percent in all other countries and less than 1 percent in Australia and Canada. Of the countries in this survey only Ireland, Spain and the UK have seen a significant increase in mortgage default during the crisis.

There are several factors responsible for this result. First sub-prime lending was rare or non-existent outside of the U.S. The only country with a significant subprime share was the UK (a peak of 8 percent of mortgages in 2006). Subprime accounted for 5 percent of mortgages in Canada, less than 2 percent in Australia and negligible proportions elsewhere.

...[T]here was far less "risk layering" or offering limited documentation loans to subprime borrowers with little or no downpayment. There was little "no doc" lending...the proportion of loans with little or no downpayment was less than the U.S. and the decline in house prices in most countries was also less...[L]oans in other developed countries are with recourse and lenders routinely go after borrowers for deficiency judgments.<sup>24</sup>

The fact that the destructiveness of the 1997-2007 bubble came from its composition—the number of NTMs it contained—rather than its size is also illustrated by data on foreclosure starts published by the Mortgage Bankers

<sup>23</sup> Dwight M. Jaffee, "Reforming the U.S. Mortgage Market Through Private Market Incentives," Paper prepared for presentation at "Past, Present and Future of the Government Sponsored Enterprises," Federal Reserve Bank of St. Louis, Nov 17, 2010, Table 4.

<sup>24</sup> Dr. Michael J. Lea, testimony before the Subcommittee on Security and International Trade and Finance of the Senate Banking Committee, September 29, 2010, p.6.

Association (MBA).<sup>25</sup> This data allows a comparison between the foreclosure starts that have thus far come out of the 1997-2007 bubble and the foreclosure starts in the two most recent housing bubbles (1977-1979 and 1985-1989) shown in Figure 1. After the housing bubble that ended in 1979, when almost all mortgages were prime loans of the traditional type, foreclosure starts in the ensuing downturn reached a high point of only .87 percent in 1983. After the next bubble, which ended in 1989 and in which a high proportion of the loans were the traditional type, foreclosure starts reached a high of 1.32 percent in 1994. However, after the collapse of the 1997-2007 bubble—in which half of all mortgages were NTMs—foreclosure starts reached the unprecedented level (thus far) of 5.3 percent in 2009. And this was true despite numerous government and bank efforts to prevent or delay foreclosures.

All the foregoing data is significant for a proper analysis of the role of government policy and NTMs in the financial crisis. What it suggests is that whatever effect low interest rates or money flows from abroad might have had in creating the great U.S. housing bubble, the deflation of that bubble need not have been destructive. It wasn't just the size of the bubble; it was also the content. The enormous delinquency rates in the U.S. (see Table 3 below) were not replicated elsewhere, primarily because other developed countries did not have the numbers of NTMs that were present in the U.S. financial system when the bubble deflated. As shown in later sections of this dissent, these mortgage defaults were translated into huge housing price declines and from there—through the PMBS they were holding—into actual or apparent financial weakness in the banks and other firms that held these securities.

Accordingly, if the 1997-2007 housing bubble had not been seeded with an unprecedented number of NTMs, it is likely that the financial crisis would never have occurred.

### **3. DELINQUENCY RATES ON NONTRADITIONAL MORTGAGES**

NTMs are non-traditional because, for many years before the government adopted affordable housing policies, mortgages of this kind constituted only a small portion of all housing loans in the United States.<sup>26</sup> The traditional residential mortgage—known as a conventional mortgage—generally had a fixed rate, often for 15 or 30 years, a downpayment of 10 to 20 percent, and was made to a borrower who had a job, a steady income and a good credit record. Before the GSE Act, even subprime loans, although made to borrowers with impaired credit, often involved substantial downpayments or existing equity in homes.<sup>27</sup>

Table 3 shows the delinquency rates of the NTMs that were outstanding on June 30, 2008. The grayed area contains virtually all the NTMs. The contrast in quality, based on delinquency rates, between these loans and Fannie and Freddie prime loans in lines 9 and 10 is clear.

<sup>25</sup> Mortgage Bankers Association National Delinquency Survey.

<sup>26</sup> See Pinto, "Government Housing Policies in the Lead-Up to the Financial Crisis: A Forensic Study" November 4, 2010, p.58, <http://www.aei.org/docLib/Government-Housing-Policies-Financial-Crisis-Pinto-102110.pdf>.

<sup>27</sup> *Id.*, p.42.

Table 3.<sup>28</sup> Delinquency rates on nontraditional mortgages

Loan Type	Estimated # of Loans	Total Delinquency Rate (30+ Days and in Foreclosure)
1. High Rate Subprime (including Fannie/Freddie private MBS holdings)	6.7 million	45.0%
2. Option Arm	1.1 million	30.5%
3. Alt-A (inc. Fannie/Freddie/FHLBs private MBS holdings)	2.4 million†	23.0%
4. Fannie Subprime/Alt-A/Nonprime	6.6 million	17.3%
5. Freddie Subprime/Alt-A/Nonprime	4.1 million	13.8%
6. Government	4.8 million	13.5%
<b>Subtotal # of Loans</b>	<b>25.7 million</b>	
7. Non-Agency Jumbo Prime	9.4 million ‡	6.8%
8. Non-Agency Conforming Prime *		5.6%
9. Fannie Prime **	11.2 million	2.6%
10. Freddie Prime ***	8.7 million	2.0%
<b>Total # of Loans</b>	<b>55 million</b>	

\* Includes an estimated 1 million subprime (FICO<660) that were (i) not high rate and (ii) non-prime CRA and HUD Best Practices Initiative loans. These are included in the “CRA and HUD Programs” line in Table 1.

\*\* Excludes Fannie subprime/Alt-A/nonprime.

\*\*\* Excludes Freddie subprime/Alt-A/nonprime.

† Excludes loans owned or securitized by Fannie and Freddie.

‡ Non-agency jumbo prime and conforming prime counted together.

Total delinquency data sources:

1, 2, 3, 6, 7 & 8: Lender Processing Services, LPS Mortgage Monitor, June 2009.

4 & 9: Based on Fannie Mae 2009 2Q Credit Supplement. Converted from a serious delinquency rate (90+ days & in foreclosure) to an estimated Total Delinquency Rate (30+ days and in foreclosure).

5 & 10: Based on Freddie Mac 2009 2Q Financial Results Supplement. Converted from a serious delinquency rate (90+ days & in foreclosure) to an estimated Total Delinquency Rate (30+ days and in foreclosure).

## 4. THE ORIGIN AND GROWTH OF SUBPRIME PMBS

It was only in 2002 that the market for subprime PMBS—that is private mortgage-backed securities backed by subprime loans or other NTMs—reached \$100 billion. In that year, the top five issuers were GMAC-RFC (\$11.5 billion), Lehman (\$10.6 billion), CS First Boston (\$10.5 billion), Bank of America (\$10.4 billion) and Ameriquest (\$9 billion).<sup>29</sup> The issuances of PMBS that year totaled \$134 billion, of which \$43 billion in PMBS were issued by Wall Street financial institutions. In subsequent years, as the market grew, Wall Street institutions fell behind the major subprime issuers, so that by 2005—the biggest year for subprime PMBS issuance—only Lehman was among the top five issuers and Wall Street issuers as a group were only 27 percent of the \$507 billion in total PMBS issuance in that year.<sup>30</sup>

<sup>28</sup> Id., Figure 53.

<sup>29</sup> Inside Mortgage Finance, *The 2009 Mortgage Market Statistical Annual—Vol. II*, p143.

<sup>30</sup> Id., p.140.

One of the many myths about the financial crisis is that Wall Street banks led the way into subprime lending and the GSEs followed. The Commission majority's report adopts this idea as a way of explaining why Fannie and Freddie acquired so many NTMs. This notion simply does not align with the facts. Not only were Wall Street institutions small factors in the subprime PMBS market, but well before 2002 Fannie and Freddie were much bigger players than the entire PMBS market in the business of acquiring NTM and other subprime loans. Table 7, page 504, shows that Fannie and Freddie had already acquired at least \$701 billion in NTMs by 2001. Obviously, the GSEs did not have to follow anyone into NTM or subprime lending; they were already the dominant players in that market before 2002. Table 7 also shows that in 2002, when the entire PMBS market was \$134 billion, Fannie and Freddie acquired \$206 billion in whole subprime mortgages and \$368 billion in other NTMs, demonstrating again that the GSEs were no strangers to risky lending well before the PMBS market began to develop.

Further evidence about which firms were first into subprime or NTM lending is provided by Fannie's 2002 10-K. This disclosure document reports that 14 percent of Fannie's credit obligations (either in portfolio or guaranteed) had FICO credit scores below 660 as of December 31, 2000, 16 percent at the end of 2001 and 17 percent at the end of 2002.<sup>31</sup> So Fannie and Freddie were active and major buyers of subprime loans in years when the PMBS market had total issuances of only \$55 billion (2000) and \$94 billion (2001). In other words, it would be more accurate to say that Wall Street followed Fannie and Freddie into subprime lending rather than vice versa. At the same time, the GSEs' purchases of subprime whole loans throughout the 1990s stimulated the growth of the subprime lending industry, which ultimately became the mainstay of the subprime PMBS market in the 2000s.

2005 was the biggest year for PMBS subprime issuances, and Ameriquest (\$54 billion) and Countrywide (\$38 billion) were the two largest issuers in the top 25. These numbers were still small in relation to what Fannie and Freddie had been buying since data became available in 1997. The total in Table 7 for Fannie and Freddie between 1997 and 2007 is approximately \$1.5 trillion for subprime loans and over \$4 trillion for all NTMs as a group.

Because subprime PMBS were rich in NTM loans eligible for credit under HUD's AH goals, Fannie and Freddie were also the largest individual purchasers of subprime PMBS from 2002 to 2006, acquiring 33 percent of the total issuances, or \$579 billion.<sup>32</sup> In Table 3 above, which organizes mortgages by delinquency rate, these purchases are included in line 1, which had the highest rate of delinquency. These were self-denominated subprime—designated as subprime by the lender when originated—and thus had low FICO scores and usually a higher interest rate than prime loans; many also had low downpayments and were subject to other deficiencies.

Ultimately, HUD's policies were responsible for both the poor quality of the subprime and Alt-A mortgages that backed the PMBS and for the enormous size to which this market grew. This was true not only because Fannie and Freddie

<sup>31</sup> 2003 10-K, Table 33, p.84 <http://www.sec.gov/Archives/edgar/data/310522/000095013303001151/w84239e10vk.htm#031>.

<sup>32</sup> See Table 3 of "High LTV, Subprime and Alt-A Originations Over the Period 1992-2007 and Fannie, Freddie, FHA and VA's Role" found at <http://www.aei.org/docLib/Pinto-High-LTV-Subprime-Alt-A.pdf>.

stimulated the growth of that market through their purchases of PMBS, but also because the huge inflow of government or government-directed funds into the housing market turned what would have been a normal housing bubble into a bubble of unprecedented size and duration. This encouraged and enabled unprecedented growth in the PMBS market in two ways.

First, the gradual increase of the AH goals, the competition between the GSEs and the FHA, the effect of HUD's Best Practices Initiative, and bank lending under the CRA, assured a continuing flow of funds into weaker and weaker mortgages. This had the effect of extending the life of the housing bubble as well as increasing its size. The growth of the bubble in turn disguised the weakness of the subprime mortgages it contained; as housing prices rose, subprime borrowers who might otherwise have defaulted were able to refinance their mortgages, using the equity that had developed in their homes solely through rising home prices. Without the continuous infusion of government or government-directed funds, delinquencies and defaults would have begun showing up within a year or two, bringing the subprime PMBS market to a halt. Instead, the bubble lasted ten years, permitting that market to grow until it reached almost \$2 trillion.

Second, as housing prices rose in the bubble, it was necessary for borrowers to seek riskier mortgages so they could afford the monthly payments on more expensive homes. This gave rise to new and riskier forms of mortgage debt, such as option ARMs (resulting in negative amortization) and interest-only mortgages. Mortgages of this kind could be suitable for some borrowers, but not for those who were only eligible for subprime loans. Nevertheless, subprime loans were necessary for PMBS, because they generally bore higher interest rates and thus could support the yields that investors were expecting. As subprime loans were originated, Fannie and Freddie were willing consumers of those that might meet the AH goals; moreover, because of their lower cost of funds, they were able to buy the "best of the worst," the highest quality among the NTMs on offer. These factors—the need for higher yielding loans and the ability of Fannie and Freddie to pay up for the loans they wanted—drove private sector issuers further out on the risk curve as they sought to meet the demands of investors who were seeking exposure to subprime PMBS. From the investors' perspective, as long as the bubble kept growing, PMBS were offering the high yields associated with risk but were not showing commensurate numbers of delinquencies and defaults.

## **5. WHAT WAS KNOWN ABOUT NTMS PRIOR TO THE CRISIS?**

Virtually everyone who testified before the Commission agreed that the financial crisis was initiated by the mortgage meltdown that began when the housing bubble began to deflate in 2007. None of these witnesses, however, including the academics consulted by the Commission, the representatives of the rating agencies, the officers of financial institutions that were ultimately endangered by the mortgage downdraft, regulators and supervisors of financial institutions and even the renowned investor Warren Buffett,<sup>33</sup> seems to have understood the dimensions

<sup>33</sup> See Buffett, testimony before the FCIC, June 2, 2010.

of the NTM problem or recognized its significance before the bubble deflated. The Commission majority's report notes that "there were warning signs." There always are if one searches for them; they are most visible in hindsight, in which the Commission majority, and many of the opinions it cites for this proposition, happily engaged. However, as Michael Lewis's acclaimed book, *The Big Short*, showed so vividly, very few people in the financial world were actually willing to bet money—even at enormously favorable odds—that the bubble would burst with huge losses. Most seem to have assumed that NTMs were present in the financial system, but not in unusually large numbers.

Even today, there are few references in the media to the number of NTMs that had accumulated in the U.S. financial system before the meltdown began. Yet this is by far the most important fact about the financial crisis. None of the other factors offered by the Commission majority to explain the crisis—lack of regulation, poor regulatory and risk management foresight, Wall Street greed and compensation policies, systemic risk caused by credit default swaps, excessive liquidity and easy credit—do so as plausibly as the failure of a large percentage of the 27 million NTMs that existed in the financial system in 2007.

It appears that market participants were unprepared for the destructiveness of this bubble's collapse because of a chronic lack of information about the composition of the mortgage market. In September 2007, for example, after the deflation of the bubble had begun, and various financial firms were beginning to encounter capital and liquidity difficulties, two Lehman Brothers analysts issued a highly detailed report entitled "Who Owns Residential Credit Risk?"<sup>34</sup> In the tables associated with the report, they estimated the total unpaid principal balance of subprime and Alt-A mortgages outstanding at \$2.4 trillion, about half the actual number at the time. Based on this assessment, when they applied a stress scenario in which housing prices declined about 30 percent, they still found that "[t]he aggregate losses in the residential mortgage market under the 'stressed' housing conditions could be about \$240 billion, which is manageable, assuming it materializes over a five-to six-year horizon." In the end, of course, the losses were much larger, and were recognized under mark-to-market accounting almost immediately, rather than over a five to six year period. But the failure of these two analysts to recognize the sheer size of the subprime and Alt-A market, even as late as 2007, is the important point.

Along with most other observers, the Lehman analysts were not aware of the true composition of the mortgage market in 2007. Under the "stressed" housing conditions they applied, they projected that the GSEs would suffer aggregate losses of \$9.5 billion (net of mortgage insurance coverage) and that their guarantee fee income would be more than sufficient to cover these losses. Based on known losses and projections recently made by the Federal Housing Finance Agency (FHFA), the GSEs' credit losses alone could total \$350 billion—more than 35 times the Lehman analysts' September 2007 estimate. The analysts could only make such a colossal error if they did not realize that 37 percent—or \$1.65 trillion—of the GSEs' credit risk portfolio consisted of subprime and Alt-A loans (see Table 1, *supra*) or that these weak loans would account for about 75% of the GSEs' default losses over 2007-

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<sup>34</sup> Vikas Shilpiekandula and Olga Gorodetski, "Who Owns Residential Credit Risk?" *Lehman Brothers Fixed Income U.S. Securitized Products Research*, September 7, 2007.

2010.<sup>35</sup> It is also instructive to compare the Lehman analysts' estimate that the 2006 vintage of subprime loans would suffer lifetime losses of 19 percent under "stressed" conditions to other, later, more informed estimates. In early 2010, for example, Moody's made a similar estimate for the 2006 vintage and projected a 38 percent loss rate after the 30 percent decline in housing prices had actually occurred.<sup>36</sup>

The Lehman loss rate projection suggests that the analysts did not have an accurate estimate of the number of NTMs actually outstanding in 2006. Indeed, I have not found any studies in the period before the financial crisis in which anyone—scholar or financial analyst—actually seemed to understand how many NTMs were in the financial system at the time. It was only after the financial crisis, when my AEI colleague, Edward Pinto, began gathering this information from various unrelated and disparate sources that the total number of NTMs in the financial markets became clear. As a result, all loss projections before Pinto's work were bound to be faulty.

Much of the Commission majority's report, which criticizes firms, regulators, corporate executives, risk managers and ratings agency analysts for failure to perceive the losses that lay ahead, is sheer hindsight. It appears that information about the composition of the mortgage market was simply not known when the bubble began to deflate. The Commission never attempted a serious study of what was known about the composition of the mortgage market in 2007, apparently satisfied simply to blame market participants for failing to understand the risks that lay before them, without trying to understand what information was actually available.

The mortgage market is studied constantly by thousands of analysts, academics, regulators, traders and investors. How could all these people have missed something as important as the actual number of NTMs outstanding? Most market participants appear to have assumed in the bubble years that Fannie and Freddie continued to adhere to the same conservative underwriting policies they had previously pursued. Until Fannie and Freddie were required to meet HUD's AH goals, they rarely acquired subprime or other low quality mortgages. Indeed, the very definition of a traditional prime mortgage was a loan that Fannie and Freddie would buy. Lesser loans were rejected, and were ultimately insured by FHA or made by a relatively small group of subprime originators and investors.

Although anyone who followed HUD's AH regulations, and thought through their implications, would have realized that Fannie and Freddie must have been shifting their buying activities to low quality loans, few people had incentives to uncover the new buying pattern. Investors believed that there was no significant risk in MBS backed by Fannie and Freddie, since they were thought (correctly, as it turns out) to be implicitly backed by the federal government. In addition, the GSEs were exempted by law from having to file information with the Securities and Exchange Commission (SEC)--they agreed to file voluntarily in 2002--leaving them free from disclosure obligations and questions from analysts about the quality of their mortgages.

When Fannie voluntarily began filing reports with the SEC in 2003, it disclosed

<sup>35</sup> Fannie Mae, 2010 Second Quarter Credit Supplement, [http://www.fanniemae.com/ir/pdf/sec/2010/q2credit\\_summary.pdf](http://www.fanniemae.com/ir/pdf/sec/2010/q2credit_summary.pdf).

<sup>36</sup> "Moody's Projects Losses of Almost Half of Original Balance from 2007 Subprime Mortgage Securities," <http://seekingalpha.com/article/182556-moodys-projects-losses-of-almost-half-of-original-balance-from-2007-subprime-mortgage-securities>.

that 16 percent of its credit obligations on mortgages had FICO scores of less than 660—the common definition of a subprime loan. There are occasionally questions about whether a FICO score of 660 is the appropriate dividing line between prime and subprime loans. The federal bank regulators use 660 as the dividing line,<sup>37</sup> and in the credit supplement it published for the first time with its 2008 10-K, Fannie included loans with FICO scores below 660 to disclose its exposure to loans that were other than prime. As of December 31, 2008, borrowers with a FICO of less than 660 had a serious delinquency rate about four times that for borrowers with a FICO equal to or greater than 660 (6.74% compared to 1.72%).<sup>38</sup> Fannie did not point out in its filing that a FICO score of less than 660 was considered a subprime loan. Although at the end of 2005 Fannie was exposed to \$311 billion in subprime loans it reported in its 2005 10-K (not filed with the SEC until May 2, 2007) that: “The percentage of our single-family mortgage credit book of business consisting of subprime mortgage loans or structured Fannie Mae MBS backed by subprime mortgage loans was *not material* as of December 31, 2005.”[emphasis supplied]<sup>39</sup>

Fannie was able to make this statement because it defined subprime loans as loans it purchased from subprime lenders. Thus, in its 2007 10-K report, Fannie stated: “Subprime mortgage loans are typically originated by lenders specializing in these loans or by subprime divisions of large lenders, using processes unique to subprime loans. In reporting our subprime exposure, *we have classified mortgage loans as subprime if the mortgage loans are originated by one of these specialty lenders or a subprime division of a large lender.*”<sup>40</sup>[emphasis supplied] The credit scores on these loans, and the riskiness associated with these credit scores, were not deemed relevant. Accordingly, as late as its 2007 10-K report, Fannie was able to make the following statements, even though it is likely that at that point it held or guaranteed enough subprime loans to drive the company into insolvency if a substantial number of these loans were to default:

Subprime mortgage loans, whether held in our portfolio or backing Fannie Mae MBS, represented *less than 1%* of our single-family business volume in each of 2007, 2006 and 2005.<sup>41</sup> [emphasis supplied]

We estimate that subprime mortgage loans held in our portfolio or subprime mortgage loans backing Fannie Mae MBS, excluding re-securitized private label mortgage related securities backed by subprime mortgage loans, represented approximately *0.3% of our single-family mortgage credit book of business* as of December 31, 2007, compared with 0.2% and 0.1% as of December 31, 2006 and 2005, respectively.<sup>42</sup>[emphasis supplied]

These statements could have lulled market participants and others—including

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<sup>37</sup> Office of Comptroller of the Currency, Federal Reserve, Federal Deposit Insurance Corporation, and Office of Thrift Supervision advised in its “Expanded Guidance for Subprime Lending Programs”, published in 2001, <http://www.federalreserve.gov/Boarddocs/SRletters/2001/sr0104a1.pdf> that “the term ‘subprime’ refers to the credit characteristics of individual borrowers. Subprime borrowers typically have weakened credit histories that include payment delinquencies and possibly more severe problems such as charge-offs, judgments, and bankruptcies.” A FICO score of 660 or below was evidence of “relatively high default probability.”

<sup>38</sup> Derived from Table 12.

<sup>39</sup> Fannie Mae, 2005 10-K report, filed May 2, 2007.

<sup>40</sup> Fannie Mae, 2007 Form 10K, pp. 129 and 155.

<sup>41</sup> Fannie Mae, 2007 Form 10K, p.129.

<sup>42</sup> Fannie Mae, 2007 Form 10K, p.130.

the Lehman analysts—into believing that Fannie and Freddie did not hold or had not guaranteed substantial numbers of high risk loans, and thus that there were many fewer such loans in the financial system than in fact existed.

Of course, in the early 2000s there was no generally understood definition of the term “subprime,” so Fannie and Freddie could define it as they liked, and the assumption that the GSEs only made prime loans continued to be supported by their public disclosures. So when Fannie and Freddie reported their loan acquisitions to various mortgage information aggregators they did not report those mortgages as subprime or Alt-A, and the aggregators continued to follow industry practice by placing virtually all the GSEs’ loans in the “prime” category. Without understanding Fannie and Freddie’s peculiar and self-serving loan classification methods, the recipients of information about the GSEs’ mortgage positions simply seemed to assume that all these mortgages were prime loans, as they had always been in the past, and added them to the number of prime loans outstanding. Accordingly, by 2008 there were approximately 12 million more NTMs in the financial system—and 12 million fewer prime loans—than most market participants realized.

Appendix 1 shows that the levels of delinquency and default would be 86 percent higher than expected if there were 12 million NTMs in the financial system instead of 12 million prime loans. Appendix 2 shows that the levels of delinquency would be 150 percent higher than expected if the feedback effect of mortgage delinquencies—causing lower housing prices, in a downward spiral—were taken into account. These differences in projected losses could have misled the rating agencies into believing that, even if the bubble were to deflate, the losses on mortgage failures would not be so substantial as to have a more than local effect and would not adversely affect the AAA tranches in MBS securitizations.

The Commission never looked into this issue, or attempted to determine what market participants believed to be the number of subprime and other NTMs outstanding in the system immediately before the financial crisis. Whenever possible in the Commission’s public hearings, I asked analysts and other market participants how many NTMs they believed were outstanding before the financial crisis occurred. It was clear from the responses that none of the witnesses had ever considered that question, and it appeared that none suspected that the number was large enough to substantially affect losses after the collapse of the bubble.

It was only on November 10, 2008, after Fannie had been taken over by the federal government, that the company admitted in its 10-Q report for the third quarter of 2008 that it had classified as subprime or Alt-A loans only those loans that it purchased from self-denominated subprime or Alt-A originators, and not loans that were subprime or Alt-A because of their risk characteristics. Even then Fannie wasn’t fully candid. After describing its classification criteria, Fannie stated, “[H]owever, we have other loans with some features that are similar to Alt-A and subprime loans that we have not classified as Alt-A or subprime because they do not meet our classification criteria.”<sup>43</sup> This hardly described the true nature of Fannie’s obligations.

On the issue of the number of NTMs outstanding before the crisis the Commission studiously averted its eyes, and the Commission majority’s report

<sup>43</sup> Fannie Mae, 2008 3rd quarter 10-Q, p.115, <http://www.fanniemae.com/ir/pdf/earnings/2008/q32008.pdf>.

never addresses the question. HUD's role in pressing for a reduction in mortgage underwriting standards escaped the FCIC's attention entirely, the GSEs' AH goals are mentioned only in passing, CRA is defended, and neither HUD's Best Practices Initiative nor FHA's activities are mentioned at all. No reason is advanced for the accumulation of subprime loans in the bubble other than the idea—implicit in the majority's report—that it was profitable. In sum, the majority's report is Hamlet without the prince of Denmark.

Indeed, the Commission's entire investigation seemed to be directed at minimizing the role of NTMs and the role of government housing policy. In this telling, the NTMs were a "trigger" for the financial crisis, but once the collapse of the bubble had occurred the "weaknesses and vulnerabilities" of the financial system—which had been there all along—caused the crisis. These alleged deficiencies included a lack of adequate regulation of the so-called "shadow banking system" and over-the-counter derivatives, the overly generous compensation arrangements on Wall Street, and securitization (characterized as "the originate to distribute model"). Coincidentally, all these purported weaknesses and vulnerabilities then required more government regulation, although their baleful presence hadn't been noted until the unprecedented number of subprime and Alt-A loans, created largely to comply with government housing policies, defaulted.

## 6. CONCLUSION

What is surprising about the many views of the causes of the financial crisis that have been published since the Lehman bankruptcy, including the Commission's own inquiry, is the juxtaposition of two facts: (i) a general agreement that the bubble and the mortgage meltdown that followed its deflation were the precipitating causes—sometimes characterized as the "trigger"—of the financial crisis, and (ii) a seemingly studious effort to avoid examining how it came to be that mortgage underwriting standards declined to the point that the bubble contained so many NTMs that were ready to fail as soon as the bubble began to deflate. Instead of thinking through what would almost certainly happen when these assets virtually disappeared from balance sheets, many observers—including the Commission majority in their report—pivoted immediately to blame the "weaknesses and vulnerabilities" of the free market or the financial or regulatory system, without considering whether *any* system could have survived such a blow.

One of the most striking examples of this approach was presented by Larry Summers, the head of the White House economic council and one of the President's key advisers. In a private interview with a few of the members of the Commission (I was not informed of the interview), Summers was asked whether the mortgage meltdown was the cause of the financial crisis. His response was that the financial crisis was like a forest fire and the mortgage meltdown like a "cigarette butt" thrown into a very dry forest. Was the cigarette butt, he asked, the cause of the forest fire, or was it the tinder dry condition of the forest?<sup>44</sup> The Commission majority adopted the idea that it was the tinder-dry forest. Their central argument is that the mortgage meltdown as the bubble deflated triggered the financial crisis because of the "vulnerabilities" inherent in the U.S. financial system at the time—the absence

<sup>44</sup> FCIC, Summers interview, p.77.

of regulation, lax regulation, predatory lending, greed on Wall Street and among participants in the securitization system, ineffective risk management, and excessive leverage, among other factors. One of the majority's singular notions is that "30 years of deregulation" had "stripped away key safeguards" against a crisis; this ignores completely that in 1991, in the wake of the S&L crisis, Congress adopted the FDIC Improvement Act, which was by far the toughest bank regulatory law since the advent of deposit insurance and was celebrated at the time of its enactment as finally giving the regulators the power to put an end to bank crises.

The forest metaphor turns out to be an excellent way to communicate the difference between the Commission's report and this dissenting statement. What Summers characterized as a "cigarette butt" was 27 million high risk NTMs with a total value over \$4.5 trillion. Let's use a little common sense here: \$4.5 trillion in high risk loans was *not* a "cigarette butt;" they were more like an exploding gasoline truck in that forest. The Commission's report blames the conditions in the financial system; I blame 27 million subprime and Alt-A mortgages—half of all mortgages outstanding in the U.S. in 2008—and a number that appears to have been unknown to most if not all market participants at the time. No financial system, in my view, could have survived the failure of large numbers of high risk mortgages once the bubble began to deflate, and no market could have avoided a panic when it became clear that the number of defaults and delinquencies among these mortgages far exceeded anything that even the most sophisticated market participants expected.

This conclusion has significant policy implications. If in fact the financial crisis was caused by government housing policies, then the Dodd-Frank Act was legislative overreach and unnecessary. The appropriate policy choice was to reduce or eliminate the government's involvement in the residential mortgage markets, not to impose significant new regulation on the financial system.

\* \* \* \*

The balance of this statement will outline (i) how the high levels of delinquency and default among the NTMs were transmitted as losses to the financial system, and (ii) how the government policies summarized above caused the accumulation of an unprecedented number of NTMs in the U.S. and around the globe.

## II. HOW 27 MILLION NTMS PRECIPITATED A FINANCIAL CRISIS

Although the Commission never defined the financial crisis it was supposed to investigate, it is necessary to do so in order to know where to start and stop. If, for example, the financial crisis is still continuing, then the effect of government policies such as the Troubled Asset Repurchase Program (TARP) should be evaluated.

However, it seems clear that Congress wanted the Commission to concentrate on what caused the unprecedented events that occurred largely in the fall of 2008, and for this purpose Ben Bernanke's definition of the financial crisis seems most appropriate:

The credit boom began to unravel in early 2007 when problems surfaced with subprime mortgages—mortgages offered to less-creditworthy borrowers—and house prices in parts of the country began to fall. Mortgage delinquencies and defaults rose, and the downturn in house prices intensified, trends that continue today. Investors, stunned by losses on assets they had believed to be safe, began to pull back from a wide range of credit markets, and financial institutions—reeling from severe losses on mortgages and other loans—cut back their lending. The crisis deepened [in September 2008], when the failure or near-failure of several major financial firms caused many financial and credit markets to freeze up.<sup>45</sup>

In other words, the financial crisis was the result of the losses suffered by financial institutions around the world when U.S. mortgages began to fail in large numbers; the crisis became more severe in September 2008, when the failure of several major financial firms—which held or were thought to hold large amounts of mortgage-related assets—caused many financial markets to freeze up. This summary encapsulates a large number of interconnected events, but it makes clear that the underlying cause of the financial crisis was a rapid decline in the value of one specific and widely held asset: U.S. residential mortgages. The next question is how, exactly, these delinquencies and losses caused the financial crisis.

The following discussion will show that it was not all mortgages and mortgage-backed securities that were the source of the crisis, but primarily NTMs—including PMBS backed by NTMs. Traditional mortgages, which were generally prime mortgages, did not suffer substantial losses at the outset of the mortgage meltdown, although as the financial crisis turned into a recession and housing prices continued to fall, losses among prime mortgages began to approach the level of prime mortgage losses that had occurred in past housing crises. However, those levels were far lower than the losses on NTMs, which reached levels of delinquency and default between 15 and 45 percent (depending on the characteristics of the loans in question) because the loans involved were weaker as a class than in any previous housing crisis. The fact that they were also far larger in number than any

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<sup>45</sup> Speech at Morehouse College, April 14, 2009.

previous bubble was what caused the catastrophic housing price declines that fueled the financial crisis.

## **1. HOW FAILURES AMONG NTMS WERE TRANSMITTED TO THE FINANCIAL SYSTEM**

When the housing bubble began to deflate in mid-2007, delinquency rates among NTMs began to increase substantially. Previously, although these mortgages were weak and high risk, their delinquency rates were relatively low. This was a consequence of the bubble itself, which inflated housing prices so that homes could be sold with no loss in cases where borrowers could not meet their mortgage obligations. Alternatively, rising housing prices—coupled with liberal appraisal rules—created a form of free equity in a home, allowing the home to be refinanced easily, perhaps even at a lower interest rate. However, rising housing prices eventually reached the point where even easy credit terms could no longer keep the good times rolling, and at that point the bubble flattened and weak mortgages became exposed for what they were. As Warren Buffett has said, when the tide goes out, you can see who's swimming naked.

The role of the government's housing policy is crucial at this point. As discussed earlier, if the government had not been directing money into the mortgage markets in order to foster growth in home ownership, NTMs in the bubble would have begun to default relatively soon after they were originated. The continuous inflow of government or government-backed funds, however, kept the bubble growing—not only in size but over time—and this tended to suppress the significant delinquencies and defaults that had brought previous bubbles to an end in only three or four years. That explains why PMBS based on NTMs could become so numerous and so risky without triggering the delinquencies and defaults that caused earlier bubbles to deflate within a shorter period. With losses few and time to continue originations, Countrywide and others were able to securitize subprime PMBS in increasingly large amounts from 2002 (\$134 billion) to 2006 (\$483 billion) without engendering the substantial increase in delinquencies that would ordinarily have alarmed investors and brought the bubble to a halt.<sup>46</sup>

Indeed, the absence of delinquencies had the opposite effect. As investors around the world saw housing prices rise in the U.S. without any significant losses even among subprime and other high-yielding loans, they were encouraged to buy PMBS that—although rated AAA—still offered attractive yields. In other words, as shown in Figure 2, government housing policies—AH goals imposed on the GSEs, the decline in FHA lending standards, HUD's pressure for reduced underwriting standards among mortgage bankers, and CRA requirements for insured banks—by encouraging the growth of the bubble, increased the worldwide demand for subprime PMBS. Then, in mid-2007, the bubble began to deflate, with catastrophic consequences.

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<sup>46</sup> Inside Mortgage Finance, *The 2009 Mortgage Market Statistical Annual—Volume II*, MBS database.

## 2. THE DEFAULTS BEGIN

The best summary of how the deflation of the housing bubble led to the financial crisis was contained in the prepared testimony that FDIC chair Sheila Bair delivered to the FCIC in a September 2 hearing:

Starting in mid 2007, global financial markets began to experience serious *liquidity challenges* related mainly to rising concerns about U.S. mortgage credit quality. As *home prices fell*, recently originated subprime and *non-traditional mortgage loans began to default at record rates*. These developments led to *growing concerns* about the value of financial positions in mortgage-backed securities and related derivative instruments held by major financial institutions in the U.S. and around the world. The *difficulty in determining the value* of mortgage-related assets and, therefore, the *balance-sheet strength* of large banks and non-bank financial institutions ultimately led these institutions to become *wary of lending* to one another, even on a short-term basis.<sup>47</sup> [emphasis supplied]

All the important elements of what happened are in Chairman Bair's succinct statement: (i) in mid 2007, the markets began to experience liquidity challenges because of concerns about the credit quality of NTMs; (ii) housing prices fell; NTMs began to default at record rates; (iii) it was difficult to determine the value of MBS, and thus the financial condition of the institutions that held them; and, (iv) finally, as a consequence of this uncertainty—especially after the failure of Lehman—financial institutions would not lend to one another. That phenomenon *was* the financial crisis. The following discussion will show how each of these steps operated to bring down the financial system.

### *Markets Began to Experience Liquidity Challenges*

To understand the transmission mechanism, it is necessary to distinguish between PMBS, on the one hand, and the MBS that were distributed by government agencies such as FHA/Ginnie Mae and the GSEs (referred to jointly as “Agencies” in this section). As shown in Table 1, by 2008, the 27 million NTMs in the U.S. financial system were held as (i) whole mortgages, (ii) MBS guaranteed by the GSEs, or insured or held by a government agency or a bank under the CRA, or (iii) as PMBS securitized by private firms such as Countrywide. The 27 million NTMs had an aggregate unpaid principal balance of more than \$4.5 trillion, and the portion represented by PMBS consisted of 7.8 million mortgages with an aggregate unpaid principal balance of approximately \$1.9 trillion. As mortgage delinquencies and defaults multiplied in the U.S. financial system, the losses were transmitted to financial institutions through their holdings of PMBS. How did this happen, and what role was played by government housing policy?

Both Agency MBS and PMBS pass through to investors the principal and interest received on the mortgages in a pool that backs an issue of securities; the difference between them is the way they protect investors against credit risk—i.e., the possibility of losses in the event that the mortgages in the pool begin to default. The Agencies insure or place a guarantee on all the securities issued by a pool they or some other entity creates. Because of the Agencies' real or perceived government

<sup>47</sup> Sheila C. Bair, “Systemically Important Institutions and the Issue of ‘Too-Big-to-Fail,’” Testimony to the FCIC, September 2, 2010, p.3.

backing, all these securities are rated or considered to be AAA.

PMBS rely on a classification and subordination system known as “tranching” to provide some investors in the pool with a degree of assurance that they will not suffer losses because of mortgage defaults. In the tranching system, different classes of securities are issued by the pool. The rights of some classes to receive payments of principal and interest from the mortgages in the pool are subordinated to the rights of other classes, so that the superior classes are more likely to receive payment even if there are some defaults among the mortgages in the pool.

Through this mechanism, approximately 90 percent of an issue of PMBS could be rated AAA or AA, even if the underlying mortgages are NTMs that have a higher rate of delinquency than prime loans. In theory, for example, if the historic rates of loss on a pool of NTMs is, say, five percent, then those losses will be absorbed by the ten percent of the securities holders who are in the classes rated lower than AAA or AA. Of course, if the losses are greater than anticipated—exactly what happened as the recent bubble began to deflate—they will reach into the higher classes and substantially reduce their value.<sup>48</sup> It is not clear whether, in 2007 or 2008, mortgage delinquencies and defaults had actually caused cash losses in the AAA tranches of PMBS, but the rate at which delinquencies and defaults among NTMs were occurring throughout the financial system was so high that such losses were a distinct possibility—obviously a matter of great concern to investors.

This means that investors in PMBS and government-backed Agency MBS had different experiences when the bubble began to deflate. Those who invested in Agency MBS did not suffer losses (the U.S. government has thus far protected all investors in Agency MBS), while those who invested in PMBS were exposed to losses if the losses on the underlying mortgages were so great that they threatened to invade the AAA and AA classes. Even if no cash losses had actually been suffered, the holders of PMBS would see a sharp decline in the market value of their holdings as investors—shocked by the large number of defaults on mortgages—fled the asset-backed market. So when we look for the *direct* effect of mortgage failures on the financial condition of various financial institutions in the financial crisis we should look only to the PMBS, not the MBS issued by the Agencies.

In addition, the default and delinquency ratios on the loans underlying the PMBS were higher than similar ratios among the loans held or guaranteed by the Agencies. Many of the loans which backed the PMBS were the self-denominated subprime loans (that is, made by subprime lenders explicitly to subprime borrowers) and were classified in the worst-performing categories in Table 3. In part, the better-performing characteristics of the NTMs held or guaranteed by the Agencies was due to the fact that the Agencies were not buying for economic purposes—to make profits—but only to meet government requirements such as the AH goals. They did not want or need the higher-yielding and thus more risky mortgages that backed the PMBS, because they did not need higher yields in order to sell their MBS. In addition, because of their lower cost funding, the Agencies could pay more for the NTMs they bought and thus could acquire the “best of the worst.”

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<sup>48</sup> A thorough description of the tranching system, and many more details about various methods of protecting senior tranches, is contained in Gary B. Gorton, *Slapped By the Invisible Hand: The Panic of 2007*, Oxford University Press, 2010, pp. 82-113.

### ***PMBS are Connected to All Other NTMs Through Housing Prices***

But this does not mean that only the failure of the PMBS was responsible for the financial crisis. In a sense, all mortgages are linked to one another through housing prices, and housing prices in turn are highly sensitive to delinquencies and defaults on mortgages. This is a characteristic of mortgages that is not present in other securitized assets. If a credit card holder defaults on his obligations it has little effect on other credit card holders, but if a homeowner defaults on a mortgage the resulting foreclosure has an effect on the value of all homes in the vicinity and thus on the quality of all mortgages on those homes.

Accordingly, the PMBS were intimately connected—through housing prices—to the NTMs securitized by the Agencies. Because there were so many more NTMs held or securitized by the Agencies (see Table 1), their unprecedented numbers—even in cases where they had a lower average rate of delinquency and default than the NTMs that backed the PMBS—was the major source of downward pressure on housing prices throughout the United States. Weakening housing prices, in turn, caused more mortgage defaults, among both NTMs in general and the particular NTMs that were the collateral for PMBS. In other words, the NTMs underlying the PMBS were weakened by the delinquencies and defaults among the much larger number of mortgages held or guaranteed as MBS by the Agencies.

In reality, then, the losses on the PMBS were much higher than they would have been if the government's housing policies had not brought into being 19 million other NTMs that were failing in unprecedented numbers. These failures drove down housing prices by 30 percent—an unprecedented decline—which multiplied the losses on the PMBS.

Finally, the funds that the government directed into the housing market in pursuit of its social policies enlarged the housing bubble and extended it in time. The longer housing bubbles grow, the riskier the mortgages they contain; lenders are constantly trying to find ways to keep monthly mortgage payments down while borrowers are buying more expensive houses. While the bubble was growing, the risks that were building within it were obscured. Borrowers who would otherwise have defaulted on their loans, bringing an end to the bubble, were able to use the rising home prices to refinance, sometimes at lower interest rates. With delinquency rates relatively low, investors did not have a reason to exit the mortgage markets, and the continuing flow of funds into mortgages allowed the bubble to extend for an unprecedented 10 years. This in turn enabled the PMBS market to grow to enormous size and thus to have a more calamitous effect when it finally collapsed. If the government policies that provided a continuing source of funding for the bubble had not been pursued, it is doubtful that there would have been a PMBS market remotely as large as the one that developed, or that—when the housing bubble collapsed—the losses to financial institutions would have been as great.

### ***PMBS, as Securities, are Vulnerable to Investor Sentiment***

In addition to their link to the Agencies' NTMs through housing prices, PMBS were particularly vulnerable to changes in investor sentiment about mortgages. The fact that the mortgages underlying the PMBS were held in securitized form was an important element of the crisis. There are many reasons for the popularity

of mortgage securitization. Beginning in 2002, for example, the Basel regulations provided that mortgages held in the form of MBS—presumably because of their superior liquidity compared to whole mortgages—required a bank to hold only 1.6 percent risk-based capital, while whole mortgages required risk-based capital backing of four percent. This made all forms of MBS, including PMBS, much less expensive to hold than whole mortgages. In addition, mortgages in securitized form could be traded more easily, and used more readily as a source of liquidity through repurchase agreements.

However, some of the benefits of securitized mortgages are also detriments when certain mortgage market conditions prevail. If housing values are declining, losses on whole mortgages are recognized only slowly in bank financial statements and will be recognized even more slowly in the larger market. PMBS, however, are far more vulnerable to swings in sentiment than whole mortgages held on bank balance sheets. First, because they are more easily traded, PMBS values can be more quickly and adversely affected by negative information about the underlying mortgages than whole mortgages in the same principal amount. PMBS markets tend to be thin, because PMBS pools differ from one another. If investors believe that mortgages in general are declining in value, or they learn of a substantial and unexpected number of defaults and delinquencies, they may abandon the market for all PMBS, causing the general PMBS price level to fall precipitously.

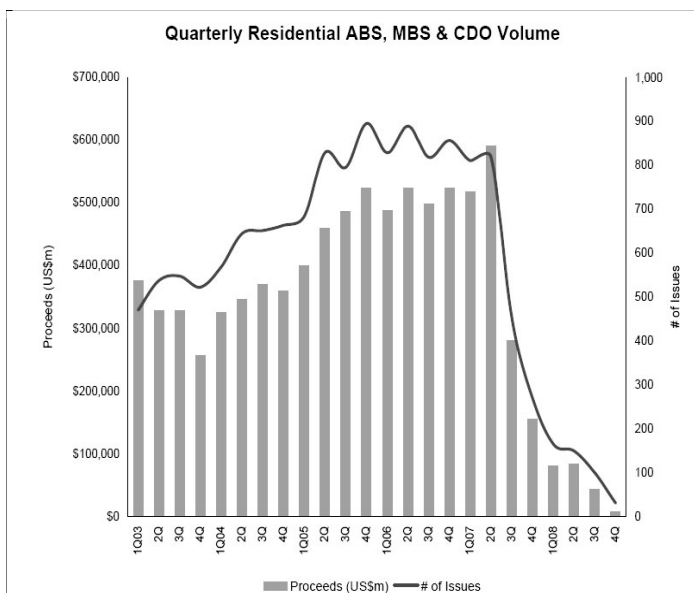
For example, in his book *Slapped by the Invisible Hand*, Professor Gary Gorton of Yale notes that the ABX index, initially published in late 2006, for the first time gave investors a picture of how others saw the value of a selected group of PMBS pools. The index showed steeply declining values, which caused many investors to withdraw from the market. Gorton observed: “I view the ABX indices as revealing hitherto unknown information, namely, the aggregated view that subprime was worth significantly less...It is not clear whether the housing bubble was burst by the ability to short the subprime housing market or whether house prices were going down and the implications of this were aggregated and revealed by the ABX indices”<sup>49</sup>

Whatever the underlying reason, as shown in Figure 3, this seems to be exactly what happened in the financial crisis. The result was a crash in the MBS market as investors fled what looked like major oncoming losses.

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<sup>49</sup> Gorton, *Slapped by the Invisible Hand*, note 41, pp.121-123.

Figure 3. The MBS market reacts to the bubble's deflation



Source: Thompson Reuters Debt Capital Markets Review, Fourth Quarter 2008, available at [http://thomsonreuters.com/products\\_services/financial/league\\_tables/debt\\_equity/](http://thomsonreuters.com/products_services/financial/league_tables/debt_equity/) (accessed July 30, 2009).

The decline in housing values had a profound adverse effect on the liquidity of all financial institutions that were exposed to PMBS. As noted above, one of the benefits of holding PMBS, especially those with AAA ratings, was that they were readily marketable. As such, they were considered sound and secure investments, carried on balance sheets at par and suitable to serve as collateral for short term financing through repurchase agreements, or “repos.” In a repo transaction, a borrower sells a security to a lender with an option to repurchase it at a price that provides the lender with a return appropriate for a secured loan. The lender assumes that if its counterparty defaults the collateral can be sold. Accordingly, if the collateral asset loses its reputation for high quality and liquidity, it loses much of its value for both capital and liquidity purposes, even if the collateral itself has not actually suffered losses. This is what happened to AAA-rated PMBS as housing prices first leveled off and then began to fall in 2007, and as mortgage delinquencies rolled in at rates no one had expected. As discussed more fully below, when AAA-rated PMBS became unmarketable they lost their value for liquidity purposes, making it difficult or impossible for many financial institutions to fund themselves using these assets as collateral for repos. This was the *liquidity challenge* to which Chairman Bair referred in her testimony.

The near-failure of Bear Stearns in March 2008 was an excellent example of how the unexpected collapse of the PMBS market could cause a substantial loss of liquidity by a financial institution, and ultimately its inability to survive the resulting loss in market confidence. The FCIC staff’s review of the liquidity problems of Bear Stearns showed that the loss of the PMBS market was the single event that was crippling for Bear, because it eliminated a major portion of the firm’s liquidity

pool—AAA-rated PMBS—as a useful source of repo financing. According to the Commission staff’s Preliminary Investigative Report on Bear, prepared for hearings on May 5 and 6, 2010, 97.4 percent of Bear’s short term funding was secured and only 2.6 percent unsecured. “As of January 11, 2008,” the FCIC staff reported, “\$45.9 billion of Bear Stearns’ repo collateral was composed of agency (Fannie and Freddie) mortgage-related securities, \$23.7 billion was in non-agency securitized asset backed securities [i.e., PMBS], and \$19 billion was in whole loans.”<sup>50</sup> The Agency MBS was unaffected by the collapse of the PMBS market, and could still be used for funding.

Thus, about 27 percent of Bear’s readily available sources of funding consisted of PMBS that became unusable for repo financing when the PMBS market disappeared. The loss of this source of liquidity put the firm in serious jeopardy; rumors swept the market about Bear’s condition, and clients began withdrawing funds. Bear’s officers told the Commission that the firm was profitable in its first 2008 quarter—the quarter in which it failed; ironically they also told the Commission’s staff that they had moved Bear’s short term funding from commercial paper to MBS because they believed that collateral-backed funding would be more stable. In the week beginning March 10, 2008, according to the FCIC staff report, Bear had over \$18 billion in cash reserves, but by March 13 the liquidity pool had fallen to \$2 billion.<sup>51</sup> It was clear that Bear—solvent and profitable or not—could not survive a run that was fueled by fear and uncertainty about its liquidity and the possibility of its insolvency.

Parenthetically, it should be noted that the Commission’s staff focused on Bear because the Commission’s majority apparently believed that the business model of investment banks, which relied on relatively high leverage and repo or other short term financing, was inherently unstable. The need to rescue Bear was thought to be evidence of this fact. Clearly, the five independent investment banks—Bear, Lehman Brothers, Merrill Lynch, Morgan Stanley and Goldman Sachs—were badly damaged in the financial crisis. Only two of them remain independent firms, and those two are now regulated as bank holding companies by the Federal Reserve. Nevertheless, it is not clear that the investment banks fared any worse than the much more heavily regulated commercial banks—or Fannie and Freddie which were also regulated more stringently than the investment banks but not as stringently as banks. The investment banks did not pass the test created by the mortgage meltdown and the subsequent financial crisis, but neither did a large number of insured banks—IndyMac, Washington Mutual (WaMu) and Wachovia, to name the largest—that were much more heavily regulated and, in addition, offered insured deposits and had access to the Fed’s discount window if they needed emergency funds to deal with runs. The view of the Commission majority, that investment banks—as part of the so-called “shadow banking system”—were special contributors to the financial crisis, seems misplaced for this reason. They are better classified not as contributors to the financial crisis but as victims of the panic that ensued after the housing bubble and the PMBS market collapsed.

Bear went down because the delinquencies and failures of an unprecedentedly large number of NTMs caused the collapse of the PMBS market; this destroyed the

<sup>50</sup> FCIC, “Investigative Findings on Bear Stearns (Preliminary Draft),” April 29, 2010, p.16.

<sup>51</sup> *Id.*, p.45.

usefulness of AAA-rated PMBS as assets that Bear and others relied on for both capital and liquidity, and thus raised questions about the firm's ability to meet its obligations. Investment banks like Bear Stearns were not commercial banks; instead of using short term deposits to hold long term assets—the hallmark of a bank—their business model relied on short-term funding to carry the short term assets of a trading business. Contrary to the views of the Commission majority, there is nothing inherently wrong with that business model, but it could not survive an unprecedented financial panic as severe as that which followed the collapse in value of an asset class as large and as liquid as AAA-rated subprime PMBS.

### ***Mortgage Defaults at Record Rates Created Balance Sheet Losses***

Chairman Bair also pointed to the relationship between the decline in the value of PMBS and “the *balance sheet strength*” of financial institutions that held these assets. Adding to liquidity-based losses, balance sheet writedowns were another major element of the loss transmission mechanism. Securitized assets held by financial institutions are subject to the rules of fair value accounting, and must be marked to market under certain circumstances. Thus, banks and other financial institutions that are holding securitized mortgages in the form of PMBS could be subject to large *accounting* losses—but not necessarily cash losses—if investor sentiment were to turn against securitized mortgages and market values decline. Accordingly, once large numbers of delinquencies and losses started showing up in the mortgage markets generally and in the mortgage pools that backed the PMBS, it was *not necessary* for all the losses to be realized before the PMBS lost substantial value. All that was necessary was that the market for these assets become seriously impaired. This is exactly what happened in the middle of 2007, leading immediately not only to severe adverse liquidity consequences for financial institutions that held PMBS but also to capital writedowns that made them appear unstable and possibly insolvent.

These mark-to-market capital losses could be greater than the actual credit losses to be anticipated. As one Federal Reserve study put it, “The financial turmoil...put downward pressure on prices of structured finance products across the whole spectrum of [asset-backed] securities, even those with only minimal ties to the riskiest underlying assets...[I]n addition to discounts from higher expected credit risk, large mark-to-market discounts are generated by uncertainty about the quality of the underlying assets, by illiquidity, and by price volatility... This illiquidity discount is the main reason why the mark-to-market discount here, and in most similar analyses, is larger than the expected credit default rates on underlying assets.”<sup>52</sup> In other words, the illiquidity discount associated with the uncertainties in value of collateral are and can be substantially larger than the credit default spread, since the spread reflects only anticipated credit losses.

As shown so dramatically in Figure 3, the collapse of the market for PMBS was a seminal event in the history of the financial crisis. Even though delinquencies had only just begun to show up in mortgage pools, the absence of a functioning

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<sup>52</sup> Daniel Beltran, Laurie Pounder and Charles Thomas, “Foreign Exposure to Asset-Backed Securities of U.S. Origin,” Board of Governors of the Federal Reserve System, *International Finance Discussion Papers* 939, August 2008, pp. 11-14.

market meant that PMBS simply could not be sold at anything but distress prices. The inability of financial institutions to liquidate their PMBS assets at anything like earlier values had dire consequences, especially under mark-to-market accounting rules, and was the crux of the crisis. In effect, a whole class of assets—involving almost \$2 trillion—came to be called “toxic assets” in the media, and had to be written down substantially on the balance sheets of financial institutions around the world. Although this made financial institutions look weaker than they actually were, the PMBS they held, despite being unmarketable at that point, were in many cases still flowing cash at close to expected rates. Instead of a slow decline in value—which would have occurred if whole mortgages were held on bank balance sheets and gradually deteriorated in quality—the loss of marketability of these securities caused a crash in value.

The Commission majority did not discuss the significance of mark-to-market accounting in its report. This was a serious lapse, given the views of many that accounting policies played an important role in the financial crisis. Many commentators have argued that the resulting impairment charges to balance sheets reduced the GAAP equity of financial institutions and, therefore, their capital positions, making them appear financially weaker than they actually were if viewed on the basis of the cash flows they were receiving.<sup>53</sup>

The investor panic that began when unanticipated and unprecedented losses started to appear among NTMs generally and in the PMBS mortgage pools now spread to financial institutions themselves; investors were no longer sure which of these institutions could survive severe mortgage-related losses. This process was succinctly described in an analysis of fair value or mark-to-market accounting in the financial crisis issued by the Institute of International Finance, an organization of the world’s largest banks and financial firms:

[O]ften-dramatic write-downs of *sound* assets required under the current implementation of fair-value accounting adversely affect market sentiment, in turn leading to further write-downs, margin calls and capital impacts in a downward spiral that may lead to large-scale fire-sales of assets, and destabilizing, pro-cyclical feedback effects. These damaging feedback effects worsen liquidity problems and contribute to the conversion of liquidity problems into solvency problems.<sup>54</sup> [emphasis in the original]

At least one study attempted to assess the effect of this on financial institutions overall. In January 2009, Nouriel Roubini and Elisa Parisi-Capone estimated the mark-to-market losses on MBS backed by both prime loans and NTMs. Their estimate was slightly over \$1 trillion, of which U.S. banks and investment banks were estimated to have lost \$318 billion on a mark-to-market basis.<sup>55</sup>

This would be a dramatic loss if all of it were realized. In 2008, the U.S. banking system had total assets of \$10 trillion; the five largest investment banks had

<sup>53</sup> FCIC Draft Staff Report, “The Role of Accounting During the Financial Crisis,” p.16.

<sup>54</sup> Institute of International Finance, “IIF Board of Directors - Discussion Memorandum on Valuation in Illiquid Markets,” April 7, 2008, p.1.

<sup>55</sup> Nouriel Roubini and Elisa Parisi-Carbone, “Total \$3.6 Trillion Projected Loan and Securities Losses in U.S. \$1.8 Trillion of Which Borne by U.S. Banks/Brokers,” *RGE Monitor*, January 2009, p.8.

total assets of \$4 trillion.<sup>56</sup> If we assume that the banks had a leverage ratio of about 15-to-1 in 2008 and the investment banks about 30-to-1, that would mean that the equity capital position of the banking industry as a whole would be about \$650 billion and the same number for the investment banks would be about \$130 billion, for a total of \$780 billion. Under these circumstances, the collapse of the PMBS market alone reduced the capital positions of U.S. banks and investment banks by approximately 41 percent on a mark-to-market basis. This does not mean that any actual losses were suffered, only that the assets concerned might have to be written down or could not be sold for the price at which they were previously carried on the firm's balance sheet.

In addition, Roubini and Parisi-Capone estimated that U.S. commercial and investment banks suffered a further mark-to-market loss of \$225 billion on unsecuritized subprime and Alt-A mortgages.<sup>57</sup> They also estimated that mark-to-market losses for financial institutions outside the U.S. would be about 40 percent of U.S. losses, so there was likely to be a major effect on banks and other financial institutions around the world—depending, of course, on their capital position at the time the PMBS market stopped functioning. I am not aware of any data showing the mark-to-market effect of the collapse of the PMBS market on other U.S. financial institutions, but it can be assumed that they also suffered similar losses in proportion to their holdings of PMBS.

Losses of this magnitude would certainly be enough—when combined with other losses on securities and loans not related to mortgages—to call into question the stability of a large number of banks, investment banks and other financial institutions in the U.S. and around the world. However, there was one other factor that exacerbated the adverse effect of the loss of a market for PMBS. Although accounting rules did not require all PMBS to be written down, investors and counterparties did not know which financial institutions were holding the weakest assets and how much of their assets would have to be written down over time. Whatever that amount, it would reduce their capital positions at a time when investors and counterparties were anxious about their stability. This was the *balance sheet effect* that was the third element of Chairman Bair's summary.

To summarize, then, the following are the steps through which the government's housing policies transmitted losses—through PMBS—to the largest financial institutions: (i) the 19 million NTMs acquired or guaranteed by the Agencies were major contributors to the growth of the bubble and its extension in time; (ii) the growth of the bubble suppressed the losses that would ordinarily have brought the development of NTM-backed PMBS to a halt; (ii) competition for NTMs drove subprime lenders further out the risk curve to find high-yielding mortgages to securitize, especially when these loans did not appear to be producing losses commensurate with their risk; (iv) when the bubble finally burst, the unprecedented number of delinquencies and defaults among all NTMs—the great majority of which were held or guaranteed by the Agencies—caused investors to

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<sup>56</sup> Timothy F. Geithner, "Reducing Systemic Risk in a Dynamic Financial System," Remarks at the Economic Club of New York, June 9, 2008, available at <http://www.ny.frb.org/newsevents/speeches/2008/tfg080609.html>.

<sup>57</sup> Nouriel Roubini and Elisa Parisi-Carbone, "Total \$3.6 Trillion Projected Loan and Securities Losses," p.7.

flee the PMBS market, reducing the liquidity of the financial institutions that held the PMBS; and (v) mark-to-market accounting required these institutions to write down the value of the PMBS they held, as well as their other mortgage-related assets, reducing their capital positions and raising further questions about their stability and solvency.

### ***Government Actions Create a Panic***

More than any other phenomenon, the financial crisis of 2008 resembles an old-fashioned investor and creditor panic. In the classic study, *Manias, Panics and Crashes: A History of Financial Crises*, Charles Kindleberger and Robert Aliber make a distinction between a remote cause and a proximate cause of a panic: “*Causa remota* of any crisis is the expansion of credit and speculation, while *causa proxima* is some incident that saps the confidence of the system and induces investors to sell commodities, stocks, real estate, bills of exchange, or promissory notes and increase their money holdings.”<sup>58</sup> In the great financial panic of 2008, it is reasonably clear that the remote cause was the build-up of NTMs in the financial system, primarily—as I have shown in this analysis—as a result of government housing policy. This unprecedented increase in weak and risky assets set the financial system up for a crisis of some kind. The event that turned a potential crisis into a full-fledged panic—the proximate cause of the panic—was also the government’s action: the rescue of Bear Stearns in March 2008 and the subsequent failure to rescue Lehman Brothers six months later. In terms of its ultimate cost to the public, this was one of the great policy errors of all time, and the reasons for the misjudgments that led to it have not yet been fully explored.

The lesson taught by the rescue of Bear was that all large financial institutions—and especially those larger than Bear—would be rescued. The moral hazard introduced by this one act irreparably changed the position of Lehman Brothers and every other large firm in the world’s financial system. From that time forward, (i) the critical need for more capital became less critical; the likelihood of a government bailout would reassure creditors, so there was no need to dilute the shareholders any further by raising additional capital; (ii) firms such as Lehman, that might have been saved through an acquisition by a larger firm or an infusion of fresh capital by a strategic investor, drove harder bargains with potential acquirers; (iii) the potential acquirers themselves waited for the U.S. government to pick up some of the cost, as it had with Bear—an offer that never came in Lehman’s case; and (iv) the Reserve Fund, a money market mutual fund, apparently assuming that Lehman would be rescued, decided not to sell the heavily discounted Lehman commercial paper it held; instead, with devastating results for the money market fund industry, it waited to be bailed out on the assumption that Lehman would be saved.

But Lehman was not saved, and its creditors were not bailed out. At a time when large mark-to-market losses among U.S. financial firms raised questions about which large financial institutions were insolvent or unstable, the demise of Lehman was a major shock. It overturned all the rational expectations about government

<sup>58</sup> Charles P. Kindleberger and Robert Aliber, *Manias, Panics, and Crashes: A History of Financial Crises*, 5th edition, John Wiley & Sons, Inc., 2005, p.104.

policies that market participants had developed after the Bear rescue. With no certainty about who was strong or who was weak, there was a headlong rush to U.S. government securities. Banks—afraid that their counterparties would want a return of their investments or their corporate customers would draw on lines of credit—began to hoard cash. Banks wouldn't lend to other banks, even overnight. As Chairman Bair suggested, that *was* the financial crisis. Everything after that was simply cleaning up the mess.

This analysis lays the principal cause of the financial crisis squarely at the feet of the unprecedented number of NTMs that were brought into the U.S. financial markets by government housing policy. These weak and high risk loans helped to build the bubble, and when the bubble deflated they defaulted in unprecedented numbers. This threatened losses in the PMBS that were held by financial institutions in the U.S. and around the world, impairing both their liquidity and their apparent stability.

The accumulation of 27 million subprime and Alt-A mortgages was not a random event, or even the result of major forces such as global financial imbalances or excessively low interest rates. Instead, these loans and the bubble to which they contributed were the direct consequence of something far more mundane: U.S. government housing policy, which—led by HUD over two administrations—deliberately reduced mortgage underwriting standards so that more people could buy homes. While this process was going on, everyone was pleased. Homeownership in the U.S. actually grew to the highest level ever recorded. But the result was a financial catastrophe from which the U.S. has still not recovered.



### III. THE U.S. GOVERNMENT’S ROLE IN FOSTERING THE GROWTH OF THE NTM MARKET

The preceding section of this dissenting statement described the damage that was done to the financial system by the unprecedented number of defaults and delinquencies that occurred among the 27 million NTMs that were present there in 2008. Given the damage they caused, the most important question about the financial crisis is why so many low quality mortgages were created. Another way to state this question is to ask why mortgage standards declined so substantially before and during the 1997-2007 bubble, allowing so many NTMs to be created. This massive and unprecedented change in underwriting standards had to have a cause—some factor that was present during the 1990s and thereafter that was not present in any earlier period. Part III addresses this fundamental question.

The conventional explanation for the financial crisis is the one given by Fed Chairman Bernanke in the same speech at Morehouse College quoted at the outset of Part II:

Saving inflows from abroad can be beneficial if the country that receives those inflows invests them well. Unfortunately, that was not always the case in the United States and some other countries. *Financial institutions reacted to the surplus of available funds by competing aggressively for borrowers, and, in the years leading up to the crisis, credit to both households and businesses became relatively cheap and easy to obtain.* One important consequence was a housing boom in the United States, a boom that was fueled in large part by a rapid expansion of mortgage lending. *Unfortunately, much of this lending was poorly done, involving, for example, little or no down payment by the borrower or insufficient consideration by the lender of the borrower’s ability to make the monthly payments.* Lenders may have become careless because they, like many people at the time, expected that house prices would continue to rise--thereby allowing borrowers to build up equity in their homes--and that credit would remain easily available, so that borrowers would be able to refinance if necessary. *Regulators did not do enough to prevent poor lending, in part because many of the worst loans were made by firms subject to little or no federal regulation.* [Emphasis supplied]<sup>59</sup>

In other words, the liquidity in the world financial market caused U.S. banks to compete for borrowers by lowering their underwriting standards for mortgages and other loans. Lenders became careless. Regulators failed. Unregulated originators made bad loans. One has to ask: is it plausible that banks would compete for borrowers by lowering their mortgage standards? Mortgage originators—whether S&Ls, commercial banks, mortgage banks or unregulated brokers—have been competing for 100 years. That competition involved offering the lowest rates and the most benefits to potential borrowers. It did not, however, generally result in

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<sup>59</sup> Speech at Morehead College April 14, 2009.

or involve the weakening of underwriting standards. Those standards—what made up the traditional U.S. mortgage—were generally 15 or 30 year amortizing loans to homebuyers who could provide a downpayment of at least 10-to-20 percent and had good credit records, jobs and steady incomes. Because of its inherent quality, this loan was known as a prime mortgage.

There were subprime loans and subprime lenders, but in the early 1990s subprime lenders were generally niche players that made loans to people who could not get traditional mortgage loans; the number of loans they generated was relatively small and bore higher than normal interest rates to compensate for the risks of default. In addition, mortgage bankers and others relied on FHA insurance for loans with low downpayments, impaired credit and high debt ratios. Until the 1990s, these NTMs were never more than a fraction of the total number of mortgages outstanding. The reason that low underwriting standards were not generally used is simple. Low standards would result in large losses when these mortgages defaulted, and very few lenders wanted to hold such mortgages. In addition, Fannie and Freddie were the buyers for most middle class mortgages in the United States, and they were conservative in their approach. Unless an originator made a traditional mortgage it was unlikely that Fannie or Freddie or another secondary market buyer could be found for it.

This is common sense. If you produce an inferior product—whether it's a household cleaner, an automobile, or a loan—people soon recognize the lack of quality and you are out of business. This was not the experience with mortgages, which became weaker and riskier as the 1990s and 2000s progressed. Why did this happen?

In its report, the Commission majority seemed to assume that originators of mortgages controlled the quality of mortgages. Much is made in the majority's report of the so-called "originate to distribute" idea, where an originator is not supposed to care about the quality of the mortgages because they would eventually be sold off. The originator, it is said, has no "skin in the game." The motivation for making poor quality mortgages in this telling is to earn fees, not only on the origination but in each of the subsequent steps in the securitization process.

This theory turns the mortgage market upside down. Mortgage originators could make all the low quality mortgages they wanted, but they wouldn't earn a dime unless there was a *buyer*. The real question, then, is why there were buyers for inferior mortgages and this, as it turns out, is the same as asking why mortgage underwriting standards, beginning in the early 1990s, deteriorated so badly. As Professor Raghuram Rajan notes in *Fault Lines*, "[A]s brokers came to know that someone out there was willing to buy subprime mortgage-backed securities without asking too many questions, they rushed to originate loans without checking the borrowers' creditworthiness, and credit quality deteriorated. But for a while, the problems were hidden by growing house prices and low defaults—easy credit masked the problems caused by easy credit—until house prices stopped rising and the flood of defaults burst forth."<sup>60</sup>

Who were these buyers? Table 1, reporting the number of NTMs outstanding on June 30, 2008, identified government agencies and private organizations required by the government to acquire, hold or securitize NTMs as responsible for two-thirds

<sup>60</sup> Raghuram G. Rajan, *Fault Lines*, p.44.

of these mortgages, about 19 million. The table also identifies the private sector as the securitizer of the remaining one-third, about 7.8 million loans. In other words, if we are looking for the buyer of the NTMs that were being created by originators at the local level, the government's policies would seem to be the most likely culprit. The private sector certainly played a role, but it was a subordinate one. Moreover, what the private sector did was respond to demand—that's what the private sector does—but the government's role involved deliberate policy, an entirely different matter. Of its own volition, it created a demand that would not otherwise have been there.

The deterioration in mortgage standards did *not* occur—contrary to the Commission majority's apparent view—because banks and other originators suddenly started to make deficient loans; nor was it because of insufficient regulation at the originator level. The record shows unambiguously that government regulations made FHA, Fannie and Freddie, mortgage banks and insured banks of all kinds into *competing* buyers. All of them needed NTMs in order to meet various government requirements. Fannie and Freddie were subject to increasingly stringent affordable housing requirements; FHA was tasked with insuring loans to low-income borrowers that would not be made unless insured; banks and S&Ls were required by CRA to show that they were also making loans to the same group of borrowers; mortgage bankers who signed up for the HUD Best Practices Initiative and the Clinton administration's National Homeownership Strategy were required to make the same kind of loans. Profit had nothing to do with the motivations of these firms; they were responding to government direction. Under these circumstances, it should be no surprise that underwriting standards declined, as all of these organizations scrambled to acquire the same low quality mortgages.

## 1. HUD'S CENTRAL ROLE

In testimony before the House Financial Services Committee on April 14, 2010, Shaun Donovan, Secretary of Housing and Urban Development, said in reference to the GSEs: "Seeing their market share decline [between 2004 and 2006] as a result of [a] change of demand, the GSEs made the decision to widen their focus from safer prime loans and begin chasing the non-prime market, loosening long-standing underwriting and risk management standards along the way. This would be a fateful decision that not only proved disastrous for the companies themselves—but ultimately also for the American taxpayer."

Earlier, in a "Report to Congress on the Root Causes of the Foreclosure Crisis," in January 2010, HUD declared "The serious financial troubles of the GSEs that led to their being placed into conservatorship by the Federal government provides strong testament to the fact that the GSEs were, indeed, overexposed to unduly risky mortgage investments. However, *the evidence suggests that the GSEs' decisions to purchase or guarantee non-prime loans was motivated much more by efforts to chase market share and profits than by the need to satisfy federal regulators.*"

<sup>61</sup> [emphasis supplied]

Finger-pointing in Washington is endemic when problems occur, and

<sup>61</sup> Report to Congress on the Root Causes of the Foreclosure Crisis, January 2010, p.xii, [http://www.huduser.org/portal/publications/hsgfin/foreclosure\\_09.html](http://www.huduser.org/portal/publications/hsgfin/foreclosure_09.html).

agencies and individuals are constantly trying to find scapegoats for their own bad decisions, but HUD's effort to blame Fannie and Freddie for the decline in underwriting standards sets a new standard for running from responsibility. Contrast the 2010 statement quoted above with this statement by HUD in 2000, when it was significantly increasing Fannie and Freddie's affordable housing goals:

Lower-income and minority families have made major gains in access to the mortgage market in the 1990s. A variety of reasons have accounted for these gains, including improved housing affordability, enhanced enforcement of the Community Reinvestment Act, *more flexible mortgage underwriting*, and stepped-up enforcement of the Fair Housing Act. *But most industry observers believe that one factor behind these gains has been the improved performance of Fannie Mae and Freddie Mac under HUD's affordable lending goals. HUD's recent increases in the goals for 2001-03 will encourage the GSEs to further step up their support for affordable lending.*<sup>62</sup> [emphasis supplied]

Or this statement in 2004, when HUD was again increasing the affordable housing goals for Fannie and Freddie:

Millions of Americans with less than perfect credit or who cannot meet some of the tougher underwriting requirements of the prime market for reasons such as inadequate income documentation, limited downpayment or cash reserves, or the desire to take more cash out in a refinancing than conventional loans allow, rely on subprime lenders for access to mortgage financing. *If the GSEs reach deeper into the subprime market, more borrowers will benefit from the advantages that greater stability and standardization create.*<sup>63</sup> [emphasis supplied]

Or, finally, this statement in a 2005 report commissioned by HUD:

More liberal mortgage financing has contributed to the increase in demand for housing. During the 1990s, lenders have been *encouraged by HUD and banking regulators* to increase lending to low-income and minority households. The Community Reinvestment Act (CRA), Home Mortgage Disclosure Act (HMDA), government-sponsored enterprises (GSE) housing goals and fair lending laws have strongly encouraged mortgage brokers and lenders to market to low-income and minority borrowers. *Sometimes these borrowers are higher risk, with blemished credit histories and high debt or simply little savings for a down payment. Lenders have responded with low down payment loan products and automated underwriting, which has allowed them to more carefully determine the risk of the loan.*<sup>64</sup> [emphasis supplied]

Despite the recent effort by HUD to deny its own role in fostering the growth of subprime and other high risk mortgage lending, there is strong—indeed irrefutable—evidence that, beginning in the early 1990s, HUD led an ultimately successful effort to lower underwriting standards in every area of the mortgage market where HUD had or could obtain influence. With support in congressional legislation, the policy was launched in the Clinton administration and extended almost to the end of the Bush administration. It involved FHA, which was under the direct control of HUD; Fannie Mae and Freddie Mac, which were subject to HUD's affordable housing regulations; and the mortgage banking industry, which—while not subject to HUD's legal jurisdiction—apparently agreed to pursue HUD's

<sup>62</sup> Issue Brief: HUD's Affordable Housing Goals for Fannie Mae and Freddie Mac, p.5.

<sup>63</sup> Final Rule, <http://fdsys.gpo.gov/fdsys/pkg/FR-2004-11-02/pdf/04-24101.pdf>.

<sup>64</sup> HUD PDR, May 2005, HUD Contract C-OPC-21895, Task Order CHI-T0007, "Recent House Price Trends and Homeownership Affordability", p.85.

policies out of fear that they would be brought under the Community Reinvestment Act through legislation.<sup>65</sup> In addition, although not subject to HUD's jurisdiction, the new tighter CRA regulations that became effective in 1995 led to a process in which community groups could obtain commitments for substantial amounts of CRA-qualifying mortgages and other loans to subprime borrowers when banks were applying for merger approvals.<sup>66</sup>

By 2004, HUD believed it had achieved the “revolution” it was looking for:

Over the past ten years, there has been a ‘revolution in affordable lending’ that has extended homeownership opportunities to historically underserved households. Fannie Mae and Freddie Mac have been a substantial part of this ‘revolution in affordable lending’. *During the mid-to-late 1990s, they added flexibility to their underwriting guidelines, introduced new low-downpayment products, and worked to expand the use of automated underwriting in evaluating the creditworthiness of loan applicants. HMDA data suggest that the industry and GSE initiatives are increasing the flow of credit to underserved borrowers. Between 1993 and 2003, conventional loans to low income and minority families increased at much faster rates than loans to upper-income and nonminority families.*<sup>67</sup>[emphasis supplied]

This turned out to be an immense error of policy. By 2010, even the strongest supporters of affordable housing as enforced by HUD had recognized their error. In an interview on Larry Kudlow's CNBC television program in late August, Representative Barney Frank (D-Mass.)—the chair of the House Financial Services Committee and previously the strongest congressional advocate for affordable housing—conceded that he had erred: “I hope by next year we'll have abolished Fannie and Freddie . . . it was a great mistake to push lower-income people into housing they couldn't afford and couldn't really handle once they had it.” He then added, “I had been too sanguine about Fannie and Freddie.”<sup>68</sup>

## 2. THE DECLINE OF MORTGAGE UNDERWRITING STANDARDS

Before the enactment of the GSE Act in 1992, and HUD's adoption of a policy thereafter to reduce underwriting standards, the GSEs followed conservative underwriting practices. For example, in a random review by Fannie Mae of 25,804 loans from October 1988 to January 1992, over 78 percent had LTV ratios of 80 percent or less, while only 5.75 percent had LTV ratios of 91 to 95 percent.<sup>69</sup> High risk lending was confined primarily to FHA (which was controlled by HUD) and specialized subprime lenders who often sold the mortgages they originated to FHA. What caused these conservative standards to decline? The Commission majority,

<sup>65</sup> Steve Cocheo, “Fair-lending pressure builds,” *ABA Banking Journal*, vol. 86, 1994, <http://www.questia.com/googleScholar.qst?docId=5001707340>.

<sup>66</sup> See NCRC, *CRA Commitments*, 2007.

<sup>67</sup> *Federal Register*, vol. 69, No. 211, November 2, 2004, Rules and Regulations, p.63585, <http://fdsys.gov/gov/fdsys/pkg/FR-2004-11-02/pdf/04-24101.pdf>.

<sup>68</sup> Larry Kudlow, “Barney Frank Comes Home to the Facts,” GOPUSA, August 23, 2010, available at [www.gopusa.com/commentary/2010/08/kudlow-barney-frank-comes-home-to-the-facts.php#ixz\\_z0zdCrWpCY](http://www.gopusa.com/commentary/2010/08/kudlow-barney-frank-comes-home-to-the-facts.php#ixz_z0zdCrWpCY) (accessed September 20, 2010).

<sup>69</sup> Document in author's files.

echoing Chairman Bernanke, seems to believe that the impetus was competition among the banks, irresponsibility among originators, and the desire for profit. The majority's report offers no other explanation.

However, there is no difficulty finding the source of the reductions in mortgage underwriting standards for Fannie and Freddie, or for the originators for whom they were the buyers. HUD made clear in numerous statements that its policy—in order to make credit available to low-income borrowers—was specifically *intended* to reduce underwriting standards. The GSE Act enabled HUD to put Fannie and Freddie into competition with FHA, and vice versa, creating what became a contest to lower mortgage standards. As the Fannie Mae Foundation noted in a 2000 report, “FHA loans constituted the largest share of Countrywide’s [subprime lending] activity, until Fannie Mae and Freddie Mac began accepting loans with higher LTVs [loan-to-value ratios] and greater underwriting flexibilities.”<sup>70</sup>

Under the GSE Act, the HUD Secretary was authorized to establish affordable housing goals for Fannie and Freddie. Congress required that these goals include a low and moderate income goal and a special affordable goal (discussed below), both of which could be adjusted in the future. Among the factors the secretary was to consider in establishing the goals were national housing needs and “the ability of the enterprises [Fannie and Freddie] to lead the industry in making mortgage credit available for low- and moderate-income families.” The Act also established an interim affordable housing goal of 30 percent for the two-year period beginning January 1, 1993. Under this requirement, 30 percent of the GSEs’ mortgage purchases had to be affordable housing loans, defined as loans to borrowers at or below the AMI.<sup>71</sup>

Further, the Act established a “special affordable” goal to meet the “unaddressed needs of, and affordable to, low-income families in low-income areas and very low-income families.” This category was defined as follows: “(i) 45 percent shall be mortgages of low-income families who live in census tracts in which the median income does not exceed 80 percent of the area median income; and (ii) 55 percent shall be mortgages of very low income families,” which were later defined as 60 percent of AMI.<sup>72</sup> Although the GSE Act initially required that the GSEs spend on special affordable mortgages “not less than 1 percent of the dollar amount of the mortgage purchases by the [GSEs] for the previous year,” HUD raised this requirement substantially in later years. Ultimately, it became the most difficult affordable housing AH burden for Fannie and Freddie to meet.

Finally, the GSEs were directed to: “(A) assist primary lenders to make housing credit available in areas with low-income and minority families; and (B) assist insured depository institutions to meet their obligations under the Community Reinvestment Act of 1977.”<sup>73</sup> There will be more on the CRA and its effect on the quality of mortgages later in this section.

Congress also made clear in the act that its intention was to call into question the high quality underwriting guidelines of the time. It did so by directing Fannie and Freddie to “examine—

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<sup>70</sup> Fannie Mae Foundation, “Making New Markets: Case Study of Countrywide Home Loans,” 2000, [http://content.knowledgeplex.org/kp2/programs/pdf/rep\\_newmortmkt\\_countrywide.pdf](http://content.knowledgeplex.org/kp2/programs/pdf/rep_newmortmkt_countrywide.pdf).

<sup>71</sup> GSE Act, Section 1332.

<sup>72</sup> Id., Section 1333.

<sup>73</sup> Id., Section 1335.

- (1) The extent to which the underwriting guidelines prevent or inhibit the purchase or securitization of mortgages for houses in mixed-use, urban center, and predominantly minority neighborhoods and for housing for low-and moderate-income families;
- (2) The standards employed by private mortgage insurers and the extent to which such standards inhibit the purchase and securitization by the enterprises of mortgages described in paragraph (1); and
- (3) The implications of implementing underwriting standards that—
  - (A) establish a downpayment requirement for mortgagors of 5 percent or less;
  - (B) allow the use of cash on hand as a source of downpayments; and
  - (C) approve borrowers who have a credit history of delinquencies if the borrower can demonstrate a satisfactory credit history for at least the 12-month period ending on the date of the application for the mortgage.<sup>74</sup>

I could not find a record of reports by Fannie and Freddie required under this section of the act, but it would have been fairly clear to both companies, and to HUD, what Congress wanted in asking for these studies. Prevailing underwriting standards were inhibiting mortgage financing for low and moderate income (LMI) families, and would have to be substantially relaxed in order to meet the goals of the Act. Whatever the motivation, HUD set out to assure that downpayment requirements were substantially reduced (eventually they reached zero) and past credit history became a much less important issue when mortgages were made (permitting subprime mortgages to become far more common).

Until 1995, HUD enforced the temporary AH goals originally put in place by the GSE Act. With the exception of the special affordable requirements, which were small at this point, these goals were not burdensome. In the ordinary course of their business, the GSEs seem to have bought enough mortgages made to borrowers below the AMI to qualify for the 30 percent AH goal. In 1995, however, HUD raised the LMI goal to 40 percent, applicable to 1996, and to 42 percent for subsequent years. In terms of its effect on Fannie and Freddie, HUD's most important move at this time was to set a Special Affordable goal (low and very low income borrowers) of 12 percent, which increased to 14 percent in 1997. Efforts to find loans to low or very low income borrowers (80 percent and 60 percent of AMI, respectively) that did not involve high risks would prove difficult. As early as November 1995, even before the effect of these new and higher goals, Fannie's staff had already recognized that Fannie's Community Homebuyer Program (CHBP), which featured a 97 percent loan-to-value (LTV) ratio—i.e., 3 percent downpayment<sup>75</sup>—was showing significant rates of serious delinquency that exceeded Fannie's expected rates by 26 percent in origination year 1992, 93 percent in 1993 and 57 percent in 1994.<sup>76</sup>

In 1995, continuing its efforts to erode underwriting standards in order to increase homeownership, HUD issued a policy statement entitled "The National Homeownership Strategy: Partners in the American Dream." The Strategy was prepared by HUD, "under the direction of Secretary Henry G. Cisneros, in response

<sup>74</sup> *Id.*, Section 1354(a).

<sup>75</sup> Fannie Mae, "Opening Doors with Fannie Mae's Community Lending Products," 1995, p.3.

<sup>76</sup> Fannie Mae, Memo from Credit Policy Staff to Credit Policy Committee, "CHBP Performance," November 14, 1995, p.1.

to a request from President Clinton.”<sup>77</sup> The first paragraph of Chapter 1 stated: “The purpose of the National Homeownership Strategy is to achieve an all-time high level of homeownership in America within the next 6 years through an unprecedented collaboration of public and private housing industry organizations.”

The Strategy paper then noted that “industry representatives agreed to the formation of working groups to help develop the National Homeownership Strategy” and made clear that one of its purposes was to increase homeownership by reducing downpayments: “*Lending institutions, secondary market investors, mortgage insurers, and other members of the partnership should work collaboratively to reduce homebuyer downpayment requirements. Mortgage financing with high loan-to-value ratios should generally be associated with enhanced homebuyer counseling and, where available, supplemental sources of downpayment assistance.*”<sup>78</sup> According to a HUD summary, the purpose of the Strategy was to make financing “more available, affordable, and flexible.”<sup>79</sup> [emphasis supplied] It continued:

The inability (either real or perceived) of many younger families to qualify for a mortgage is widely recognized as a very serious barrier to homeownership. The National Homeownership Strategy commits both government and the mortgage industry to a number of initiatives designed to:

Cut transaction costs through streamlined regulations and technological and procedural efficiencies.

*Reduce downpayment requirements and interest costs by making terms more flexible, providing subsidies to low- and moderate-income families, and creating incentives to save for homeownership.*

*Increase the availability of alternative financing products in housing markets throughout the country.*<sup>80</sup> [emphasis supplied]

Reductions in downpayments, the area on which HUD particularly concentrated in pursuing its AH goals and the National Homeownership Strategy, are especially important in weakening underwriting standards. Table 4, below, based on a large sample of loans from the 1990s, shows the risk relationships between downpayments and mortgage risks. It is particularly instructive to note that when low downpayments (i.e., high LTVs) are combined with low FICO scores (subprime loans) the expected delinquencies and defaults are multiplied several fold. For example, when a loan with a FICO score below 620 is combined with a downpayment of five percent, the risk of default is 4.2 times greater than it would be if the downpayment were 25 percent.

<sup>77</sup> HUD, “The National Homeownership Strategy: Partners in the American Dream,” available at <http://web.archive.org/web/20010106203500/www.huduser.org/publications/affhsg/homeown/chap1.html>.

<sup>78</sup> *Id.*, Chapter 4, Action 35.

<sup>79</sup> The term “flexible” has a special meaning when HUD uses it. See note 8 *supra*.

<sup>80</sup> HUD, Urban Policy Brief No.2, August 1995, available at <http://www.huduser.org/publications/txt/hdbrf2.txt>.

Table 4.<sup>81</sup> High LTVs enhance the risk of low FICO scores

	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Row 1	FICO Score	≤ 70% LTV	71-80% LTV	81-90% LTV	91-95% LTV	Relation of Column 5 to Column 3
Row 2	< 620	1.0	4.8	11	20	4.2 times
Row 3	620-679	0.5	2.3	5.3	9.4	4.1 times
Row 4	680-720	0.2	1.0	2.3	4.1	4.1 times
Row 5	> 720	0.1	0.4	0.9	1.6	4 times

Despite these obvious dangers, HUD saw the erosion of downpayment requirements imposed by the private sector as one of the keys to the success of its strategy to increase home ownership through the “partnership” it had established with the mortgage financing community: “The amount of borrower equity is an important factor in assessing mortgage loan quality. *However, many low-income families do not have access to sufficient funds for a downpayment. While members of the partnership have already made significant strides in reducing this barrier to home purchase, more must be done.* In 1989 only 7 percent of home mortgages were made with less than 10 percent downpayment. By August 1994, low downpayment mortgage loans had increased to 29 percent.”<sup>82</sup> [emphasis supplied]

HUD’s policy was highly successful in achieving the goals it sought. In 1989, only one in 230 homebuyers bought a home with a downpayment of 3 percent or less, but by 2003 one in seven buyers was providing a downpayment at that level, and by 2007 the number was less than one in three. The gradual increase in LTVs and CLTVs (first and second loans combined to produce a lower downpayment) under HUD’s policies is shown in Figure 4. Note the date (1992) when HUD began to have some influence over the downpayments that the GSEs would accept.

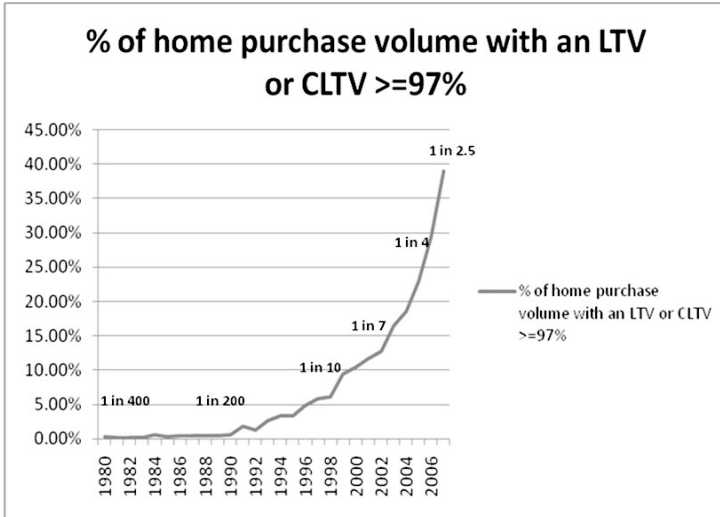
That HUD’s AH goals were the reason Fannie increased its high LTV (low downpayment) lending is clearly described in a Fannie presentation to HUD assistant secretary Albert Trevino on January 10, 2003: “Analyses of the market demonstrate the greatest barrier to home ownership for most renters are related to wealth—the lack of money for a downpayment...our low-downpayment lending—negligible until 1994—has grown considerably. It is a key part of our strategy to serve low-income and minority borrowers.” The figure that accompanied that statement showed that Fannie’s home purchase loans over 95 percent LTV had increased from one percent in 1994 to 7.9 percent in 2001.<sup>83</sup>

<sup>81</sup> “Deconstructing the Subprime Debacle Using New Indices of Underwriting Quality and Economic Conditions: A First Look,” by Anderson, Capozza, and Van Order, found at <http://www.ufanet.com/DeconstructingSubprimeJuly2008.pdf>.

<sup>82</sup> HUD’s “National Homeownership Strategy – Partners in the American Dream,” <http://web.archive.org/web/20010106203500/www.huduser.org/publications/affhsg/homeown/chap1.html>.

<sup>83</sup> “Fannie Mae’s Role in Affordable Housing Finance: Connecting World Capital Markets and America’s Homebuyers,” Presentation to HUD Assistant Secretary Albert Trevino, January 10, 2003.

Figure 4. Estimated Percentage of Home Purchase Volume with an LTV or CLTV  $\geq 97\%$  (Includes FHA and Conventional Loans\*) and Combined Foreclosure Start Rate for Conventional and Government Loans

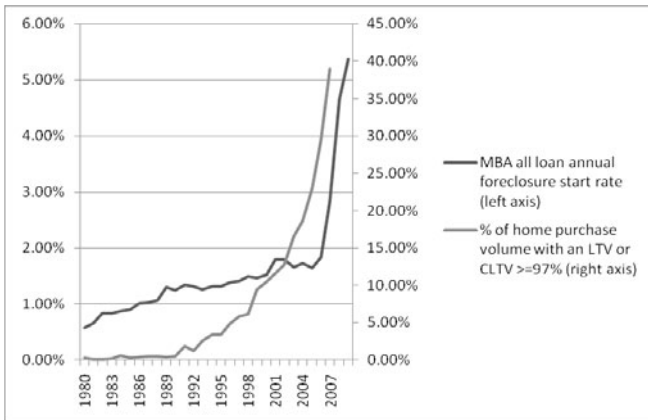


\*Fannie’s percentage of home purchase loans with an LTV or CLTV  $\geq 97\%$  used as the proxy for conventional loans.

Sources: FHA 2009 Actuarial Study, and HUD’s Office of Policy Development and Research - Profiles of GSE Mortgage Purchases in 1999 and 2000, in 2001-2004, and in 2005-2007, and Fannie’s 2007 10-K. Compiled by Edward Pinto.

The close relationship between low downpayments and delinquencies and defaults on mortgages is shown in Figure 5, which compares the increase in FHA 97 percent (or greater) CLTV or LTV mortgages to the increase in the foreclosure start rate on all loans published by the Mortgage Bankers Association.

Figure 5. Relationship between low downpayments and delinquencies or defaults on mortgages



Sources: MBA National Delinquency Survey, FHA 2009 Actuarial Study, and HUD’s Office of Policy Development and Research - Profiles of GSE Mortgage Purchases in 1999 and 2000, in 2001-2004, and in 2005-2007, SMR’s “Piggyback Mortgage Lending,” and Fannie’s 2007 10-K. Fannie is used as the proxy on the conventional market. Compiled by Edward Pinto.

In 1995, HUD also ruled that Fannie and Freddie could get AH credit for buying PMBS that were backed by loans to low-income borrowers.<sup>84</sup> This provided an opportunity for subprime lenders to create pools of subprime mortgages that were likely to be AH goals-rich. These were then sold through Wall Street underwriters to Fannie and Freddie, which became the largest buyers of these high risk PMBS between 2002 and 2005.<sup>85</sup> These PMBS pools were not bought for profit. As Adolfo Marzol, Fannie's Chief Credit Officer, noted to Fannie CEO Dan Mudd in a 2005 memorandum, "large 2004 private label [PMBS] volumes were necessary to achieve challenging minority lending goals and housing goals."<sup>86</sup> There is a strong possibility that by creating a market for PMBS backed by NTMs Fannie and Freddie enabled Wall Street—which had previously focused on securitizing prime jumbo loans—to get its start in developing an underwriting business in PMBS based on NTMs.

HUD pursued these policies throughout the balance of the Clinton administration and into the administration of George W. Bush. Ultimately, they would lead to the mortgage meltdown in 2007, as vast numbers of mortgages with low or no downpayments and other non-traditional features suffused the financial system. But in June, 1995, the dangers in HUD's policies were not recognized. As President Clinton said in a 1995 speech, "Our homeownership strategy will not cost the taxpayers one extra red cent. It will not require legislation. It will not add more federal programs or grow the Federal bureaucracy."<sup>87</sup> The lesson here is that the government can accomplish a lot of its goals without growing, as long as it has the power to enlist the private sector. That does not mean, however, as we have all now learned, that the taxpayers will not ultimately be faced with the costs.

The next significant move in the AH goals was made under HUD Secretary Andrew Cuomo, and it was a major step. On July 29, 1999, HUD issued a press release with the heading "Cuomo Announces Action to Provide \$2.4 trillion in Mortgages for Affordable Housing for 28.1 Million Families."<sup>88</sup> The release began: "Housing and Urban Development Secretary Andrew Cuomo today announced a policy to require the nation's two largest housing finance companies to buy \$2.4 trillion in mortgages over the next 10 years to provide affordable housing for about 28.1 million low-and moderate-income families." This was followed by a quote from President Clinton to emphasize the importance of the initiative: "During the last six and a half years, my Administration has put tremendous emphasis on promoting homeownership and making housing more affordable for all Americans...Today, the homeownership rate is at an all-time high, with more than 66 percent of all American families owning their homes. Today, we take another significant step."

The release then pointed out that the AH goals would be substantially raised and that "[u]nder the higher goals, Fannie Mae and Freddie Mac will buy an additional \$488.3 billion in mortgages that will be used to provide affordable housing for 7 million more low-and moderate-income families over the next 10 years. Those new mortgages and families are over and above the \$1.9 trillion in mortgages for

<sup>84</sup> <http://www.washingtonpost.com/wp-dyn/content/article/2008/06/09/AR2008060902626.html>.

<sup>85</sup> See Footnote 32.

<sup>86</sup> Fannie Mae, internal memo, Adolfo Marzol to Dan Mudd, "RE: Private Label Securities," March 2, 2005.

<sup>87</sup> William J. Clinton, Remarks on the National Homeownership Strategy, June 5, 1995.

<sup>88</sup> HUD Press Release, HUD No. 99-131, July 29, 1999.

21.1 million families that would have been generated if the current goals had been retained.” The release also noted that “Fannie Mae Chairman Franklin D. Raines joined Cuomo at the news conference in which Cuomo announced the HUD action. Raines committed Fannie Mae to reaching HUD’s increased Affordable Housing goals.”

The policy behind this substantial increase in the AH goals was expressed in HUD’s discussion of the rule-making: “To fulfill the intent of [the GSE Act], the GSEs should lead the industry in ensuring that access to mortgage credit is made available for very low-, low- and moderate-income families and residents of underserved areas. HUD recognizes that, to lead the mortgage industry over time, *the GSEs will have to stretch to reach certain goals and close the gap between the secondary mortgage market and the primary mortgage market. This approach is consistent with Congress’ recognition that ‘the enterprises will need to stretch their efforts to achieve’ the goals.*”<sup>89</sup> [emphasis supplied]

The new AH goals announced in 1999 were not finally issued until October 2000. Their specifics were stunning and drove Fannie and Freddie into a new and far more challenging era. The basic goal, an LMI requirement of 42 percent, was raised to 50 percent, and the special affordable goal was raised from 14 percent to 20 percent. As a result, 75 percent of the increase in goals was concentrated in the low- and very-low income category—where the risks were the greatest. A HUD memo summarized the new rules:<sup>90</sup>

For each year from 2001 through 2003, the goals are:

- *Low- and moderate-income goal.* At least 50 percent of the dwelling units financed by each GSE’s mortgage purchases should be for families with incomes no greater than area median income (AMI), defined as median income for the metropolitan area or nonmetropolitan county. The corresponding goal was 42 percent for 1997-2000.
- *Special affordable goal.* At least 20 percent of the dwelling units financed by each GSE’s mortgage purchases should be for very low-income families (those with incomes no greater than 60 percent of AMI) or for low-income families (those with incomes no greater than 80 percent of LMI) in low-income areas. The corresponding goal was 14 percent for 1997-2000.
- *Underserved areas goal.* At least 31 percent of the dwelling units financed by each GSE’s mortgage purchases should be for units located in underserved areas. Research by HUD and others has demonstrated that low-income and high-minority census tracts have high mortgage denial rates and low mortgage origination rates, and this forms the basis for HUD’s definition of underserved areas. The corresponding goal was 24 percent for 1997-2000.

HUD’s new and more stringent AH goal requirements immediately stimulated strong interest at the GSEs for CRA loans, substantial portions of which were likely to be goals-qualifying. This is evident in a speech by Fannie’s Vice Chair, Jamie Gorelick, to an American Bankers Association conference on October 30,

<sup>89</sup> [http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=2000\\_register&docid=page+65043-65092](http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=2000_register&docid=page+65043-65092).

<sup>90</sup> HUD, Office of Policy Development and Research, Issue Brief No. 5, January 2001, p.3.

2000, just after HUD announced the latest increase in the AH goals for the GSEs:

Your CRA business is very important to us. Since 1997, we have done nearly \$7 billion in specially targeted CRA business—all with depositories like yours. But that is just the beginning. Before the decade is over, Fannie Mae is committed to finance over \$20 billion in specially targeted CRA business and over \$500 billion in CRA business altogether...

We want your CRA loans because they help us meet our housing goals... We will buy them from your portfolios, or package them into securities... We will also purchase CRA mortgages you make right at the point of origination... You can originate CRA loans for our purchase with one of our CRA-friendly products, like our 3 percent down Fannie 97. Or we have special community lending products with flexible underwriting and special financing... Our approach is "CRA your way".<sup>91</sup>

The 50 percent level in the new HUD regulations was a turning point. Fannie and Freddie had to stretch a bit to reach the previous goal of 42 percent, but 50 percent was a significant challenge. As Dan Mudd told the Commission,

Fannie Mae's mission regulator, HUD, imposed ever-higher housing goals that were very difficult to meet during my tenure as CEO [2005-2008]. The HUD goals greatly impacted Fannie Mae's business, as a great deal of time, resources, energy, and personnel were dedicated to finding ways to meet these goals. HUD increased the goals aggressively over time to the point where they exceeded the 50% mark, requiring Fannie Mae to place greater emphasis on purchasing loans to underserved areas. Fannie Mae had to devote a great deal of resources to running its business to satisfy HUD's goals and subgoals.<sup>92</sup>

Mudd's point can be illustrated with simple arithmetic. At the 50 percent level, for every mortgage acquired that was not goal-qualifying, Fannie and Freddie had to acquire a goal-qualifying loan. Although about 30 percent of prime loans were likely to be goal-qualifying in any event (because they were made to borrowers at or below the applicable AMI), most prime loans were not. Subprime and other NTM loans were goals-rich, but not every such loan was goal-qualifying. Accordingly, in order to meet a 50 percent goal, the GSEs had to purchase ever larger amounts of goals-rich NTMs in order to acquire sufficient quantities of goals-qualifying loans.

Thus, in a presentation to HUD in 2004, Fannie argued that to meet a 57 percent LMI goal (which was under consideration by HUD at the time) it would have to acquire 151.5 percent more subprime loans than the goal in order to capture enough goal-qualifying loans.<sup>93</sup> Moreover, with the special affordable category at 20 percent in 2004, the GSEs had to acquire large numbers of NTM loans from borrowers who were at or below 60 percent of the AMI. This requirement drove Fannie and Freddie even further into risk territory in search of loans that would meet this subgoal.

<sup>91</sup> Jamie S. Gorelick, Remarks at American Bankers Association conference, October 30, 2000. [http://web.archive.org/web/20011120061407/www.fanniemae.com/news/speeches/speech\\_152.html](http://web.archive.org/web/20011120061407/www.fanniemae.com/news/speeches/speech_152.html).

<sup>92</sup> Daniel H. Mudd's Responses to the Questions Presented in the FCIC's June 3, 2010, letter, Answer to Question 6: How influential were HUD's affordable housing guidelines in Fannie Mae's purchase of subprime and Alt-A loans? Were Alt-A loans "goals-rich"? Were Alt-A loans net positive for housing goals?

<sup>93</sup> Fannie Mae, "Discussion of HUD's Proposed Housing Goals," Presentation to the Department of Housing and Urban development, June 9, 2004.

Most of what was going on here was under the radar, even for specialists in the housing finance field, but not everyone missed it. In a paper published in 2001,<sup>94</sup> financial analyst Josh Rosner recognized the deterioration in mortgage standards although he did not recognize how many loans were subject to this problem:

Over the past decade Fannie Mae and Freddie Mac have reduced required down payments on loans that they purchase in the secondary market. Those requirements have declined from 10% to 5% to 3% and in the past few months Fannie Mae announced that it would follow Freddie Mac's recent move into the 0% down payment mortgage market. Although they are buying low down payment loans, those loans must be insured with 'private mortgage insurance' (PMI). On homes with PMI, even the closing costs can now be borrowed through unsecured loans, gifts or subsidies. This means that not only can the buyer put zero dollars down to purchase a new house but also that the mortgage can finance the closing costs....

*[I]t appears a large portion of the housing sector's growth in the 1990's came from the easing of the credit underwriting process....The virtuous cycle of increasing homeownership due to greater leverage has the potential to become a vicious cycle of lower home prices due to an accelerating rate of foreclosures.*<sup>95</sup>[emphasis supplied]

The last increase in the AH goals occurred in 2004, when HUD raised the LMI goal to 52 percent for 2005, 53 percent for 2006, 55 percent for 2007 and 56 percent for 2008. Again, the percentage increases in the special affordable category outstripped the general LMI goal, putting added pressure on Fannie and Freddie to acquire additional risky NTMs. This category increased from 20 percent to 27 percent over the period. In the release that accompanied the increases, HUD declared:

Millions of Americans with less than perfect credit or who cannot meet some of the tougher underwriting requirements of the prime market for reasons such as inadequate income documentation, limited downpayment or cash reserves, or the desire to take more cash out in a refinancing than conventional loans allow, rely on subprime lenders for access to mortgage financing. *If the GSEs reach deeper into the subprime market, more borrowers will benefit from the advantages that greater stability and standardization create.*<sup>96</sup> [emphasis supplied]

Fannie did indeed reach deeper into the subprime market, confirming in a March 2003 presentation to HUD, "Higher goals force us deeper into FHA and subprime."<sup>97</sup> According to HUD data, as a result of the AH goals Fannie Mae's acquisitions of goal-qualifying loans (which were primarily subprime and Alt-A) increased (i) for very low income borrowers from 5.2 percent of their acquisitions in 1993 to 12.2 percent in 2007; (ii) for special affordable borrowers from 6.4 percent in 1993 to 15.2 percent in 2007; and (iii) for less than median income borrowers (which includes the other two categories) from 29.2 percent in 1993 to 41.5 percent in 2007.<sup>98</sup>

<sup>94</sup> Josh Rosner, "Housing in the New Millennium: A Home Without Equity is Just a Rental With Debt," June, 2001, p.7, available at: [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1162456](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1162456).

<sup>95</sup> Id., p.29.

<sup>96</sup> <http://fdsys.gpo.gov/fdsys/pkg/FR-2004-11-02/pdf/04-24101.pdf>, p.63601.

<sup>97</sup> Fannie Mae, "The HUD Housing Goals", March 2003.

<sup>98</sup> HUD, Office of Policy Development and Research, Profiles of GSE Mortgage Purchases, 1992-2000, 2001-2004, and 2005-2007.

By 2004, Fannie and Freddie were sufficiently in need of subprime loans to meet the AH goals that their CEOs, as the following account shows, went to a meeting of mortgage bankers to ask for more subprime loan production:

The top executives of Freddie Mac and Fannie Mae [Richard Syron and Franklin Raines] made no bones about their interest in buying loans made to borrowers formerly considered the province of nonprime and other niche lenders. . . . Fannie Mae Chairman and [CEO] Franklin Raines told mortgage bankers in San Francisco that his company's lender-customers 'need to learn the best from the subprime market and bring the best from the prime market into [the subprime market].' He offered praise for nonprime lenders that, he said, 'are some of the best marketers in financial services.' . . . *We have to push products and opportunities to people who have lesser credit quality,*" he said.<sup>99</sup> [emphasis supplied]

Accordingly, by 2004, when HUD put new and tougher AH goals into effect, Fannie and Freddie were using every available resource to meet the goals, including subprime loans, Alt-A loans and the purchase of PMBS. Some observers, including the Commission's majority, have claimed that the GSEs bought NTM loans and PMBS for profit—that these instruments did not assist Fannie and Freddie in meeting the AH goals and therefore must have been acquired because they were profitable. However, the statement by Adolfo Marzol reported above, and the data in Table 5 furnished to the Commission by Fannie Mae shows that all three categories of NTMs—subprime loans (i.e., loans to borrowers with FICO scores less than 660), Alt-A loans and PMBS (called PLS for "Private Label Securities" in the table)—fulfilled the AH goals or subgoals for the years and in the percentages shown below. (Bolded numbers exceeded the applicable goal.) Table 5 also shows, significantly, that the gradual increase in Fannie's purchases of these NTMs closely followed the gradual increase in the goals between 1996 and 2008.

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<sup>99</sup> Neil Morse, "Looking for New Customers," *Mortgage Banking*, December 1, 2004. It may be significant that the chairman of Freddie Mac at the time, Leland Brendsel, did not attend the 2000 press conference or pledge support for HUD's new goals. Raines must have forgotten his 1999 pledge to Secretary Cuomo and his speech to the mortgage bankers when he wrote in a letter to *The Wall Street Journal* on August 3, 2010: "The facts about the financial collapse of Fannie and Freddie are pretty clear and a matter of public record. The company managers, their regulator and the Treasury have all said that the losses which crippled the companies were caused by the purchase of loans with lower credit standards between 2005 and 2007. The companies explicitly changed their credit standards in order to regain market share after Wall Street began to define market credit standards in 2004."

Table 5.<sup>100</sup> Nontraditional Mortgages and the Affordable Housing Goals

Year	Low & Moderate Income Base Goal		Special Affordable Base Goal		Underserved Base Goal	
	Actual*	Goal	Actual*	Goal	Actual*	Goal
<b>Credit Score &lt;660 Originations</b>						
1996	38.08%	40 %	12.31%	12%	32.10%	21%
1997	38.04%	42%	12.35%	14%	33.03%	24%
1998	37.72%	42%	11.76%	14%	29.37%	24%
1999	40.36%	42%	14.04%	14%	30.87%	24%
2000	43.69%	42%	17.83%	14%	35.79%	24%
2001	45.98%	50%	17.90%	20%	34.91%	31%
2002	49.66%	50%	20.09%	20%	37.29%	31%
2003	49.18%	50%	19.38%	20%	34.12%	31%
2004	52.71%	50%	22.14%	20%	37.54%	31%
2005	54.39%	52%	24.21%	22%	44.38%	37%
2006	56.34%	53%	25.85%	23%	46.34%	38%
2007	55.47%	55%	24.76%	25%	46.45%	38%
2008	55.24%	56%	25.50%	27%	45.39%	39%
<b>Alt-A Originations</b>						
1999	48.83%	42%	24.17%	14%	37.41%	24%
2000	40.61%	42%	18.74%	14%	41.03%	24%
2001	39.05%	50%	16.41%	20%	40.66%	31%
2002	42.77%	50%	18.13%	20%	40.08%	31%
2003	42.42%	50%	16.81%	20%	37.34%	31%
2004	44.13%	50%	18.56%	20%	40.08%	31%
2005	43.12%	52%	18.57%	22%	45.36%	37%
2006	40.43%	53%	18.09%	23%	46.40%	38%
2007	39.02%	55%	17.29%	25%	50.29%	38%
2008	42.37%	56%	18.52%	27%	42.10%	39%
<b>PLS Backed by Subprime</b>						
2003	51.43%	50%	19.57%	20%	47.09%	31%
2004 ^						
2005	50.95%	52%	19.86%	22%	61.13%	37%
2006	60.63%	53%	23.51%	23%	60.12%	38%
2007	52.96%	55%	19.21%	25%	54.55%	38%
2008	51.42%	56%	17.68%	27%	64.45%	39%

\*% of unit financed that qualified for base goals.

^ Not included in housing goals scoring in 2004

Table 5 also shows that ordinary subprime loans, Alt-A loans and PMBS backed by subprime loans were not always sufficient to meet the AH goals. For

<sup>100</sup> Fannie Mae, disk produced for FCIC, April 7, 2010. Throughout this analysis, I have not discussed the GSEs' compliance with the "Underserved Base Goal," which is included in this table. The Underserved Base Goal applied mostly to minorities and involved a different set of lending decisions than the LMI goal and the Special Affordable Goal.

this reason, Fannie developed special categories of loans in which the firm waived some of its regular underwriting requirements in order to supplement what they were getting from higher quality NTMs. The two principal categories were My Community Mortgage (MCM) and Expanded Approval (EA). In many cases, these two categories enabled Fannie to meet the AH goals, but at the cost of much higher delinquency rates than occurred among higher quality NTMs they acquired. As the years progressed and the AH goals increased, Fannie had to acquire increasing numbers of loans in these categories, and as shown in Table 6 these increasing numbers also exhibited increasing delinquency rates:

Table 6.<sup>101</sup> Higher Risk Loans Produced Higher Delinquency Rates at Fannie Mae

Goals by Vintage		Loan Count	Serious Delinquency Rate
2004 & Prior	EA/MCM & Housing Goals	115,686	17.59%
2005	EA/MCM & Housing Goals	56,822	22.35%
2006	EA/MCM & Housing Goals	110,539	25.19%
2007	EA/MCM & Housing Goals	224, 513	29.70%

Just how desperate Fannie and Freddie were to meet their AH goals is revealed by Fannie's behavior in 2004. As reported in the *American Banker* on May 13, 2005, "A House Financial Services Committee report shared with lawmakers Thursday accused Fannie Mae and Freddie Mac of engaging over several years in a series of dubious transactions to meet their affordable-housing goals... The report cited several large transactions entered into by Fannie under which sellers were allowed to repurchase loans without recourse. For example, it said that in September 2003, Fannie bought the option to buy up to \$12 billion of multifamily mortgage loans from Washington Mutual, Inc., for a fee of \$2 million, the report said. Under the agreement, the GSE permitted WaMu to repurchase the loans...' This was the largest multifamily transaction ever undertaken by Fannie Mae and was critical for Fannie Mae to reach the affordable-housing goals, the report said."<sup>102</sup>

A clearer statement of what happened here is contained in WaMu's 10-K for 2003. Freddie had engaged in a similar but larger transaction with WaMu in 2003, reported as follows in WaMu's 10-K dated December 31, 2003:

Other noninterest income increased in 2003 compared with 2002 partially due to fees paid to the Company [WaMu] by the Federal Home Loan Mortgage Corporation ("FHLMC" or Freddie Mac). The Company received \$100 million in nonrefundable fees to induce the Company to swap approximately \$6 billion of multi-family loans for 100% of the beneficial interest in those loans in the form of mortgage-backed securities issued by Freddie Mac. Since the Company has the unilateral right to collapse the securities after one year, the Company has effectively retained control over the loans. Accordingly, the assets continue to be accounted for and reported as loans. This transaction was undertaken by Freddie Mac in order to facilitate fulfilling its 2003 affordable housing goals as set by the Department of Housing and Urban Development.

Fannie and Freddie were both paying holders of mortgages to temporarily transfer to them possession of goal-qualifying loans that the GSEs could use to satisfy the AH goals for the year 2003. After the end of the year, the seller had an

<sup>101</sup> Fannie Mae, "GSE Credit Losses," presentation to House Financial Services Committee, April 16, 2010.

<sup>102</sup> Rob Blackwell, "Two GSEs Cut Corners to Hit Goals, Report Says," *American Banker*, May 13, 2005, p.1.

absolute right to reacquire these loans. There can be little doubt, then, that as early as 2003, Fannie and Freddie were under so much pressure to find the subprime or other loans that they needed to meet their affordable housing obligations that they were willing to pay substantial sums to window-dress their reports to HUD.

### 3. THE AFFORDABLE HOUSING GOALS WERE THE SOLE REASON THAT THE GSEs' ACQUIRED SO MANY NTMS

Up to this point, we have seen that HUD's policy was to reduce underwriting standards in order to make mortgage credit more readily available to low-income borrowers, and that Fannie and Freddie not only took the AH goals seriously but were willing to go to extraordinary lengths to make sure that they met them. Nevertheless, it seems to have become an accepted idea in some quarters—including in the Commission majority's report—that Fannie and Freddie bought large numbers of subprime and Alt-A loans between 2004 and 2007 in order to recover the market share they had lost to subprime lenders such as Countrywide or Wall Street, or to make profits. Although there is no evidence whatever for this belief—and a great deal of evidence to the contrary—it has become another urban myth, repeated so often in books, blogs and other media that it has attained a kind of reality.<sup>103</sup>

The formulations of the idea vary a bit. As noted earlier, HUD has claimed—absurdly, in light of its earlier efforts to reduce mortgage underwriting standards—that the GSEs were “chasing the nonprime market” or “chasing market share and profits,” principally between 2004 and 2007. The inference, all too easily accepted, is that this is another example of private greed doing harm, but it is clear that HUD was simply trying to evade its own culpability for using the AH goals to degrade the GSEs' mortgage underwriting standards over the 15 year period between 1992 and 2007. The Commission majority also adopted a version of this idea in its report, blaming the GSEs' loosening of their underwriting standards on a desire to please stock market analysts and investors, as well as to increase management compensation. None of HUD's statements about its efforts to reduce underwriting standards managed to make it into the Commission majority's report, which relied entirely on the idea that the GSEs' underwriting standards were reduced by their desire to “follow Wall Street and other lenders in [the] rush for fool's gold.”

These claims place the blame for Fannie and Freddie's insolvency—and the huge number of low quality mortgages in the U.S. financial system immediately prior to the financial crisis—on the firms' managements. They absolve the government, particularly HUD, from responsibility. The GSEs' managements made plenty of mistakes—and won't be defended here—but taking risks to compete for market share was not something they actually did. Because of the AH goals, Fannie and

<sup>103</sup> See, e.g., Barry Ritholtz, “Get Me ReWrite!” in *Bailout Nation, Bailouts, Credit, Real Estate, Really, Really Bad Calls*, May 13, 2010, <http://www.ritholtz.com/blog/2010/05/rewriting-the-causes-of-the-credit-crisis/print/>; Dean Baker, “NPR Tells Us that Republicans Believe that Fannie and Freddie Caused the Crash” *Beat the Press Blog*, Center for Economic and Policy Research <http://www.cepr.net/index.php/blogs/beat-the-press/npr-tells-us-that-republicans-believe-that-fannie-and-freddie-caused-the-crash>; Charles Duhigg, “Roots of the Crisis,” *Frontline*, Feb 17, 2009, <http://www.pbs.org/wgbh/pages/frontline/meltdown/themes/howwegothere.html>.

Freddie were major buyers of NTMs well before Wall Street firms and the subprime lenders who came to dominate the business entered the subprime PMBS market in any significant way. Moreover, the GSEs did not (indeed, could not) appreciably increase their purchases of NTMs during the years 2005 and 2006, when they had lost market share to the real PMBS issuers, Countrywide and other subprime lenders.

The following discussion addresses each of the claims about the GSEs' motives in turn, and in the end will show that the only plausible motive for their actions was their effort to comply with HUD's AH goals.

### ***Did the GSEs acquire NTMs to “compete for market share” with Wall Street or others?***

The idea that Fannie and Freddie were newcomers to the purchase of NTMs between 2004 and 2007, and reduced their underwriting standards so they could compete for market share with Wall Street or others, is wrong. As shown in Table 7, the GSEs' acquisition of subprime loans and other NTMs began in the 1990s, when they first became subject to the AH goals. Research shows that, in contravention of their earlier standards, the GSEs began to acquire high loan-to-value (LTV) mortgages in 1994, shortly after the enactment of the GSE Act and the imposition of the AH goals, and by 2001—before the PMBS market reached \$100 billion in annual issuances—the GSEs had already acquired at least \$700 billion in NTMs, including over \$400 billion in subprime loans.<sup>104</sup> Far from following Wall Street or anyone else into subprime loans between 2004 and 2007, the GSEs had become the largest buyers of subprime and other NTMs many years before the PMBS market began to develop. Given these facts, it would be more accurate to say that Wall Street and the subprime lenders who later came to dominate the PMBS market followed the GSEs into subprime lending. Table 7 does not show any significant increase in the GSEs' acquisition of NTMs from 2004 to 2007, and the amount of subprime PMBS they acquired during this period actually decreased. This is consistent with the fact—outlined below—that the GSEs did not make any special effort to compete for market share during these years.

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<sup>104</sup> Pinto, “Government Housing Policies in the Lead-up to the Financial Crisis: A Forensic Study,” Chart 52, p.148, <http://www.aei.org/docLib/Government-Housing-Policies-Financial-Crisis-Pinto-102110.pdf>.

Table 7.<sup>105</sup> GSE Purchases of Subprime and Alt-A loans

\$ in billions	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	1997-2007
Subprime PMBS	\$3*	\$18*	\$18*	\$11*	\$16*	\$38	\$82	\$180	\$169	\$110	\$62	\$707
Subprime loans**	\$37	\$83	\$74	\$65	\$159	\$206	\$262	\$144	\$139	\$138	\$195	\$1,502
Alt-A PMBS	Unk.	Unk.	Unk.	Unk.	Unk.	\$18	\$12	\$30	\$36	\$43	\$15	\$154
Alt-A loans***	Unk.	Unk.	Unk.	Unk.	Unk.	\$66	\$77	\$64	\$77	\$157	\$178	\$619
High LTV loans****	\$32	\$44	\$62	\$61	\$84	\$87	\$159	\$123	\$126	\$120	\$226	\$1,124
Total*****	\$72	\$145	\$154	\$137	\$259	\$415	\$592	\$541	\$547	\$568	\$676	\$4,106

\*Total purchases of PMBS for 1997-2001 are known. Subprime purchases for these years were estimated based upon the percentage that subprime PMBS constituted of total PMBS purchases in 2002 (57%).

\*\*Loans where borrower's FICO <660.

\*\*\* Fannie and Freddie used their various affordable housing programs and individual lender variance programs (many times in conjunction with their automated underwriting systems once these came into general use in the late-1990s) to approve loans with Alt-A characteristics. However, they generally did not classify these loans as Alt-A. Classification as Alt-A started in the early-1990s. There is an unknown number of additional loans that had higher debt ratios, reduced reserves, loosened credit requirements, expanded seller contributions, etc. The volume of these loans is not included.

\*\*\*\*Loans with an original LTV or original combined LTV >90% (given industry practices, this effectively means >=95%). Data to estimate loans with CLTV >90% is unavailable prior to 2003. Amounts for 2003-2007 are grossed up by 60% to account for the impact of loans with a CLTV >90%.

These estimates are based on disclosures by Fannie and Freddie that at the end of 2007 their total exposures to loans with an LTV or CLTV >90% was 50% and 75% percent respectively higher than their exposure to loans with an LTV >90%. Fannie reports on p. 128 of its 2007 10-K that 15% of its entire book had an original combined LTV >90%. Its Original LTV percentage >90% (without counting the impact of any 2nd mortgage simultaneously negotiated) is 9.9%. Freddie reports on p60 of its Q2:2008 10 Q that 14% of its portfolio had an original combined LTV >90%. Its OLTV percentage >90% (without counting any simultaneous 2nd) is 8%. While Fannie and Freddie purchased only the first mortgage, these loans had the same or higher incidence of default as a loan with an LTV of >90%.

\*\*\*\*\*Since loans may have more than one characteristic, they may appear in more than one category. Totals are not adjusted to take this into account.

The claim that the GSEs loosened their underwriting standards in order to compete specifically with “Wall Street” can be easily dismissed—unless the Commission majority and others who have made this statement are including Countrywide (which was based in California) or other subprime lenders in the term “Wall Street.” Assuming, however, that the Commission majority and other commentators have been using the term Wall Street to apply to the commercial and investment banks that operate in the financial markets of New York, the data shows that Wall Street was not a significant participant in the subprime PMBS market between 2004 and 2007 or at any time before or after those dates. The top five players in 2004 were subprime lenders Ameriquest (\$55 billion) and Countrywide (\$40 billion), followed by Lehman Brothers (\$27 billion), GMAC RFC (\$26 billion), and New Century (\$22 billion). Other than Lehman, some other Wall Street firms were scattered through the list of the top 25, but were not significant players as a group.

In 2005, the biggest year for subprime issuances, the five leaders were the same, and the total for all Wall Street institutions was \$137 billion, or about 27

<sup>105</sup> Id.

percent of the \$508 billion issued that year.<sup>106</sup> In 2006, Lehman had dropped out of the top five and Countrywide had taken over the leadership among the issuers, but Wall Street's share had not significantly changed. By the middle of 2007, the PMBS market had declined to such a degree that the market share numbers were meaningless. However, in that year the GSEs' market share in NTMs increased because they had to continue buying NTMs—even though others had defaulted or left the business—in order to comply with the AH goals. Accordingly, if Fannie had ever loosened its lending standards to compete with some group, that group was not Wall Street.

The next question is whether the GSEs loosened their underwriting standards to compete with Countrywide, Ameriquest and the other subprime lenders who were the dominant players in the PMBS market between 2004 and 2007. Again, the answer seems clearly to be no. The subprime PMBS market was very small until 2002, when for the first time it exceeded \$100 billion and reached \$134 billion in subprime PMBS issuances.<sup>107</sup> Yet, Table 7 shows that in 2002 alone the GSEs bought \$206 billion in subprime loans, more than the total amount securitized by all the subprime lenders and others combined in that year.

The discussion of internal documents that follows will focus almost exclusively on Fannie Mae. The Commission concentrated its investigation on Fannie and it was from Fannie that the Commission received the most complete set of internal documents.

By the early 2000s, Countrywide had succeeded in creating an integrated system of mortgage distribution that included originating, packaging, issuing and underwriting NTMs through PMBS. Other subprime lenders, as noted above, were also major issuers, but they sold their PMBS through Wall Street firms that were functioning as underwriters.

The success of Countrywide and other subprime lenders as distributors of NTMs through PMBS was troubling to Fannie for two reasons. First, Countrywide had been Fannie's largest supplier of subprime mortgages; the fact that it could now securitize mortgages it formerly sold to Fannie meant that Fannie would have more difficulty finding subprime mortgages that were AH goals-eligible. In addition, the GSEs knew that their support in Congress depended heavily on meeting the AH goals and "leading the market" in lending to low income borrowers. In 2005 and 2006, the Bush administration and a growing number of Republicans in Congress were calling for tighter regulation of Fannie and Freddie, and the GSEs needed allies in Congress to hold this off. The fact that subprime lenders were taking an increasing market share in these years—suggesting that the GSEs were no longer the most important sources of low income mortgage credit—was thus a matter of great concern to Fannie's management. Without strong support among the Democrats in Congress, there was a significant chance that the Republican Congress would enact tougher regulatory legislation. This was expressed at Fannie as concern about a loss of "relevance," and provoked wide-ranging consideration within the firm about how they could regain their leadership role in low-income lending.

Nevertheless, although Fannie had strong reasons for wanting to compete for market share with Countrywide and others, it did not have either the operational

<sup>106</sup> Inside Mortgage Finance, *The 2009 Mortgage Market Statistical Annual—Volume II*, pp. 139 and 140.

<sup>107</sup> Inside Mortgage Finance, *The 2009 Market Statistical Annual—Volume II*, p.143.

or financial capacity to do so. In the end, Fannie was unable to take any significant action during the key years 2005 and 2006 that would regain market share from the subprime lenders or anyone else. They reduced their underwriting standards to the degree necessary to keep pace with the increasing AH goals, but not to go significantly beyond those requirements.

In a key memo dated June 27, 2005 (the “Crossroads” memo), Tom Lund, Executive Vice President for Single Family Business, addressed the question of Fannie’s loss of market share and how this share position could be regained. The date of this memo is important. It shows that even in the middle of 2005 there was still a debate going on within Fannie about *whether* to compete for market share with Countrywide and the other subprime issuers. No such competition had actually begun. Lund starts the discussion in the memo by saying “We are at a strategic crossroad...[his ellipses] We face two stark choices: 1. Stay the Course [or] 2. Meet the Market Where the Market Is”. “Staying the course” meant trying to maintain the mortgage quality standards that Fannie had generally followed up to that point (except as necessary to meet HUD’s AH goals). “Meeting the market” meant competing with Countrywide and others not only by acquiring substantially *more* NTMs than the AH goals required, but also by acquiring much *riskier* mortgages than Fannie—which specialized in fixed rate mortgages—had been buying up to that time.

These riskier potential acquisitions would have included much larger numbers of Option ARMs (involving negative amortization) and other loans involving multiple (or “layered”) risks with which Fannie had no prior experience. Thus, Lund noted that to compete in this business Fannie lacked “capabilities and infrastructure...knowledge... willingness to compete on price..[and] a value proposition for subprime.” His conclusion was as stark as the choice: “*Realistically, we are not in a position to ‘Meet the Market’ today.*” “Therefore,” Lund continued, “*we recommend that we: Pursue a ‘Stay the Course’ strategy and test whether market changes are cyclical vs secular.*”<sup>108</sup> [emphasis supplied]

In the balance of the Crossroads memo, Lund notes that subprime and Alt-A loans are driving the “leakage” of “goals rich” products to PMBS issuers. He points out the severity of the loss of market share, but never suggests that this changes his view that Fannie was unequipped to compete with Countrywide and others at that time. According to an internal FCIC staff investigation, dated March 31, 2010, other senior officials—Robert Levin (Executive Vice President and Chief Business Officer), Kenneth Bacon (Executive Vice President for Housing and Community Development), and Pamela Johnson (Senior Vice President for Single Family Business)—all concurred that Fannie should follow Lund’s recommendation to “stay the course.”

There is no indication in any of Fannie’s documents after June 2005 that Lund’s “Stay the Course” recommendation was ever changed or challenged during 2005 or 2006—the period when Fannie and Freddie were supposed to have begun to acquire large numbers of NTMs (beyond what was required to meet the AH goals) in order to compete with Countrywide or (in some telling) Wall Street.

Thus, in June 2006, one year after the Lund Crossroads memo, Stephen B. Ashley, then the chairman of the board, told Fannie’s senior executives: “2006 is a

<sup>108</sup> Tom Lund, “Single Family Guarantee Business: Facing Strategic Crossroads” June 27, 2005.

transition year. To be sure, there are still issues to resolve. The consent order with OFHEO [among other things, the order raised capital requirements temporarily] is demanding. And from a strategy standpoint, *it is clear that until we have eliminated operations and control weaknesses, taking on more risk or opening new lines of business will be viewed dimly by our regulators.*<sup>109</sup> [emphasis supplied] So, again, we have confirmation that Fannie's top officials did not believe that the firm was in any position—in the middle of 2006—to take on the additional risk that would be necessary to compete with Countrywide and other subprime lenders that were selling PMBS backed by subprime and other NTMs.

Moreover, there is very strong financially-based evidence that Fannie either never tried or was never financially able to compete for market share with Countrywide and other subprime lenders from 2004 to 2007. For example, set out below are Fannie's key financial data, published by OFHEO, its former regulator, in early 2008.<sup>110</sup>

Table 8. Fannie Mae Financial Highlights

<b>Earnings Performance:</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
Net Income (\$ billions)	8.1	5.0	6.3	4.2	-2.1
Net Interest Income (\$ billions)	19.5	18.1	11.5	6.8	4.6
Guarantee Fees (\$ billions)	3.4	3.8	4.0	4.3	5.1
Net Interest margin (%)	2.12	1.86	1.31	0.85	0.57
Average Guarantee Fee (bps)	21.9	21.8	22.3	22.2	23.7
Return on Common Equity (%)	27.6	16.6	19.5	11.3	-8.3
Dividend Payout Ratio (%)	20.8	42.1	17.2	32.4	N/M

Table 8 shows that Fannie's average guarantee fee *increased* during the period from 2003 to 2007. To understand the significance of this, it is necessary to understand the way the mortgage business works. Most of Fannie's guarantee business—the business that competed with securitizations of PMBS by Countrywide and others—was done with wholesale sellers of mortgage pools. In these deals, the wholesaler or issuer, a Countrywide or a Wells Fargo, would assemble a pool of mortgages and look for a guaranty mechanism that would offer the best pricing. In the case of a Fannie MBS, the key issue was the GSEs' guarantee fee, because that determined how much of the profit the issuer would be able to retain. In the case of a PMBS issue, it was the amount and cost of the credit enhancement needed to attain a AAA rating for a large percentage of the securities backed by the mortgage pool.

The issuer had a choice of securitizing through Fannie, Freddie or one of the Wall Street underwriters. Thus, if Fannie wanted to compete with the private issuers for subprime and other loans there was only one way to do it—by reducing its guarantee fees (called “G-fees” at Fannie and Freddie) and in this way making itself a more attractive outlet than using a Wall Street underwriter. The fact that Fannie does not appear to have done so is strong evidence that it never tried to compete for share with Countrywide and the other subprime issuers after the date of the Crossroads memo in June 2005.

The OFHEO financial summary also shows that Fannie in reality had very

<sup>109</sup> Stephen B. Ashley Fannie Mae Chairman, remarks at senior management meeting, June 27, 2006.

<sup>110</sup> OFHEO, “Mortgage Markets and the Enterprises in 2007,” pp. 33-34.

little flexibility to compete by lowering its G-fees. Its net income and its return on equity were all declining quickly during this period, and a cut in its G-fees would have hastened this decline.

Finally, there are Fannie's own reports about its acquisitions of subprime loans. According to Fannie's 10-K reports for 2004 (which, as restated, covered periods through 2006) and 2007, Fannie's acquisition of subprime loans barely increased from 2004 through 2007. These are the numbers:

Table 9.<sup>111</sup> Fannie Mae's Acquisition of Subprime Loans, 2004-2007

	2004	2005	2006	2007
FICO <620	5%	5%	6%	6%
FICO 620-<660	11%	11%	11%	12%

These percentages are consistent with Fannie's effort to comply with the gradual increase in the AH goals during the years 2004 through 2007; they are not consistent with an effort to substantially increase its purchases of subprime mortgages in order to compete with firms like Countrywide that were growing their market share through securitizing subprime and other loans.

Finally, Fannie's 2005 10-K (which, as restated and filed in May 2007, also covered 2005 and 2006), contains a statement similar to that made in 2006, confirming that the GSE made no effort to compete for subprime loans (except as necessary to meet the AH goals), and that in fact it lost market share by declining to do so in 2004, 2005 and 2006:

[I]n recent years, an increasing proportion of single-family mortgage loan originations has consisted of non-traditional mortgages such as interest-only mortgages, negative-amortizing mortgages and sub-prime mortgages, and demand for traditional 30-year fixed-rate mortgages has decreased. *We did not participate in large amounts of these non-traditional mortgages in 2004, 2005 and 2006 because we determined that the pricing offered for these mortgages often offered insufficient compensation for the additional credit risk associated with these mortgages. These trends and our decision not to participate in large amounts of these non-traditional mortgages contributed to a significant loss in our share of new single-family mortgages-related securities issuances to private-label issuers during this period, with our market share decreasing from 45.0% in 2003 to 29.2% in 2004, 23.5% in 2005 and 23.7 in 2006.*<sup>112</sup> [emphasis supplied]

Accordingly, despite losing market share to Countrywide and others in 2004, 2005 and 2006, Fannie did not attempt to acquire unusual numbers of subprime loans in order to regain this share. Instead, it continued to acquire only the subprime and other NTM loans that were necessary to meet the AH goals. That the AH goals were Fannie's sole motive for acquiring NTMs is shown by the firm's actions after the PMBS market collapsed in 2007. At that point, Fannie's market share began to rise as Countrywide and others could not continue to issue PMBS. Nevertheless, despite the losses on subprime loans that were beginning to show up in the markets, Fannie continued to buy NTMs until they were taken over by the government in

<sup>111</sup> Fannie Mae, 2004 10-K. These totals do not include Fannie's purchases of subprime PMBS. [http://www.fanniemae.com/ir/pdf/sec/2004/2004\\_form10K.pdf;jsessionid=N3RRICZPD5SOVJ2FQSHSFGI](http://www.fanniemae.com/ir/pdf/sec/2004/2004_form10K.pdf;jsessionid=N3RRICZPD5SOVJ2FQSHSFGI), p.141 and Fannie's 2007 10-K, [http://www.fanniemae.com/ir/pdf/sec/2008/form10k\\_022708.pdf;jsessionid=N3RRICZPD5SOVJ2FQSHSFGI](http://www.fanniemae.com/ir/pdf/sec/2008/form10k_022708.pdf;jsessionid=N3RRICZPD5SOVJ2FQSHSFGI), p.127.

<sup>112</sup> Fannie Mae, 2005 10-K, p.37.

September 2008. The reason for this nearly reckless behavior is obvious—they were still subject to the AH goals, which were increasing through this period. If they had only acquired these NTMs to compete with Countrywide and others for market share the competition was already over; their competitors had abandoned the field. But the fact is that Fannie did not—or could not—increase its market share between 2004 and 2006 shows without question that market share was not the reason they had acquired so many NTMs by the time they failed in September 2008.

Beleaguered by accounting problems, suffering diminished profitability, and lacking the capability to evaluate the risks of the new kinds of mortgages they would have to buy, Fannie had no option but to stay the course they had been following for 15 years. The NTMs they bought during the period from 2004 to 2007 were acquired to comply with the AH goals and not to increase their market share—as much as Fannie might have preferred to do so. Fannie's market share finally did increase in 2007, when the asset-backed market collapsed, Countrywide weakened, and neither Countrywide nor anyone else could continue to securitize mortgages. In a report to the board of directors on October 16, 2007, Mudd reported that Fannie's market share, which was 20 percent of the whole market at the beginning of 2007, had risen to 42 percent.<sup>113</sup>

That leaves one other possibility—that Fannie and Freddie were buying NTMs because they were profitable. That issue is addressed in the next section.

### ***Did Fannie acquire NTMs because these loans were profitable?***

From time to time, commentators on the GSEs have suggested that the GSEs' real motive for acquiring NTMs was not that they had to comply with the AH goals, but that they were seeking the profits these risky loans produced. This could have been true in the 1990s, but after the major increase in the AH goals in 2000 Fannie began to recognize that complying with the goals was reducing the firm's profitability. By 2007, Fannie was asking for relief from the goals.

The following table, drawn from a FHFA publication, shows the applicable AH goals over the period from 1996 through 2008 and the GSEs' success in meeting them.

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<sup>113</sup> Fannie Mae, Minutes of a Meeting of the Board of Directors, October 16, 2007, p.18.

Table 10.<sup>114</sup> GSEs' Success in Meeting Affordable Housing Goals, 1996-2007

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
<b>Low &amp; Mod Housing Goals</b>	40%	42%	42%	42%	42%	50%	50%	50%	50%	52%	53%	55%	56%
Fannie Actual	45%	45%	44%	46%	50%	51%	52%	52%	53%	55%	57%	56%	54%
Freddie Actual	41%	43%	43%	46%	50%	53%	50%	51%	52%	54%	56%	56%	51%
<b>Special Affordable Goal</b>	12%	14%	14%	14%	14%	20%	20%	20%	20%	22%	23%	25%	27%
Fannie Actual	15%	17%	15%	18%	19%	22%	21%	21%	24%	24%	28%	27%	26%
Freddie Actual	14%	15%	16%	18%	21%	23%	20%	21%	23%	26%	26%	26%	23%
<b>Underserved Goal</b>	21%	24%	24%	24%	24%	31%	31%	31%	31%	37%	38%	38%	39%
Fannie Actual	25%	29%	27%	27%	31%	33%	33%	32%	32%	41%	43%	43%	39%
Freddie Actual	28%	26%	26%	27%	29%	32%	31%	33%	34%	43%	44%	43%	38%

As the table shows, Fannie and Freddie exceeded the AH goals virtually each year, but not by significant margins. They simply kept pace with the increases in the goals as these requirements came into force over the years. This alone suggests that they did not increase their purchases in order to earn profits. If that was their purpose they would have substantially exceeded the goals, since their financial advantages (low financing costs and low capital requirements) allowed them to pay more for the mortgages they wanted than any of their competitors. As HUD noted in 2000: "Because the GSEs have a funding advantage over other market participants, they have the ability to underprice their competitors and increase their market share."<sup>115</sup>

As early as 1999, there were clear concerns at Fannie about how the 50 percent LMI goal—which HUD had signaled as its next move—would be met. In a June 15, 1999, memorandum,<sup>116</sup> four Fannie staff members proposed three categories of rules changes that would enable Fannie to meet the goals more easily: (i) persuade HUD to change the goals accounting (what goes into the numerator and denominator); (ii) enter other businesses where the pickings might be goals-rich, such as manufactured housing and, significantly, Alt-A and subprime ("Efforts to expand into Alt-A and A-markets (the highest grade of subprime lending) should also yield incremental business that will have a salutary effect on our low-and moderate-income score"); and (iii) persuade HUD to adopt different methods of goals scoring.

By 2000, Fannie was effectively in competition with banks that were required to make mortgage loans under CRA to roughly the same population of low-income borrowers targeted in HUD's AH goals. Rather than selling their CRA loans to Fannie and Freddie, banks and S&Ls had begun to retain the loans in portfolio. In a presentation in November 2000, Barry Zigas, a Senior Vice President of Fannie, noted that "Our own anecdotal evidence suggests that this increase [in banks' and

<sup>114</sup> FHFA Mortgage Market Note 10-2, <http://www.fhfa.gov/webfiles/15408/Housing%20Goals%201996-2009%2002-01.pdf.pdf>.

<sup>115</sup> [http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=2000\\_register&docid=page+65093-65142](http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=2000_register&docid=page+65093-65142).

<sup>116</sup> Bell, Kinney, Kunde and Weech, through Zigas and Marks internal memo Frank Raines, "RE: HUD Housing Goals Options," June 15, 1999.

S&Ls' holding loans in portfolio] is due in part to below-market CRA products."<sup>117</sup> In other words, banks and S&Ls subject to CRA were making mortgage loans at below market interest rates, and thus could not sell them without taking losses. This was troubling for Fannie because it meant that in order to capture these loans they would have to increase what they were willing to pay for these loans. Doing so would underprice the risks they would be assuming.

It is important to recognize what was happening. Fannie, and the banks and S&Ls under CRA, were now competing for the same kinds of NTMs, and were doing so by lowering their mortgage underwriting standards and adding flexibilities and subsidies. Simply as a result of supply and demand, all of the participants in this competition were required to pay higher prices for these increasingly risky mortgages. The banks and S&Ls that acquired these loans could not sell them, without taking a loss, when market interest rates were higher than the rates on the mortgages. This is the first indication in the documents that the FCIC received from Fannie that competition for subprime loans among the GSEs, banks, S&Ls, and FHA was causing the underpricing of risk—one of the principal causes of the mortgage meltdown and thus the financial crisis.

In January 2003, Fannie began planning for how to confront HUD before the next round of increases in the AH goals, expected to occur in 2004. In an "Action Plan for the Housing Goals Rewrite," dated January 22, 2003, Fannie staff reviewed a number of options, and concluded that "Fannie should strongly oppose: goals increases and new subgoals." (Slide 35)<sup>118</sup>

In March 2003, as Fannie prepared for new increases in the AH goals, its staff prepared a presentation, perhaps for HUD or for policy defense in public forums. The apparent purpose was to show that the goals should not be increased significantly in 2004. Slide 5 stated:

In 2002, Fannie Mae exceeded all our goals for the 9th straight year. But it was probably the most challenging environment we've ever faced. Meeting the goals required heroic 4<sup>th</sup> quarter efforts on the part of many across the company. Vacations were cancelled. The midnight oil burned. Moreover, the challenge freaked out the business side of the house. Especially because the tenseness around meeting the goals meant that we considered not doing deals—not fulfilling our liquidity function—and *did deals at risks and prices we would not have otherwise done.*<sup>119</sup> [emphasis supplied]

By September 2004, it was becoming clear that continuing increases in the AH goals were having a major adverse effect on Fannie's profitability. In a memorandum to Brian Graham (another Fannie official), Paul Weech, Director of Market Research and Policy Development, wrote: "Meeting the goals in difficult markets imposes significant costs on the Company and potentially causes market-distorting behaviors. In 1998, 2002, and 2003 especially, the Company has had to pursue certain transactions as much for housing goals attainment as for the economics of the transaction."<sup>120</sup>

In a June 2005 presentation entitled "Costs and Benefits of Mission

<sup>117</sup> Barry Zigas, "Fannie Mae and Minority Lending: Assessment and Action Plan" Presentation, November 16, 2000.

<sup>118</sup> Fannie Mae, "Action Plan for the Housing Goals Rewrite," January 22, 2003.

<sup>119</sup> Fannie Mae, "The HUD Housing Goals," March 2003.

<sup>120</sup> Fannie Mae internal memo, Paul Weech to Brian Graham, "RE: Mission Legislation," September 3, 2004.

Activities,”<sup>121</sup> the authors noted in slide 10 that AH goal costs had risen from \$2,632,500 in 2000 to \$13,447,500 in 2003. Slide 17 is entitled: “Meeting Future HUD Goals Appear Quite Daunting and Potentially Costly” and reports, “Based on 2003 experience where goal acquisition costs (relative to Fannie Mae model fees) cost between \$65 per goals unit in the first quarter to \$370 per unit in the fourth quarter, meeting the shortfall could cost the company \$6.5-\$36.5 million to purchase sufficient units.” The presentation concludes (slide 20): “Cost of mission activities—explicit and implicit—over the 2000-2004 period likely averaged approximately \$200 million per year.”

Earlier, I noted the efforts of Fannie and Freddie to window-dress their records for HUD by temporarily acquiring loans that would comply with the AH goals, while giving the seller the option to reacquire the loans at a later time. In 2005, we begin to see efforts by Fannie’s staff to accomplish the same window-dressing in another way--delaying acquisitions of non-goal-eligible loans so Fannie can meet the AH goals in that year; we also see the first efforts to calculate systematically the effect of goal-compliance on Fannie’s profitability. In a presentation dated September 30, 2005, Barry Zigas, the key Fannie official on affordable housing, outlined a “business deferral option.” Under that initiative, Fannie would ask seven major lenders to defer until 2006 sending non-goal loans to Fannie for acquisition. This would reduce the denominator of the AH goal computation and thus bring Fannie nearer to goal compliance in the 4th quarter of 2005. The cost of the deferral alone was estimated at \$30-\$38 million.<sup>122</sup>

In a presentation to HUD on October 31, 2005, entitled “Update on Fannie Mae’s Housing Goals Performance,”<sup>123</sup> Fannie noted several “Undesirable Tradeoffs Necessary to Meet Goals.” These included significant additional credit risk, and negative returns (“Deal economics are well below target returns; some deals are producing negative returns” and “G-fees may not cover expected losses”). One of the most noteworthy points was the following: “Liquidity to Questionable Products: Buying exotic product encourages continuation of risky lending; many products present with significant risk-layering; consumers are at risk of payment shock and loss of equity; potential need to waive our responsible lending policies to get goals business.”

Much of the narrative about the financial crisis posits that unscrupulous and unregulated mortgage originators tricked borrowers into taking on bad mortgages. The idea that predatory lending was a major source of the NTMs in the financial system in 2008 is a significant element of the Commission majority’s report, although the Commission was never able to provide any data to support this point. This Fannie slide suggests that loans later dubbed “predatory” might actually have been made to comply with the AH goals. This possibility is suggested, too, in a message sent in 2004 to Freddie’s CEO, Richard Syron, by Freddie’s chief risk manager, David Andrukonis, when Syron was considering whether to authorize a “Ninja” (no income/no jobs/no assets) product that he ultimately approved. Andrukonis argued against authorizing Freddie’s purchase: “The potential for the perception and reality

<sup>121</sup> Fannie Mae, “Costs and Benefits of Mission Activities, Project Phineas,” June 14, 2005.

<sup>122</sup> Barry Zigas, “Housing Goals and Minority Lending,” September 30, 2005.

<sup>123</sup> Fannie Mae, “Update on Fannie Mae’s Housing Goals Performance,” Presentation to the U.S. Department of Housing and Development, October 31, 2005.

of predatory lending, with this product is great.”<sup>124</sup> But the product was approved by Freddie, probably for the reason stated by another Freddie employee: “The Alt-A [(low doc/no doc)] business makes a contribution to our HUD goals.”<sup>125</sup>

On May 5, 2006, a Fannie staff memo to the Single Family Business Credit Committee revealed the serious credit and financial problems Fannie was facing when acquiring subprime mortgages to meet the AH goals. The memo describes the competitive landscape, in which “product enhancements from Freddie Mac, FHA, Alt-A and subprime lenders have all contributed to increased competition for goals rich loans...On the issue of seller contributions [in which the seller of the home pays cash expenses for the buyer] even FHA has expanded their guidelines by allowing 6% contributions for LTVs up to 97% that can be used toward closing, prepaid expenses, discount points and other financing concessions.”<sup>126</sup>

The memorandum is eye-opening for what it says about the credit risks Fannie had to take in order to get the goals-rich loans it needed to meet HUD’s AH requirements for 2006. Table 11 below shows the costs of NTMs in terms of the guarantee fee (G-fee) “gap.” (In order to determine whether a loan contributed to a return on equity, Fannie used a G-fee pricing model that took into account credit risk as well as a number of other factors; a G-fee “gap” was the difference between the G-fees required by the pricing model for a particular loan to contribute to a return on equity and a loan that did not.) The table in this memo shows the results for three subprime products under consideration, a 30 year fixed rate mortgage (FRM), a 5 year ARM, and 35 and 40 year fixed rate mortgages. For simplicity, this analysis will discuss only the 30 year fixed rate product. The table shows that the base product, the 30 year FRM, with *a zero* downpayment should be priced according to the model at a G-fee of 106 basis points. However, the memo reports that Fannie is actually buying loans like that at a price consistent with an annual fee of 37.50 basis points, producing a gap (or loss from the model) of 68.50 basis points. The reason the gap is so large is shown in the table: the anticipated default rate on that zero-down mortgage was *34 percent*. The table then goes on to look at other possible loan alternatives, with the following results:

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<sup>124</sup> Freddie Mac, internal email, Donna Cogswell on behalf of David Andrukonis to Dick Syron, “RE: No Income/No Asset (NINA) Mortgages,” September 7, 2004.

<sup>125</sup> Freddie Mac, internal email from Mike May to Dick Syron, “FW: FINAL NINA Memo,” October 6, 2004.

<sup>126</sup> Fannie Mae, internal memo, Single Family Business Product Management and Development to Single Family Business Credit Committee, “RE: PMD Proposal for Increasing Housing Goal Loans,” May 5, 2006, p.6.

Table 11.<sup>127</sup> Fannie Mae Took Losses on Higher Risk Mortgages Necessary to Meet the Affordable Housing Goals

Individual Enhancements (cost analysis for “base” MCM enhancement-not layered)	30 YR FRM		
	Model Fee	Average Default %	Gap
<b>Base: 100% LTV, 20% MI</b>	<b>106</b>	<b>34</b>	<b>-68.50</b>
Interest First (IF)	129	40	-91.50
Seller Contribution (SC)	115	23	-77.50
Temporary B/D (BD)	118	37	-80.50
Zero Down (ZD)	106	34	-68.50
Manufactured Housing (MH)	227	42	-189.50

From this report, it is clear that in order to meet the AH goals Fannie had to pay up for goals-rich mortgages, taking a huge credit risk along the way.

The dismal financial results that were developing at Fannie as a result of the AH goals were also described in Fannie’s 10-K report for 2006, which anticipated both losses of revenue and higher credit losses as a result of acquiring the mortgages required by the AH goals:

[W]e have made, and continue to make, significant adjustments to our mortgage loan sourcing and purchase strategies in an effort to meet HUD’s increased housing goals and new subgoals. These strategies include entering into some purchase and securitization transactions with *lower expected economic returns than our typical transactions*. We have also relaxed some of our underwriting criteria to obtain goals-qualifying mortgage loans and increased our investments in higher-risk mortgage loan products that are more likely to serve the borrowers targeted by HUD’s goals and subgoals, *which could increase our credit losses*. [emphasis supplied]<sup>128</sup>

The underlying reasons for the “lower expected returns” were reported in February 2007 in a document the FCIC received from Fannie, which noted that for 2006 the “cash flow cost” of meeting the housing goals was \$140 million while the “opportunity cost” was \$470 million.<sup>129</sup> In a report to HUD on the AH goals, dated April 11, 2007, Fannie described these costs as follows: “The largest costs [of meeting the goals] are opportunity costs of foregone revenue. In 2006, opportunity cost was about \$400 million, whereas the cash flow cost was about \$134 million. If opportunity cost was \$0, our shareholders would be indifferent to the deal. The cash flow cost is the implied out of pocket cost.”<sup>130</sup>

By this time, “Alignment Meetings”—in which Fannie staff considered how they would meet the AH goals—were taking place almost monthly (according to the frequency with which presentations to Alignment meetings occur in the documentary record). In an Alignment Meeting on June 22, 2007, on a “Housing Goals Forecast,” three plans were considered for meeting the 2007 AH goals, even

<sup>127</sup> Id., p.8.

<sup>128</sup> Fannie Mae, 2006 10-K, p.146.

<sup>129</sup> Fannie Mae, “Business Update,” presentation. “Cash flow cost” equals expected revenue minus expected loss. Expected revenue is what will be received in G-fees; expected loss includes G&A and credit losses. “Opportunity cost” is the G-fee actually charged minus the model fee—the fee that Fannie’s model would impose to guarantee a mortgage of the same quality in order to earn a fair market return on capital.

<sup>130</sup> Fannie Mae, “Housing Goals Briefing for HUD,” April 11, 2007.

though half the year was already gone. One of the plans was forecast to result in opportunity costs of \$767.7 million, while the other two plans resulted in opportunity costs of \$817.1 million.<sup>131</sup> In a Forecast meeting on July 27, 2007, a “Plan to Meet Base Goals,” which probably meant the topline LMI goal including all subgoals, was placed at \$1.156 billion for 2007.<sup>132</sup>

Finally, in a December 21, 2007, letter to Brian Montgomery, Assistant Secretary of Housing, Fannie CEO Daniel Mudd asked that, in light of the financial and economic conditions then prevailing in the country—particularly the absence of a PMBS market and the increasing number of mortgage delinquencies and defaults—HUD’s AH goals for 2007 be declared “infeasible.” He noted that HUD also has an obligation to “consider the financial condition of the enterprise when determining the feasibility of goals.” Then he continued: “Fannie Mae submits that the company took all reasonable actions to meet the subgoals that were both financially prudent and likely to contribute to the achievement of the subgoals....*In 2006, Fannie Mae relaxed certain underwriting standards and purchased some higher risk mortgage loan products in an effort to meet the housing goals.* The company continued to purchase higher risk loans into 2007, and believes these efforts to acquire goals-rich loans are partially responsible for increasing credit losses.”<sup>133</sup> [emphasis supplied]

This statement confirms two facts that are critical on the question of why Fannie (and Freddie) acquired so many high risk loans in 2006 and earlier years: first, the companies were trying to meet the AH goals established by HUD and not because these loans were profitable. It also shows that the efforts of HUD and others—including the Commission majority in its report—to blame the managements of Fannie and Freddie for purchasing the loans that ultimately dragged them to insolvency is misplaced.

Finally, in a July 2009 report, the Federal Housing Finance Agency (FHFA, the GSEs’ new regulator, replacing OFHEO), noted that Fannie and Freddie both followed the practice of cross-subsidizing the subprime and Alt-A loans that they acquired:

Although Fannie Mae and Freddie Mac consider model-derived estimates of cost in determining the single-family guarantee fees they charge, their pricing often subsidizes their guarantees on some mortgages using higher returns they expect to earn on guarantees of other loans. In both 2007 and 2008, cross-subsidization in single-family guarantee fees charged by the Enterprises was evident across product types, credit score categories, and LTV ratio categories. In each case, there were cross-subsidies from mortgages that posed lower credit risk on average to loans that posed higher credit risk. The greatest estimated subsidies generally went to the highest-risk mortgages.<sup>134</sup>

The higher risk mortgages were the ones most needed by Fannie and Freddie to meet the AH goals. Needless to say, there is no need to cross-subsidize the G-fees of loans that are acquired because they are profitable.

Accordingly, both market share and profitability must be excluded as reasons that Fannie (and Freddie) acquired subprime and Alt-A loans between 2004 and

<sup>131</sup> Fannie Mae, “Housing Goals Forecast,” Alignment Meeting, June 22, 2007.

<sup>132</sup> Fannie Mae, Forecast Meeting, July 27, 2007 slide 4.

<sup>133</sup> Fannie Mae letter, Daniel Mudd to Asst. Secretary Brian Montgomery, December 21, 2007, p.6.

<sup>134</sup> FHFA, Fannie Mae and Freddie Mac Single Family Guarantee Fees in 2007 and 2008, p.33.

2007. The only remaining motive—and the valid one—was the effect of the AH goals imposed by HUD.

In 2008, after its takeover by the government, Fannie Mae finally published a credit supplement to its 2008 10-K, which contained an accounting of its subprime and Alt-A credit exposure. The table is reproduced below in order to provide a picture of the kinds of loans Fannie acquired in order to meet the AH goals. Loans may appear in more than one category, so the table does not reveal Fannie's total net exposure to each category, nor does it include Fannie's holdings of non-Fannie MBS or PMBS, for which it did not have loan level data. Note the reference to \$8.4 billion in the column for subprime loans. As noted earlier, Fannie classified as subprime only those loans that it purchased from subprime lenders. However, Fannie included loans with FICO scores of less than 660 in the table, indicating that they are not prime loans but without classifying them formally as subprime.

In a later credit supplement, filed in August 2009, Fannie eliminated the duplications among the loans in Table 12, and reported that as of June 30, 2009, it held the credit risk on NTMs with a total unpaid principal amount of \$2.7 trillion. The average loan amount was \$151,000, for a total of 5.73 million NTM loans.<sup>135</sup> This number does not include Fannie's holdings of subprime PMBS as to which it does not have loan level data.

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<sup>135</sup> [http://www.fanniemae.com/ir/pdf/sec/2009/q2credit\\_summary.pdf](http://www.fanniemae.com/ir/pdf/sec/2009/q2credit_summary.pdf), p.5.

Table 12. Fannie Mae Credit Profile by Key Product Features: Credit Characteristics of Single-Family Conventional Mortgage Credit Book of Business<sup>136</sup>

As of Dec 31, 2008	Overall Book	Negative-Amortizing Loans	Interest-Only Loans	Loans with FICO <620	Loans with FICO ≥ 620 and < 660	Loans with Original LTV Ratio >90%	Loans with FICO < 620 and Original LTV Ratio > 90%	Alt-A Loans <sup>(1)</sup>	Subprime Loans <sup>(1)</sup>	Jumbo Conforming Loans <sup>(1)</sup>
Unpaid Principal Balance (billions)*	\$2,730.9	\$17.3	\$212.9	\$ 123.0	\$ 256.1	\$ 278.3	\$ 27.3	\$ 292.4	\$ 8.4	\$ 19.9
Share of Single-Family Conventional Credit Book <sup>(1)</sup>	100.0%	0.6%	7.8%	4.5%	9.4%	10.2%	1.0%	10.1%	0.3%	0.7%
Average Unpaid Principal Balance	\$148,824	\$142,502	\$241,943	\$126,604	\$141,746	\$141,569	\$119,607	\$170,250	\$150,445	\$579,528
Serious Delinquency Rate	2.42%	5.61%	8.42%	9.03%	5.64%	6.33%	15.97%	7.03%	14.29%	0.12%
Origination Years 2005-2007	46.5%	62.0%	80.9%	56.3%	55.0%	58.8%	69.8%	72.7%	80.7%	1.4%
Weighted Average Original Loan-to-value Ratio	71.8%	71.1%	75.4%	76.7%	77.5%	97.3%	98.1%	72.6%	77.2%	68.4%
Original Loan-to-Value Ratio >90	10.2%	0.3%	9.1%	22.2%	21.1%	100.0%	100.0%	5.3%	6.8%	0.0%
Weighted Average Mark-to-Market Loan-to-Value Ratio	70.0%	87.2%	93.4%	76.3%	77.5%	97.6%	97.7%	81.0%	87.3%	69.9%
Mark-to-Mark Loan-to-Value Ratio >100	11.6%	42.8%	35.6%	15.9%	17.6%	38.2%	38.5%	23.2%	24.5%	0.4%
Weighted Average FICO	724	698	725	588	641	694	592	719	623	762
FICO < 620	4.5%	10.7%	1.3%	100.0%	0.0%	9.8%	100.0%	0.7%	47.6%	0.6%
FICO ≥ 620 and <660	9.4%	10.1%	7.7%	0.0%	100.0%	19.4%	0.0%	8.7%	27.8%	0.2%
Fixed-rate	90.0%	0.1%	39.6%	93.6%	92.3%	94.2%	96.5%	72.3%	73.1%	95.2%
Principal Residence	89.7%	70.4%	84.9%	96.8%	94.4%	97.1%	99.4%	77.8%	96.6%	98.2%
Condo/Co-op	9.4%	13.5%	16.2%	4.9%	6.6%	9.8%	5.9%	10.8%	4.7%	11.5%
Credit Enhanced <sup>(2)</sup>	20.9%	76.3%	35.0%	35.0%	36.3%	92.5%	94.1%	38.6%	63.4%	11.3%
% of 2007 Credit Losses <sup>(3)</sup>	100.0%	0.9%	15.0%	18.8%	21.9%	17.4%	6.4%	29.2%	1.0%	0.0%
% of 2008 Q3 Credit Losses <sup>(3)</sup>	100.0%	3.8%	36.2%	11.3%	16.8%	21.5%	5.4%	47.6%	2.1%	0.2%
% of 2008 Q4 Credit Losses <sup>(3)</sup>	100.0%	2.2%	33.1%	11.5%	17.2%	23.1%	5.2%	43.2%	2.0%	1.1%
% of 2008 Credit Losses <sup>(3)</sup>	100.0%	2.9%	34.2%	11.8%	17.4%	21.3%	5.4%	45.6%	2.0%	0.4%

<sup>(1)</sup> Alt-A, Subprime, and Jumbo Conforming Loans are calculated as a percentage of the single-family mortgage credit book of business, which includes government loans. Government loans are guaranteed or insured by the U.S. Government or its agencies, such as the Department of Veterans Affairs (VA), the Federal Housing Administration (FHA) or the Rural Housing and Community Facilities Program and the Department of Agriculture.

<sup>(2)</sup> Unpaid principal balance of all loans with credit enhancement as a percentage of unpaid principal balance of single-family conventional mortgage credit book of business. Includes primary mortgage insurance, pool insurance, lender recourse and other credit enhancement.

<sup>(3)</sup> Expressed as a percentage of credit losses for the single-family mortgage credit book of business. For information on total credit losses, refer to Fannie Mae's 2008 Form 10-K.

**Freddie Mac.** As noted earlier, in its limited review of the role of the GSEs in the financial crisis, the Commission spent most of its time and staff resources on a review of Fannie Mae, and for that reason this dissent focuses primarily on documents received from Fannie. However, things were not substantially different at Freddie Mac. In a document dated June 4, 2009, entitled “Cost of Freddie Mac’s Affordable Housing Mission,” a report to the Business Risk Committee, of the Board of Directors,<sup>136</sup> several points were made that show the experience of Freddie was no different than Fannie’s:

- Our housing goals compliance required little direct subsidy prior to 2003, but since then subsidies have averaged \$200 million per year.
- Higher credit risk mortgages disproportionately tend to be goal-qualifying. Targeted affordable lending generally requires ‘accepting’ substantially higher credit risk.
- We charge more for targeted (and baseline) affordable single-family loans, but not enough to fully offset their higher incremental risk.
- Goal-qualifying single-family loans accounted for the disproportionate share of our 2008 realized losses that was predicted by our models. (slide 2)
- In 2007 Freddie Mac failed two subgoals, but compliance was subsequently deemed infeasible by the regulator due to economic conditions. In 2008 Freddie Mac failed six goals and subgoals, five of which were deemed infeasible. No enforcement action was taken regarding the sixth missed goal because of our financial condition. (slide 3)
- Goal-qualifying loans tend to be higher risk. Lower household income correlates with various risk factors such as less wealth, less employment stability, higher loan-to-value ratios, or lower credit scores. (slide 7)
- Targeted affordable loans have much higher expected default probabilities... Over one-half of targeted affordable loans have higher expected default probabilities than the highest 5% of non-goal-qualifying loans. (Slide 8)

The use of the affordable housing goals to force a reduction in the GSEs’ underwriting standards was a major policy error committed by HUD in two successive administrations, and must be recognized as such if we are ever to understand what caused the financial crisis. Ultimately, the AH goals extended the housing bubble, infused it with weak and high risk NTMs, caused the insolvency of Fannie and Freddie, and—together with other elements of U.S. housing policy—was the principal cause of the financial crisis itself.

When Congress enacted the Housing and Economic Recovery Act of 2008 (HERA), it transferred the responsibility for administering the affordable housing goals from HUD to FHFA. In 2010, FHFA modified and simplified the AH goals, and eliminated one of their most troubling elements. As Fannie had noted, if the AH goals exceed the number of goals-eligible borrowers in the market, they were being forced to allocate credit, taking it from the middle class and providing it to low-income borrowers. In effect, there was a conflict between their mission to advance affordable housing and their mission to maintain a liquid secondary mortgage

<sup>136</sup> Freddie Mac, “Cost of Freddie Mac’s Affordable Housing Mission,” Business Risk Committee, Board of Directors, June 4, 2009.

market for most mortgages in the U.S. The new FHFA rule does not require the GSEs to purchase more qualifying loans than the percentage of the total market that these loans constitute.<sup>137</sup>

This does not solve all the major problems with the AH goals. In the sense that the goals enable the government to direct where a private company extends credit, they are inherently a form of government credit allocation. More significantly, the competition among the GSEs, FHA and the banks that are required under the CRA to find and acquire the same kind of loans will continue to cause the same underpricing of risk on these loans that eventually brought about the mortgage meltdown and the financial crisis. This is discussed in the next section and the section on the CRA.

#### **4. COMPETITION BETWEEN THE GSEs AND FHA FOR SUBPRIME AND ALT-A MORTGAGES**

One of the important facts about HUD's management of the AH goals was that it placed Fannie and Freddie in direct competition with FHA, an agency within HUD. This was already noted in some of the Fannie documents cited above. Fannie treated this as a conflict of interest at HUD, but there is a strong case that this competition is exactly what HUD and Congress wanted. It is important to recall the context in which the GSE Act was enacted in 1992. In 1990, Congress had enacted the Federal Credit Reform Act.<sup>138</sup> One of its purposes was to capture in the government's budget the risks to the government associated with loan guarantees, and in effect it placed a loose budgetary limit on FHA guarantees. For those in Congress and at HUD who favored increased mortgage lending to low income borrowers and underserved communities, this consequence of the FCRA may have been troubling. What had previously been a free way to extend support to groups who were not otherwise eligible for conventional mortgages—which generally required a 20 percent downpayment and the indicia of willingness and ability to pay—now appeared to be potentially restricted. Requiring the GSEs to take up the mantle of affordable housing would have looked at the time like a solution, since Fannie and Freddie had unlimited access to funds in the private markets and were off-budget entities.

Looked at from this perspective, it would make sense for Congress and HUD to place the GSEs and FHA in competition, just as it made sense to put Fannie and Freddie in competition with one another for affordable loans. With all three entities competing for the same kinds of loans, and with HUD's control of both FHA's lending standards and the GSEs' affordable housing requirements, underwriting requirements would inevitably be reduced. HUD's explicit and frequently expressed interest in reducing mortgage underwriting standards, as a means of making mortgage credit available to low income borrowers, provides ample evidence of HUD's motives for creating this competition.

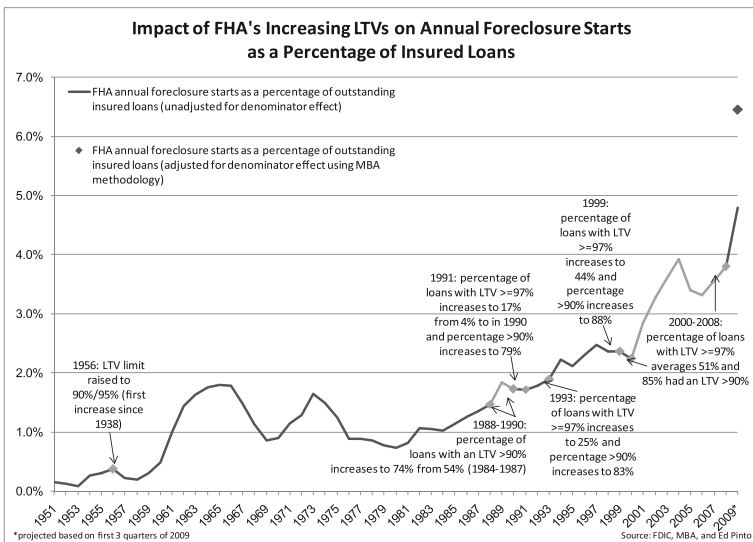
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<sup>137</sup> Federal Housing Finance Agency, 2010-2011 Enterprise Housing Goals; Enterprise Book-Entry Procedures; Final Rule, 12 CFR Parts 1249 and 1282, *Federal Register*, September 14, 2010, p.55892.

<sup>138</sup> Title V of the Congressional Budget Act of 1990. Under the FCRA, HUD must estimate the annual cost of FHA's credit subsidy for budget purposes. The credit subsidy is the net of its estimated receipts reduced by its estimated payments.

Established in 1934, now a part of HUD and administered by the Federal Housing Administrator (who is also the Assistant Secretary of Housing), FHA insures 100 percent of an eligible mortgage. It was established to provide financing to people who could not meet the standards for a bank-originated conventional loan. The loans it insured had a maximum LTV of 80 percent in 1934. This went to 95 percent in 1950, and 97 percent in 1961.<sup>139</sup> With its maximum LTV remaining at 97 percent, FHA maintained average FICO scores for its borrowers just below 660 from 1996 to 2006. During this period, the average FICO score for a conventional subprime borrower was somewhat lower.<sup>140</sup> Beginning in 1993, shortly after Fannie and Freddie were introduced as competitors, FHA began to increase its percentage of loans with low downpayments. This had the predictable effect on its delinquency rates, as shown in the figure below prepared by Edward Pinto with data from FHA, the FDIC, and the MBA:

Figure 6.



Despite its reductions in required downpayments, FHA's market share vis-a-vis the GSEs began to decline. According to GAO data, in 1996, FHA's market share among lower-income borrowers was 26 percent while the GSEs' share was 23.8 percent. By 2005, FHA's share was 9.8 percent, while the GSEs' share was 31.9 percent. It appears that early on Fannie Mae deliberately targeted FHA borrowers with its Community Homebuyer Program (CHBP). In a memorandum prepared in 1993, Fannie's Credit Policy group compared Fannie's then-proposed CHBP program to FHA's requirements under its 1-to-4 family loan program (Section 203(b)) and showed that most of Fannie's requirements were competitive or better.

<sup>139</sup> Kerry D. Vandell, "FHA Restructuring Proposals: Alternatives and Implications," *Fannie Mae Housing Policy Debate*, vol. 6, Issue 2, 1995, pp. 308-309

<sup>140</sup> GAO, "Federal Housing Administration: Decline in Agency's Market Share Was Associated with Product and Process Developments of Other Mortgage Market Participants," GAO-07-645, June 2007, pp. 42 and 44.

FHA also appears to have tried to lead the GSEs. In 1999—just before the AH goals for Fannie and Freddie were to be raised—FHA almost doubled its originations of loans with LTVs equal to or greater than 97 percent, going from 22.9 percent in 1998 to 43.84 percent in 1999.<sup>141</sup> It also offered additional concessions on underwriting standards in order to attract subprime business. The following is from a Quicken ad in January 2000 (emphasis in the original),<sup>142</sup> which is likely to have been based on an FHA program as it existed in 1999:

**Borrowers can purchase with a minimum down payment.** Without FHA insurance, many families can't afford the homes they want because down payments are a major roadblock. FHA down payments range from 1.25% to 3% of the sale price and are significantly lower than the minimum that many lenders require for conventional or sub-prime loans.

**With FHA loans, borrowers need as little as 3% of the "total funds" required.** In addition to the funds needed for the down payment, borrowers also have to pay closing costs, prepaid fees for insurance and interest, as well as escrow fees which include mortgage insurance, hazard insurance, and months worth of property taxes. A FHA-insured home loan can be structured so borrowers don't pay more than 3% of the total out-of-pocket funds, including the down payment.

**The combined total of out-of-pocket funds can be a gift or loan from family members.** FHA allows homebuyers to use gifts from family members and non-profit groups to cover their down payment and additional closing costs and fees. In fact, even a 100% gift or a personal loan from a relative is acceptable.

**FHA's credit requirements are flexible.** Compared to credit requirements established by many lenders for other types of home loans, FHA focuses only on a borrower's last 12-24 month credit history. In addition, there is no minimum FICO score - mortgage bankers look at each application on a case-by-case basis. It is also perfectly acceptable for people with NO established credit to receive a loan with this program.

**FHA permits borrowers to have a higher debt-to-income ratio than most insurers typically allow.** Conventional home loans allow borrowers to have 36% of their gross income attributed to their new monthly mortgage payment combined with existing debt. FHA program allows borrowers to carry 41%, and in some circumstances, even more.

It is important to remember that 1999 is the year that HUD was planning a big step-up in the AH goals for the GSEs—from 42 percent LMI to 50 percent, with even larger percentage increases in the special affordable category that would be most competitive with FHA. The last major increase in the percent of FHA's loans with LTVs equal to or greater than 97 percent had occurred in 1991, the year before the GSE Act imposed the AH goals on Fannie and Freddie, and in effect directed them to consider downpayments of 5 percent or less. In 1991, FHA's percentage of loans

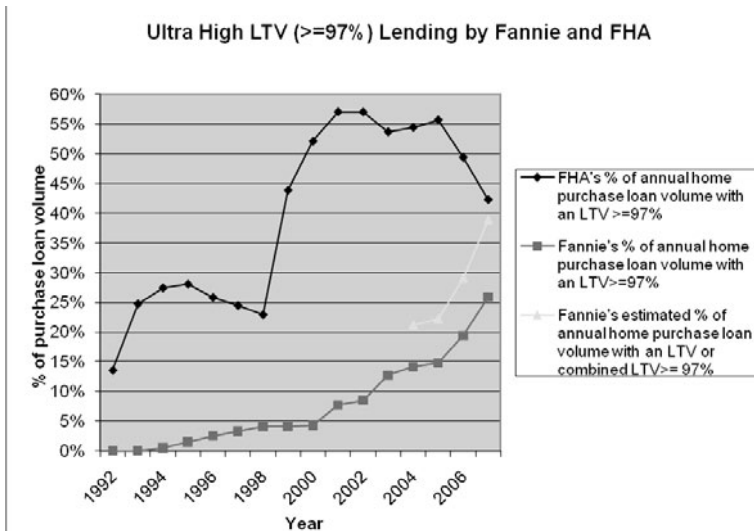
<sup>141</sup> Integrated Financial Engineering, "Actuarial Review of the Federal Housing Administration Mutual Mortgage Insurance Fund (Excluding HECMs) for Fiscal Year 2009," prepared for U.S. Department of Housing and Urban Development, November 6, 2009, p.42.

<sup>142</sup> Quicken press release, "Quicken Loans First To Offer FHA Home Mortgages Nationally On The Internet With HUD's approval, Intuit expands home ownership nationwide, offering consumers widest variety of home loan options"; January 20, 2000, [http://web.intuit.com/about\\_intuit/press\\_releases/2000/01-20.html](http://web.intuit.com/about_intuit/press_releases/2000/01-20.html).

equal to or greater than 97 percent rose suddenly from 4.4 percent to 17.1 percent.<sup>143</sup> Again, FHA, under the control of HUD, appears to be offering competition to the GSEs that would lead them to reduce their underwriting standards. Since FHA is a government agency, its actions cannot be explained by a profit motive. Instead, it seems clear that FHA reduced its lending standards as part of a HUD policy to lead Fannie and Freddie in the same direction.

The result of Fannie's competition with FHA in high LTV lending is shown in the following figure, which compares the respective shares of FHA and Fannie in the category of loans with LTVs equal to or greater than 97 percent, including Fannie loans with a combined LTV equal to or greater than 97 percent.

Figure 7.



Whether a conscious policy of HUD or not, competition between the GSEs and FHA ensued immediately after the GSEs were given their affordable housing mission in 1992. The fact that FHA, an agency controlled by HUD, substantially increased the LTVs it would accept in 1991 (just before the GSEs were given their affordable housing mission) and again in 1999 (just before the GSEs were required to increase their affordable housing efforts) is further evidence that HUD was coordinating these policies in the interest of creating competition between FHA and the GSEs. The effect was to drive down underwriting standards, which HUD had repeatedly described as its goal.

## 5. ENLISTING MORTGAGE BANKERS AND SUBPRIME LENDERS IN AFFORDABLE HOUSING

In 1994, HUD began a program to enlist other members of the mortgage financing community in the effort to reduce underwriting standards. In that year,

<sup>143</sup> GAO, "Federal Housing Administration: Decline in Agency's Market Share Was Associated with Product and Process Developments of Other Mortgage Market Participants," GAO-07-645, June 2007, pp. 42 and 44.

the Mortgage Bankers Association (MBA)—a group of mortgage financing firms not otherwise regulated by the federal government and not subject to HUD’s legal authority—agreed to join a HUD program called the “Best Practices Initiative.”<sup>144</sup> The circumstances surrounding this agreement are somewhat obscure, but at least one contemporary account suggests that the MBA signed up to avoid an effort by HUD to cover mortgage bankers under the Community Reinvestment Act (CRA), which up to that point had only applied only to government-insured banks.

In mid-September [1994], the Mortgage Bankers Association of America—whose membership includes many bank-owned mortgage companies, signed a three-year master best-practices agreement with HUD. The agreement consisted of two parts: MBA’s agreement to work on fair-lending issues in consultation with HUD and a model best-practices agreement that individual mortgage banks could use to devise their own agreements with HUD. The first such agreement, signed by Countrywide Funding Corp., the nation’s largest mortgage bank, is summarized [below]. Many have seen the MBA agreement as a preemptive strike against congressional murmurings that mortgage banks should be pulled under the umbrella of the CRA.<sup>145</sup>

As the first member of the MBA to sign, Countrywide probably realized that there were political advantages in being seen as assisting low-income mortgage lending, and it became one of a relatively small group of subprime lenders who were to prosper enormously as Fannie and Freddie began to look for sources of the subprime loans that would enable them to meet the AH goals. By 1998, there were 117 MBA signatories to HUD’s Best Practices Initiative, which was described as follows:

The companies and associations that sign “Best Practices” Agreements not only commit to meeting the responsibilities under the Fair Housing Act, but also make a concerted effort to exceed those requirements. In general, the signatories agree to administer a review process for loan applications to ensure that all applicants have every opportunity to qualify for a mortgage. They also assent to making loans of any size so that all borrowers may be served and to provide information on all loan programs for which an applicant qualifies.... The results of the initiative are promising. As lenders discover new, untapped markets, their minority and low-income loans applications and originations have risen. Consequently, the homeownership rate for low-income and minority groups has increased throughout the nation.<sup>146</sup>

Countrywide was by far the most important participant in the HUD program. Under that program, it made a series of multi-billion dollar commitments, culminating in a “trillion dollar commitment” to lend to minority and low income

<sup>144</sup> HUD’s Best Practices Initiative was described this way by HUD: “Since 1994, HUD has signed Fair Lending Best Practices (FLBP) Agreements with lenders across the nation that are individually tailored to public-private partnerships that are considered on the leading edge. The Agreements not only offer an opportunity to increase low-income and minority lending but they incorporate fair housing and equal opportunity principles into mortgage lending standards. These banks and mortgage lenders, as represented by Countrywide Home Loans, Inc., serve as industry leaders in their communities by demonstrating a commitment to affirmatively further fair lending.” Available at: <http://www.hud.gov/local/hi/working/nlwfa2001.cfm>.

<sup>145</sup> Steve Cocheo, “Fair-Lending Pressure Builds,” *ABA Banking Journal*, vol. 86, 1994, <http://www.questia.com/googleScholar.qst?docId=5001707340>.

<sup>146</sup> HUD, “Building Communities and New Markets for the 21st Century,” FY 1998 Report, p.75, <http://www.huduser.org/publications/polleg/98con/NewMarkets.pdf>.

families, which in part it fulfilled by selling subprime and other NTMs to Fannie and Freddie. In a 2000 report, the Fannie Mae Foundation noted: “FHA loans constituted the largest share of Countrywide’s activity, until Fannie Mae and Freddie Mac began accepting loans with higher LTVs and greater underwriting flexibilities.”<sup>147</sup> In late 2007, a few months before its rescue by Bank of America, Countrywide reported that it had made \$789 billion in mortgage loans toward its trillion dollar commitment.<sup>148</sup>

## 6. THE COMMUNITY REINVESTMENT ACT

The most controversial element of the vast increase in NTMs between 1993 and 2008 was the role of the CRA.<sup>149</sup> The act, which is applicable only to federally insured depository institutions, was originally adopted in 1977. Its purpose in part was to “require each appropriate Federal financial supervisory agency to use its authority when examining financial institutions to encourage such institutions to help meet the credit needs of the local communities in which they are chartered consistent with the safe and sound operations of such institutions.” The enforcement provisions of the Act authorized the bank regulators to withhold approvals for such transactions as mergers and acquisitions and branch network expansion if the applying bank did not have a satisfactory CRA rating.

CRA did not have a substantial effect on subprime lending in the years after its enactment until the regulations under the act were tightened in 1995. The 1995 regulations required insured banks to acquire or make “flexible and innovative” mortgages that they would not otherwise have made. In this sense, the CRA and Fannie and Freddie’s AH goals are cut from the same cloth.

There were two very distinct applications of the CRA. The first, and the one with the broadest applicability, is a requirement that all insured banks make CRA loans in their respective assessment areas. When the Act is defended, it is almost always discussed in terms of this category—loans in bank assessment areas. Banks (usually privately) complain that they are required by the regulators to make imprudent loans to comply with CRA. One example is the following statement by a local community bank in a report to its shareholders:

Under the umbrella of the Community Reinvestment Act (CRA), a tremendous amount of pressure was put on banks by the regulatory authorities to make loans, especially mortgage loans, to low income borrowers and neighborhoods. The regulators were very heavy handed regarding this issue. I will not dwell on it here but they required [redacted name] to change its mortgage lending practices to meet certain CRA goals, even though we argued the changes were risky and imprudent.<sup>150</sup>

On the other hand, the regulators defend the act and their actions under it, and particularly any claim that the CRA had a role in the financial crisis. The most frequently cited defense is a speech by former Fed Governor Randall Kroszner on

<sup>147</sup> Fannie Mae Foundation, “Making New Markets: Case Study of Countrywide Home Loans,” 2000, [http://content.knowledgeplex.org/kp2/programs/pdf/rep\\_newmortmks\\_countrywide.pdf](http://content.knowledgeplex.org/kp2/programs/pdf/rep_newmortmks_countrywide.pdf).

<sup>148</sup> “Questions and Answers from Countrywide about Lending,” December 11, 2007, available at <http://www.realtown.com/articles/article/print/id/768>.

<sup>149</sup> 12 U.S.C. 2901.

<sup>150</sup> Original letter in author’s files.

December 3, 2008,<sup>151</sup> in which he said in pertinent part:

Only 6 percent of all the *higher-priced loans* [those that were considered CRA loans because they bore high interest rates associated with their riskier character] were extended by *CRA-covered lenders to lower-income borrowers or neighborhoods in their assessment areas*, the local geographies that are the primary focus for CRA evaluation purposes. This result undermines the assertion by critics of the potential for a substantial role for the CRA in the subprime crisis. [emphasis supplied]

There are two points in this statement that require elaboration. First, it assumes that all CRA loans are high-priced loans. This is incorrect. Many banks, in order to be sure of obtaining the necessary number of loans to attain a satisfactory CRA rating, subsidized the loans by making them at lower interest rates than their risk characteristics would warrant. This is true, in part, because CRA loans are generally loans to low income individuals; as such, they are more likely than loans to middle income borrowers to be subprime and Alt-A loans and thus sought after by FHA, Fannie and Freddie and subprime lenders such as Countrywide; this competition is another reason why their rates are likely to be lower than their risk characteristics. Second, while bank lending under CRA in their assessment areas has probably not had a major effect on the overall presence of subprime loans in the U.S. financial system, it is not the element about CRA that raises the concerns about how CRA operated to increase the presence of NTMs in the housing bubble and in the U.S. financial system generally. There is another route through which CRA's role in the financial crisis likely to be considerably more significant.

In 1994, the Riegle-Neal Interstate Banking and Branching Efficiency Act for the first time allowed banks to merge across state lines under federal law (as distinct from interstate compacts). Under these circumstances, the enforcement provisions of the CRA, which required regulators to withhold approvals of applications for banks that did not have satisfactory CRA ratings, became particularly relevant for large banks that applied to federal bank regulators for merger approvals. In a 2007 speech, Fed Chairman Ben Bernanke stated that after the enactment of the Riegle-Neal legislation, "As public scrutiny of bank merger and acquisition activity escalated, advocacy groups increasingly used the public comment process to protest bank applications on CRA grounds. In instances of highly contested applications, the Federal Reserve Board and other agencies held public meetings to allow the public and the applicants to comment on the lending records of the banks in question. In response to these new pressures, banks began to devote more resources to their CRA programs."<sup>152</sup> This modest description, although accurate as far as it goes, does not fully describe the effect of the law and the application process on bank lending practices.

In 2007, the umbrella organization for many low-income or community "advocacy groups," the National Community Reinvestment Coalition, published a report entitled "CRA Commitments" which recounted the substantial success of its members in using the leverage provided by the bank application process to obtain trillions of dollars in CRA lending commitments from banks that had applied to

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<sup>151</sup> Randall Kroszner, Speech at the Confronting Concentrated Poverty Forum, December 3, 2008.

<sup>152</sup> Ben S. Bernanke, "The Community Reinvestment Act: Its Evolution and New Challenges," March 30, 2007, p2.

federal regulators for merger approvals. The opening section of the report states (bolded language in the original):<sup>153</sup>

**Since the passage of CRA in 1977, lenders and community organizations have signed over 446 CRA agreements totaling more than \$4.5 trillion in reinvestment dollars flowing to minority and lower income neighborhoods.**

Lenders and community groups will often sign these agreements when a lender has submitted an application to merge with another institution or expand its services. Lenders must seek the approval of federal regulators for their plans to merge or change their services. The four federal financial institution regulatory agencies will scrutinize the CRA records of lenders and will assess the likely future community reinvestment performance of lenders. *The application process, therefore, provides an incentive for lenders to sign CRA agreements with community groups that will improve their CRA performance. Recognizing the important role of collaboration between lenders and community groups, the federal agencies have established mechanisms in their application procedures that encourage dialogue and cooperation among the parties in preserving and strengthening community reinvestment.* [emphasis supplied]

A footnote to this statement reports:

The Federal Reserve Board will grant an extension of the public comment period during its merger application process upon a joint request by a bank and community group. In its commentary to Regulation Y, the Board indicates that this procedure was added to facilitate discussions between banks and community groups regarding programs that help serve the convenience and needs of the community. In its Corporate Manual, the Office of the Comptroller of the Currency states that it will not offer the expedited application process to a lender that does not intend to honor a CRA agreement made by the institution that it is acquiring.

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<sup>153</sup> See Note 12 *supra*.

In its report, the NCRC listed all 446 commitments and includes the following summary list of year-by-year commitments:

Table 13.

Year	Annual Dollars (\$ millions)	Total Dollars (\$ millions)
2007	12,500	4,566,480
2006	258,000	4,553,980
2005	100,276	4,298,980
2004	1,631,140	4,195,704
2003	711,669	2,564,564
2002	152,859	1,852,895
2001	414,184	1,700,036
2000	13,681	1,285,852
1999	103,036	1,272,171
1998	812,160	1,169,135
1997	221,345	356,975
1996	49,678	135,630
1995	26,590	85,952
1994	6,128	59,362
1993	10,716	53,234
1992	33,708	42,518
1991	2,443	8,811
1990	1,614	6,378
1989	2,260	4,764
1988	1,248	2,504
1987	357	1,256
1986	516	899
1985	73	382
1984	219	309
1983	1	90
1982	6	89
1981	5	83
1980	13	78
1979	15	65
1978	0	50
1977	50	50

The size of these commitments, which far outstrip the CRA loans made in assessment areas, suggests the potential significance of the CRA as a cause of the financial crisis. It is noteworthy that the Commission majority was not willing even to consider the significance of the NCRC's numbers. In connection with its only hearing on the housing issue, and before any research had been done on the NCRC statements, the Commission published a report absolving CRA of any responsibility for the financial crisis.<sup>154</sup>

<sup>154</sup> FCIC, "The Community Reinvestment Act and the Mortgage Crisis." *Preliminary Staff Report*, [http://www.fcic.gov/reports/pdfs/2010-0407-Preliminary\\_Staff\\_Report\\_-\\_CRA\\_and\\_the\\_Mortgage\\_Crisis.pdf](http://www.fcic.gov/reports/pdfs/2010-0407-Preliminary_Staff_Report_-_CRA_and_the_Mortgage_Crisis.pdf).

To understand CRA's role in the financial crisis, the relevant statistic is the \$4.5 trillion in bank CRA lending commitments that the NCRC cited in its 2007 report. (This document and others that are relevant to this discussion were removed from the NCRC website, [www.ncrc.org](http://www.ncrc.org), after they received publicity but can still be found on the web<sup>155</sup>). One important question is whether the bank regulators cooperated with community groups by withholding approvals of applications for mergers and acquisitions until an agreement or commitment for CRA lending satisfactory to the community groups had been arranged. It is not difficult to imagine that the regulators did not want the severe criticism from Congress that would have followed their failure to assist community groups in reaching agreements with and getting commitments from banks that had applied for these approvals. In statements in connection with mergers it has approved the Fed has said that commitments by the bank participants about future CRA lending have no influence on the approval process. A Fed official also told the Commission's staff that the Fed did not consider these commitments in connection with merger applications. The Commission did not attempt to verify this statement, but accepted it at face value from a Fed staff official. Nevertheless, there remains no explanation for why banks have been making these enormous commitments in connection with mergers, but not otherwise.

The largest of the commitments, in terms of dollars, were made by four banks or their predecessors—Bank of America, JPMorgan Chase, Citibank, and Wells Fargo—in connection with mergers or acquisitions as shown in Table 14 below.

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<sup>155</sup> [http://www.community-wealth.org/\\_pdfs/articles-publications/cdfs/report-silver-brown.pdf](http://www.community-wealth.org/_pdfs/articles-publications/cdfs/report-silver-brown.pdf).

Table 14. Announced CRA Commitments in Connection with a Merger or Acquisition by Four Largest Banks and Their Predecessors

Final bank	Acquired or merged bank/entity with a corresponding announcement of a CRA commitment	CRA commitment (year announced and dollar amount)
Wells Fargo	First Union acquired by Wachovia	2001 (\$35 b.)
	SouthTrust acquired by Wachovia	2004 (\$75 b.)
JPMorgan Chase	Chemical merges with Manufacturers Hanover	1991 (\$72.5 m.)
	NBD acquired by First Chicago	1995 (\$2 b.)
	Home Savings acquired by Washington Mutual	1998 (\$120 b.)
	Dime acquired by Washington Mutual	2001 (\$375 b.)
	Bank One acquired by JPMorgan Chase	2004 (\$800 b.)
Bank of America	Continental acquired by Bank of America	1994 (\$1 b.)
	Bank of America (acquired by NationsBank, which kept the Bank of America name).	1998 (\$350 b.)
	Bank of Boston acquired by Fleet	1999 (\$14.6 b.)
	Fleet	2004 (\$750 b.)
Citibank	Travelers	1998 (\$115 b.) 1998 (\$115 b.)
	Cal Fed	2002 (\$120 b.)

Compiled by Edward Pinto from the NCRC 2007 report CRA Commitments, found at <http://www.community-wealth.org/pdfs/articles-publications/cdfs/report-silver-brown.pdf>, NCRC testimony regarding Bank of America's \$1.5 trillion in CRA agreements and commitments in conjunction with its 2008 acquisition of Countrywide found at [http://www.house.gov/apps/list/hearing/financialsvcs\\_dem/taylor\\_testimony - 4.15.10.pdf](http://www.house.gov/apps/list/hearing/financialsvcs_dem/taylor_testimony - 4.15.10.pdf).

Given the enormous size of the commitments reported by NCRC, the key questions are: (i) how many of these commitments were actually fulfilled by the banks that made them, (ii) where are these loans today, and (iii) how are these loans performing?

Currently, in light of the severely limited Commission investigation of this issue, there are only partial answers to these questions.

*Were the loans actually made?* The banks that made these commitments apparently came under pressure from community groups to fulfill them. In an interview by Brad Bondi of the Commission's staff, Josh Silver of the NCRC noted that community groups did follow up these commitments.

Bondi: Who follows up...to make sure that these banks honor their voluntary agreements or their unilateral commitments?

Silver: Actually part of some of these CRA agreements was meeting with the bank two or three times a year and actually going through, 'Here's what you've promised. Here's what you've loaned.' That would happen on a one-on-one basis with the banks and the community organizations.<sup>156</sup>

Nevertheless, when the Commission staff asked the four largest banks (Bank of America, Citibank, JPMorgan Chase and Wells Fargo) for data on whether the merger-related commitments were fulfilled and in what amount, most of the banks supplied only limited information. They contended that they did not have the information or that it was too difficult to get, and the information they supplied was sketchy at best.

In some cases, the information supplied to the Commission by the banks, in letters from their counsel, reflected fewer loans than they had claimed in press releases to have made in fulfillment of their commitments. The press release amounts were JPMorgan Chase (including WaMu, \$835 billion), Citi (\$274 billion), and Bank of America (\$229 billion), totaled \$1.3 trillion in CRA loans between 2001 and 2008, and had been presented to the Commission by Edward Pinto in the Triggers memo.<sup>157</sup> No Wells Fargo press releases could be found, but in response to questions from the Commission Wells provided a great deal of data in spread sheets that could not be interpreted or understood without further discussion with representatives of the bank. However, the Commission terminated the investigation of the merger-related CRA commitments in August 2010, before the necessary data could be gathered. For this reason, the Wells data could not be unpacked, interpreted in discussion with Wells officials, and analyzed.

After I protested the limited efforts of the Commission on this issue in October 2010, the Commission made a belated attempt to restart the investigation of the merger-related CRA commitments in November. However, only one bank had responded by the deadline for submission of this dissenting statement. As with the bank responses, additional work was required to understand the information received, and there was no time, and no Commission staff, to follow up.

As a result of the dilatory nature of the Commission's investigation, it was impossible to determine how many loans were actually made under their merger-related CRA commitments by the four banks and their predecessors. This in turn impeded any effort to find out where these loans are today and hence their delinquency rates. It appears that in many instances the Commission management constrained the staff in their investigation into CRA by limiting the number of document requests and interviews and by preventing the staff from following up with the institutions that failed to respond adequately to requests for data.

*Where are these mortgages today?* Where these loans are today must necessarily be a matter of speculation. Some of the banks told the FCIC staff that they do not distinguish between CRA loans and other loans, and so could not provide this information. Under the GSE Act, Fannie and Freddie had an affirmative obligation to help banks to meet their CRA obligations, and they undoubtedly served as a buyer for the loans made by the largest banks and their predecessors pursuant to

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<sup>156</sup> Interview of Josh Silver of the National Community Reinvestment Coalition, June 16, 2010.

<sup>157</sup> Edward Pinto, Exhibit 2 to the Triggers memo, dated April 21, 2010, <http://www.aei.org/docLib/Pinto-Sizing-Total-Federal-Contributions.pdf>.

the commitments. In a press release in 2003, for example, Fannie reported that it had acquired \$394 billion in CRA loans, about \$201 billion of which occurred in 2002.<sup>158</sup> This amounted to approximately 50 percent of Fannie's AH acquisitions for that year.

In the Triggers memo, based on his research, Pinto estimated that Fannie and Freddie purchased about 50 percent of all CRA loans over the period from 2001 to 2007 and that, of the balance, about 10-15 percent were insured by FHA, 10-15 percent were sold to Wall Street, and the rest remain on the books of the banks that originated the loans.<sup>159</sup> Many of these loans are likely unsaleable in the secondary market because they were made at rates that did not compensate for risk or lacked mortgage insurance—again, the competition for these loans among the GSEs, FHA and the banks operating under CRA requirements inevitably raised their prices and thus underpriced their risk. To sell these loans, the banks holding them would have to take losses, which many are unwilling to do.

*What are the delinquency rates?* Under the Home Mortgage Disclosure Act (HMDA), banks are required to provide data to the Fed from which the delinquency rates on loans that have high interest rates can be calculated. It was assumed that these were the loans that might bear watching as potentially predatory. When Fannie and Freddie, FHA, Countrywide and other subprime lenders and banks under CRA are all seeking the same loans—roughly speaking, loans to borrowers at or below the AMI—it is likely that these loans when actually made will bear concessionary interest rates so that their rate spread is not reportable under HMDA. It's just supply and demand. Accordingly, the banks that made CRA loans pursuant to their commitments have no obligation to record and report their delinquency rates, and as noted above several of the large banks that made major commitments recorded by the NCRC told FCIC staff that they don't keep records about the performance of CRA loans apart from other mortgages.

However, in the past few years, Bank of America has been reporting the performance of CRA loans in its annual report to the SEC on form 10-K. For example, the bank's 10-K for 2009 contained the following statement: "At December 31, 2009, our CRA portfolio comprised six percent of the total residential mortgage balances, but comprised 17 percent of nonperforming residential mortgage loans. This portfolio also comprised 20 percent of residential net charge-offs during 2009. While approximately 32 percent of our residential mortgage portfolio carries risk mitigation protection, only a small portion of our CRA portfolio is covered by this protection."<sup>160</sup> This could be an approximation for the delinquency rate on the merger-related CRA loans that the four banks made in fulfilling their commitments, but without definitive information on the number of loans made and the banks' current holdings it is impossible to make this estimate with any confidence. In a letter from its counsel, another bank reported serious delinquency rates on the loans made pursuant to its merger-related commitments ranging from 5 percent to 50 percent, with the largest sample showing a 25 percent delinquency rate.

<sup>158</sup> "Fannie Mae Passes Halfway Point in \$2 Trillion American Dream Commitment; Leads Market in Bringing Housing Boom to Underserved Families, Communities" [http://findarticles.com/p/articles/mi\\_m0EIN/is\\_2003\\_March\\_18/ai\\_98885990/pg\\_3/?tag=content;col1](http://findarticles.com/p/articles/mi_m0EIN/is_2003_March_18/ai_98885990/pg_3/?tag=content;col1).

<sup>159</sup> Triggers memo, p.47.

<sup>160</sup> Bank of America, 2009 10-K, p.57.

Further investigation of this issue is necessary, including on the role of the bank regulators, in order to determine what effect, if any, the merger-related commitments to make CRA loans might have had on the number of NTMs in the U.S. financial system before the financial crisis.

## IV. CONCLUSION

This dissenting statement argues that the U.S. government's housing policies were the major contributor to the financial crisis of 2008. These policies fostered the development of a massive housing bubble between 1997 and 2007 and the creation of 27 million subprime and Alt-A loans, many of which were ready to default as soon as the housing bubble began to deflate. The losses associated with these weak and high risk loans caused either the real or apparent weakness of the major financial institutions around the world that held these mortgages—or PMBS backed by these mortgages—as investments or as sources of liquidity. Deregulation, lack of regulation, predatory lending or the other factors that were cited in the report of the FCIC's majority were not determinative factors.

The policy implications of this conclusion are significant. If the crisis could have been prevented simply by eliminating or changing the government policies and programs that were primarily responsible for the financial crisis, then there was no need for the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, adopted by Congress in July 2010 and often cited as one of the important achievements of the Obama administration and the 111<sup>th</sup> Congress.

The stringent regulation that the Dodd-Frank Act imposes on the U.S. economy will almost certainly have a major adverse effect on economic growth and job creation in the United States during the balance of this decade. If this was the price that had to be paid for preventing another financial crisis then perhaps it's one that will have to be borne. But if it was not necessary to prevent another crisis—and it would not have been necessary if the crisis was caused by actions of the government itself—then the Dodd-Frank Act seriously overreached.

Finally, if the principal cause of the financial crisis was ultimately the government's involvement in the housing finance system, housing finance policy in the future should be adjusted accordingly.



# APPENDIX 1

Hypothetical Losses in Two Scenarios (No feedback)

**Scenario 1 is what was known to market professional during the 2nd half of 2007; Scenario 2 is the actual condition of the mortgage market. Second mortgage/home equity loan losses are excluded.**

**Assumptions used:**

Number of mortgages= 53 million;

Total value of first mortgages=\$9.155 trillion;

Losses on Prime=1.2%% (assumes 3% foreclosure rate & 40% severity);

Losses on Subprime/Alt-A=12% (assumes 30% foreclosure rate & 40% severity);

Average size of mortgage: \$173,000

**Losses in Scenario 1**

Number of mortgages: 53 million

Prime=40 million

Subprime/Alt-A = 13 million (7.7. PMBS million + FHA/VA=5.2 million)

Aggregate Value:

Prime =\$6.9 trillion (\$173,000 X 40 million);

Subprime/Alt-A=\$2.25 trillion (\$173,000 X 13 million)

Losses on foreclosures: **\$353 billion** (\$6.9 trillion prime X 1.2%=\$83 billion + \$2.25 trillion subprime/Alt-A X 12%=\$270 billion

**Overall loss percentage: 3.5%**

**Losses in Scenario 2**

Number of mortgages: 53 million

Prime: 27 million

Subprime/Alt-A:

Original subprime/Alt-A: 13 million

Other subprime/Alt-A: 13 million (10.5 F&F (excludes 1.25 million already counted in PMBS) + 2.5 million other loans not securitized (mostly held by the large banks))

Aggregate Value:

Prime= \$4.7 trillion (\$173,000 X 27 million);

Subprime/Alt-A = \$4.5 trillion (\$173,000 X 26 million)

Losses on foreclosures: **\$596 billion** (\$4.7 trillion X 1.2%=\$56 billion + \$4.5 trillion X 12%=\$540 billion)

**Overall loss percentage: 6.5%, for an increase of 86%**

Note: No allowance for feedback effect—that is, fall in home prices as a result of larger number of foreclosures in Scenario 2. With feedback effect, losses would

be even larger in Scenario 2 because a larger number of foreclosures would drive down housing prices further and faster. This feedback effect will likely cause total first mortgage losses to approach \$1 trillion or 10% of outstanding first mortgages.

# APPENDIX 2

## Hypothetical Losses in Two Scenarios (with feedback)

**Scenario 1** is what was known to market professional during the 2nd half of 2007; **Scenario 2** is the actual condition of the mortgage market. Second mortgage/home equity loan losses are excluded.

### Assumptions used:

Number of mortgages= 53 million;

Total value of first mortgages=\$9.155 trillion;

### Scenario 1:

Losses on prime=1.2%% (assumes 3% foreclosure rate & 40% severity);

Losses on self-denominated subprime & Alt-A=14% ((assumes 35% foreclosure rate & 40% severity);

Losses on FHA/VA=5.25% (assumes 15% foreclosure rate and 35% severity)

### Scenario 2:

Losses on prime=1.6%% (assumes 3.5% foreclosure rate and 45% severity);

Losses on self-denominated subprime & Alt-A=25% (assumes 45% foreclosure rate & 55% severity);

Losses on FHA/VA & unknown subprime/Alt-A=15% (assumes 30% foreclosure rate & 50% severity)

Average size of mortgage:

Prime: \$173,000 (\$6.75 trillion/39 million)

Subprime/Alt-A/FHA/VA: \$182,000 (\$2.4 trillion/13 million)

### Losses in Scenario 1

Number of mortgages: 53 million

Prime=40 million

Subprime/Alt-A=7.7 million PMBS

FHA, and VA=5.2 million

Aggregate Value:

Prime =\$6.9 trillion (\$173,000 X 39 million);

Subprime/Alt-A=\$1.7 trillion (\$220,000 X 7.7 million)

FHA/VA= \$700 billion (\$130,000x5.2 million)

Total expected foreclosures: 4.7 million (3% X 39 million + 35% X 7.7 million + 15% X 5.2 million)

Losses on foreclosures: **\$360 billion** (\$6.9 trillion prime X 1.2%=\$83 billion + 1.7 trillion subprime/Alt-A X 14%=\$240 billion + \$700 billion X 5.25%=37 billion)

**Overall loss percentage: 3.9%**

**Losses in Scenario 2**

Number of mortgages: 53 million

Prime: 27 million

Original subprime/Alt-A: 7.7 million

FHA/VA: 5.2 million

Other subprime/Alt-A: 13 million (10.5 F&F (excludes 1.25 million already counted in PMBS), 2.5 million other loans not securitized (mostly held by the large banks))

Aggregate Value:

Prime= \$4.7 trillion ( $\$173,000 \times 27$  million);

Original Subprime/Alt-A = \$1.7 trillion ( $\$220,000 \times 7.7$  million)

FHA/VA= \$700 billion ( $\$130,000 \times 5.2$  million)

Other subprime/Alt-A: \$2 trillion ( $\$154,000 \times 13$  million)

Total expected foreclosures: 8.4 million ( $3.5\% \times 27$  million = 0.95 million,  $45\% \times 7.7$  million = 3.5 million,  $30\% \times 13$  million = 3.9 million)

Losses on foreclosures: **\$890 billion** ( $\$4.7$  trillion  $\times 1.6\%$  = \$60 billion +  $\$1.7$  trillion  $\times 25\%$  = \$425 billion +  $\$700$  billion  $\times 15\%$  = \$105 billion +  $\$2$  trillion  $\times 15\%$  = \$300 billion)

**Overall loss percentage: 9.8%, for an increase of 150%**

## APPENDIX A: GLOSSARY

*Italicized terms within definitions are defined separately.*

**ABCP** see *asset-backed commercial paper*.

**ABS** see *asset-backed security*.

**ABX.HE** A series of *derivatives* indices constructed from the prices of 20 *credit default swaps* that each reference individual subprime *mortgage-backed securities*; akin to an index like the Dow Jones Industrial Average.

**adjustable-rate mortgage** A mortgage whose interest rate changes periodically over time.

**affordable housing goals** Goals originally set by the *Department of Housing and Urban Development* (now by the Federal Housing Finance Agency) for *Fannie Mae* and *Freddie Mac* to allocate a specified part of their mortgage business to serve low- and moderate-income borrowers.

**ARM** see *adjustable-rate mortgage*.

**ARS** see *auction rate securities*.

**asset-backed commercial paper** Short-term debt secured by assets.

**asset-backed security** Debt instrument secured by assets such as mortgages, credit card loans or auto loans.

**auction rate securities** Long-term bonds whose interest rate may be reset at regular short-term intervals by an auction process.

**bank holding company** Company that controls a bank.

**broker-dealer** A firm, often the subsidiary of an investment bank, that buys and sells securities for itself and others.

**capital** Assets minus liabilities; what a firm owns minus what it owes. Regulators often require financial firms to hold minimum levels of capital.

**Capital Purchase Program** *TARP* program providing financial assistance to 700-plus U.S. financial institutions through the purchase of senior preferred shares in the corporations on standardized terms.

**CDO** see *collateralized debt obligation*.

**CDO squared** CDO that holds other CDOs.

**CDS** see *credit default swap*.

**CFTC** see *Commodity Futures Trading Commission*.

**collateralized debt obligation** Type of security often composed of the riskier portions of *mortgage-backed securities*.

**commercial paper** Short-term unsecured corporate debt.

**Commercial Paper Funding Facility** Emergency program created by the *Federal Reserve* in 2008 to purchase three-month unsecured and *asset-backed commercial paper* from eligible companies.

**Commodity Futures Trading Commission** Independent federal agency that regulates trading in futures and options.

- Community Reinvestment Act** 1977 federal law encouraging *depository institutions* to make loans and provide services in the local communities in which they take deposits.
- Consolidated Supervised Entities program** A *Securities and Exchange Commission* program created in 2004 and terminated in 2008 that provided voluntary supervision for the five largest investment bank conglomerates.
- Counterparty** A party to a contract.
- CP** see *commercial paper*.
- CPP** see *Capital Purchase Program*.
- CRA** see *Community Reinvestment Act*.
- credit default swap** A type of *credit derivative* allowing a purchaser of the swap to transfer loan default risk to a seller of the swap. The seller agrees to pay the purchaser if a default event occurs. The purchaser does not need to own the loan covered by the swap.
- credit enhancement** Insurance or other protection that may be purchased for a loan or pool of loans to offset losses in the event of default.
- credit loss** Loss from delayed payments or defaults on loans.
- credit rating agency** Private company that evaluates the credit quality of securities and provides ratings on those securities; the largest are Fitch Ratings, Moody's Investors Service, and Standard & Poor's.
- credit risk** Risk to a lender that a borrower will fail to repay the loan.
- CSE** Consolidated Supervised Entity (see *Consolidated Supervised Entities program*).
- debt-to-income ratio** One measure of a borrower's ability to repay a loan, generally calculated by dividing the borrower's monthly debt payments by gross monthly income.
- delinquency rate** The number of loans for which borrowers fail to make timely loan payments divided by total loans.
- Department of Housing and Urban Development** Cabinet-level federal department responsible for housing policies and programs.
- Department of Justice** Cabinet-level federal department responsible for enforcement of laws and administration of justice, led by the attorney general.
- Department of Treasury** Treasury of the federal government; prints and mints all currency and coins, collects federal taxes, manages U.S. government debt instruments, supervises national banks and thrifts, and advises on domestic and international fiscal policy. Its mission includes protecting the integrity of the financial system.
- depository institution** Financial institution, such as a commercial bank, thrift (savings and loan), or credit union, that accepts deposits, including deposits insured by the *FDIC*.
- derivative** Financial contract whose price is determined (derived) from the value of an underlying asset, rate, index, or event.
- Fannie Mae** Nickname for the Federal National Mortgage Association (FNMA), a *government-sponsored enterprise* providing financing for the home mortgage market.
- FCIC** Financial Crisis Inquiry Commission.
- FDIC** see *Federal Deposit Insurance Corporation*.
- Federal Deposit Insurance Corporation** Independent federal agency charged primarily with insuring deposits at financial institutions, examining and supervising some of those institutions, and shutting down failing institutions.
- Federal Housing Administration** Part of the *Department of Housing and Urban Development* that provides insurance on mortgage loans made by FHA-approved lenders.
- Federal Housing Finance Agency** Independent federal regulator of *government-sponsored enterprises*; created by the *Housing and Economic Recovery Act* of 2008 as successor to the *Office of Federal Housing Enterprise Oversight* and the Federal Housing Finance Board.
- Federal Open Market Committee** Its members are the Board of Governors of the Federal Reserve

System and certain of the presidents of the Federal Reserve Banks; oversees market conditions and implements monetary policy through such means as setting interest rates.

**Federal Reserve Bank of New York** One of 12 regional Federal Reserve Banks, with responsibility for regulating bank holding companies in New York State and nearby areas.

**Federal Reserve** U.S. central banking system created in 1913 in response to financial panics, consisting of the Federal Reserve Board in Washington, DC, and 12 Federal Reserve Banks around the country; its mission is to implement monetary policy through such means as setting interest rates, supervising and regulating banking institutions, maintaining the stability of the financial system, and providing financial services to depository institutions.

**FHA** see *Federal Housing Administration*.

**FHFA** see *Federal Housing Finance Agency*.

**FICO score** A measure of a borrower's creditworthiness based on the borrower's credit data; developed by the Fair Isaac Corporation.

**Financial Crimes Enforcement Network** Treasury office that collects and analyzes information about financial transactions to combat money laundering, terrorist financing, and other financial crimes.

**FinCEN** see *Financial Crimes Enforcement Network*.

**FOMC** see *Federal Open Market Committee*.

**foreclosure** Legal process whereby a mortgage lender gains ownership of the real property securing a defaulted mortgage.

**Freddie Mac** Nickname for the Federal Home Loan Mortgage Corporation (FHLMC), a *government-sponsored enterprise* providing financing for the home mortgage market.

**Ginnie Mae** Nickname for the Government National Mortgage Association (GNMA), a *government-sponsored enterprise*; guarantees pools of VA and FHA mortgages.

**Glass-Steagall Act** Banking Act of 1933 creating the *FDIC* to insure bank deposits; prohibited commercial banks from underwriting or dealing in most types of securities, barred banks from affiliating with securities firms, and introduced other banking reforms. In 1999, the *Gramm-Leach-Bliley Act* repealed the provisions of the Glass-Steagall Act that prohibited affiliations between banks and securities firms.

**government-sponsored enterprise** A private corporation, such as *Fannie Mae* and *Freddie Mac*, created by the federal government to pursue certain public policy goals designated in its charter.

**Gramm-Leach-Bliley Act** 1999 legislation that lifted certain remaining restrictions established by the *Glass-Steagall Act*.

**GSE** see *government-sponsored enterprise*.

**haircut** The difference between the value of an asset and the amount borrowed against it.

**hedge** In finance, a way to reduce exposure or risk by taking on a new financial contract.

**hedge fund** A privately offered investment vehicle exempted from most regulation and oversight; generally open only to high-net-worth investors.

**HOEPA** see *Home Ownership and Equity Protection Act*.

**Home Ownership and Equity Protection Act** 1994 federal law that gave the *Federal Reserve* new responsibility to address abusive and predatory mortgage lending practices.

**Housing and Economic Recovery Act** 2008 law including measures to reform and regulate the *GSEs*; created the *Federal Housing Finance Agency*.

**HUD** see *Department of Housing and Urban Development*.

**hybrid CDO** A *CDO* backed by collateral found in both cash *CDOs* and synthetic *CDOs*.

**illiquid assets** Assets that cannot be easily or quickly sold.

**interest-only loan** Loan that allows borrowers to pay interest without repaying principal until the end of the loan term.

- leverage** A measure of how much debt is used to purchase assets; for example, a leverage ratio of 5:1 means that \$5 of assets were purchased with \$4 of debt and \$1 of *capital*.
- LIBOR** London Interbank Offered Rate, an interest rate at which banks are willing to lend to each other in the London interbank market.
- liquidity** Holding cash and/or assets that can be quickly and easily converted to cash.
- liquidity put** A contract allowing one party to compel the other to buy an asset under certain circumstances. It ensures that there will be a buyer for otherwise illiquid assets.
- loan-to-value ratio** Ratio of the amount of a mortgage to the value of the house, typically expressed as a percentage. “Combined” loan-to-value includes all debt secured by the house, including second mortgages.
- LTV ratio** see *loan-to-value ratio*.
- mark-to-market** The process by which the reported amount of an asset is adjusted to reflect the market value.
- monoline** Insurance company, such as AMBAC and MBIA, whose single line of business is to guarantee financial products.
- mortgage servicer** Company that acts as an agent for mortgage holders, collecting and distributing payments from borrowers and handling defaults, modifications, settlements, and foreclosure proceedings.
- mortgage underwriting** Process of evaluating the credit characteristics of a mortgage and borrower.
- mortgage-backed security** Debt instrument secured by a pool of mortgages, whether residential or commercial.
- NAV** see *net asset value*.
- negative amortization loan** Loan that allows a borrower to make monthly payments that do not fully cover the interest payment, with the unpaid interest added to the principal of the loan.
- net asset value** Value of an asset minus any associated costs; for financial assets, typically changes each trading day.
- net charge-off rate** Ratio of loan losses to total loans.
- non-agency mortgage-backed securities** *Mortgage-backed securities* sponsored by private companies other than a *government-sponsored enterprise* (such as *Fannie Mae* or *Freddie Mac*); also known as *private-label mortgage-backed securities*.
- notional amount** A measure of the outstanding amount of over-the-counter *derivatives* contracts, based on the amount of the underlying referenced assets.
- novation** A process by which counterparties may transfer *derivatives* positions.
- OCC** see *Office of the Comptroller of the Currency*.
- Office of Federal Housing Enterprise Oversight** Created in 1992 to oversee financial soundness of *Fannie Mae* and *Freddie Mac*; its responsibilities were assumed in 2008 by its successor, the *Federal Housing Finance Agency*.
- Office of the Comptroller of the Currency** Independent bureau within *Department of Treasury* that charters, regulates, and supervises all national banks and certain branches and agencies of foreign banks in the United States.
- Office of Thrift Supervision** Independent bureau within *Treasury* that regulates all federally chartered and many state-chartered savings and loans/thrift institutions and their holding companies.
- OFHEO** see *Office of Federal Housing Enterprise Oversight*.
- originate-to-distribute** When lenders make loans with the intention of selling them to other financial institutions or investors, as opposed to holding the loans through maturity.
- originate-to-hold** When lenders make loans with the intention of holding them through maturity, as opposed to selling them to other financial institutions or investors.

- origination** Process of making a loan, including underwriting, closing, and providing the funds.
- OTS** see *Office of Thrift Supervision*.
- par** Face value of a bond.
- payment-option adjustable-rate mortgage** (also called payment *ARM* or option *ARM*) Mortgages that allow borrowers to pick the amount of payment each month, possibly low enough to increase the *principal* balance.
- PDCF** see *Primary Dealer Credit Facility*.
- PLS** see *private-label mortgage-backed securities*.
- pooling** Combining and packaging a group of loans to be held by a single entity.
- Primary Dealer Credit Facility** Program established by the *Federal Reserve* in March 2008 that allowed eligible companies to borrow cash overnight to finance their securities.
- principal** Amount borrowed.
- private mortgage insurance** Insurance on the payment of a mortgage provided by a private firm at additional cost to the borrower to protect the lender.
- private-label mortgage-backed securities** see *non-agency mortgage-backed securities*.
- repurchase agreement (repo)** A method of secured lending where the borrower sells securities to the lender as collateral and agrees to repurchase them at a higher price within a short period, often within one day.
- SEC** see *Securities and Exchange Commission*.
- section 13(3)** Section of the Federal Reserve Act under which the *Federal Reserve* may make secured loans to nondepository institutions, such as investment banks, under “unusual and exigent” circumstances.
- Securities and Exchange Commission** Independent federal agency responsible for protecting investors by enforcing federal securities laws, including regulating stock and security options exchanges and other electronic securities markets, the issuance and sale of securities, *broker-dealers*, other securities professionals, and investment companies.
- securitization** Process of pooling debt assets such as mortgages, car loans, and credit card debt into a separate legal entity that then issues a new financial instrument or security for sale to investors.
- shadow banking** Financial institutions and activities that in some respects parallel banking activities but are subject to less regulation than commercial banks. Institutions include mutual funds, investment banks, and hedge funds.
- short sale** The sale of a home for less than the amount owed on the mortgage.
- short selling** To sell a borrowed security in the expectation of a decline in value.
- SIV** see *structured investment vehicle*.
- special purpose vehicle** Entity created to fulfill a narrow or temporary objective; typically holds a portfolio of assets such as *mortgage-backed securities* or other debt obligations; often used because of regulatory and bankruptcy advantages.
- SPV** see *special purpose vehicle*.
- structured investment vehicle** Leveraged *special purpose vehicle*, funded through medium-term notes and *asset-backed commercial paper*, that invested in highly rated securities.
- synthetic CDO** A *CDO* that holds *credit default swaps* that reference assets (rather than holding cash assets), allowing investors to make bets for or against those referenced assets.
- systemic risk** In financial terms, that which poses a threat to the financial system.
- systemic risk exception** Clause in the Federal Deposit Insurance Corporation Improvement Act (FDICIA) under which the *FDIC* may commit its funds to rescue a financial institution.
- TAF** see *Term Auction Facility*.
- TALF** see *Term Asset-Backed Securities Loan Facility*.
- TARP** see *Troubled Asset Relief Program*.

- Term Asset-Backed Securities Loan Facility** *Federal Reserve* program, supported by *TARP* funds, to aid securitization of asset-based loans such as auto loans, student loans, and small business loans.
- Term Auction Facility** Program in which the *Federal Reserve* made funds available to all *depository institutions* at once through a regular auction.
- Term Securities Lending Facility** Emergency program in which the *Federal Reserve* made up to \$200 billion in Treasury securities available to banks or broker/dealers that traded directly with the Federal Reserve.
- tranche** From the French, meaning a slice; used to refer to the different types of mortgage-backed securities and CDO bonds that provide specified priorities and amounts of returns: “senior” tranches have the highest priority of returns and therefore the lowest risk/interest rate; mezzanine tranches have mid levels of risk/return; and “equity” (also known as “residual” or “first loss”) tranches typically receive any remaining cash flows.
- Troubled Asset Relief Program** Government program to address the financial crisis, signed into law in October 2008 to purchase or insure up to \$700 billion in assets and equity from financial and other institutions.
- TSLF** see *Term Securities Lending Facility*.
- undercapitalized** Condition in which a business does not have enough *capital* to meet its needs, or to meet its capital requirements if it is a regulated entity.
- Write-downs** Reducing the value of an asset as it is carried on a firm’s balance sheet because the market value has fallen.

## APPENDIX B: LIST OF HEARINGS AND WITNESSES

### **Public Meeting of the FCIC, Washington, DC, September 17, 2009**

Statements by commissioners

#### **Roundtable Discussion, Washington, DC, October 20, 2009**

Martin Baily, Senior Fellow in Economic Studies, Brookings Institution

Simon Johnson, Ronald A. Kurtz Professor of Entrepreneurship, Sloan School of Management, Massachusetts Institute of Technology

Hal S. Scott, Nomura Professor and Director of the Program on International Financial Systems, Harvard Law School

Joseph Stiglitz, Professor, Columbia Business School, Graduate School of Arts and Sciences (Department of Economics) and the School of International and Public Affairs

John B. Taylor, Mary and Robert Raymond Professor of Economics and the Bowen H. and Janice Arthur McCoy Senior Fellow at the Hoover Institution, Stanford University

Luigi Zingales, Robert C. McCormack Professor of Entrepreneurship and Finance and the David G. Booth Faculty Fellow, University of Chicago Booth School of Business

#### **Roundtable Discussion, Washington, DC, November 16, 2009**

David A. Moss, The John G. McLean Professor, Harvard Business School

Carmen M. Reinhart, Professor of Economics and Director of the Center for International Economics, University of Maryland

#### **Public Hearing, Washington, DC, Day 1, January 13, 2010**

##### *Session 1: Financial Institution Representatives*

Lloyd C. Blankfein, Chairman of the Board and Chief Executive Officer, Goldman Sachs Group, Inc.

James Dimon, Chairman of the Board and Chief Executive Officer, JPMorgan Chase & Co.

John J. Mack, Chairman of the Board, Morgan Stanley

Brian T. Moynihan, Chief Executive Officer and President, Bank of America Corporation

##### *Session 2: Financial Market Participants*

Michael Mayo, Managing Director and Financial Services Analyst, Calyon Securities (USA) Inc.

J. Kyle Bass, Managing Partner, Hayman Advisors, LP

Peter J. Solomon, Founder and Chairman, Peter J. Solomon Company

##### *Session 3: Financial Crisis Impacts on the Economy*

Mark Zandi, Chief Economist and Co-founder, Moody's Economy.com  
 Kenneth T. Rosen, Chair, Fisher Center for Real Estate and Urban Economics, University of California, Berkeley  
 Julia Gordon, Senior Policy Counsel, Center for Responsible Lending  
 C. R. "Rusty" Cloutier, President and Chief Executive Officer, MidSouth Bank, N.A., Past Chairman, Independent Community Bankers Association

**Public Hearing, Washington, DC, Day 2, January 14, 2010**

*Session 1: Current Investigations into the Financial Crisis—Federal Officials*

Eric H. Holder Jr., Attorney General, U.S. Department of Justice  
 Lanny A. Breuer, Assistant Attorney General, Criminal Division, U.S. Department of Justice  
 Sheila C. Bair, Chairman, U.S. Federal Deposit Insurance Corporation  
 Mary L. Schapiro, Chairman, U.S. Securities and Exchange Commission

*Session 2: Current Investigations into the Financial Crisis—State and Local Officials*

Lisa Madigan, Attorney General, State of Illinois  
 John W. Suthers, Attorney General, State of Colorado  
 Denise Voigt Crawford, Commissioner, Texas Securities Board, and President, North American Securities Administrators Association, Inc.  
 Glenn Theobald, Chief Counsel, Miami-Dade County Police Department; Chairman, Mayor Carlos Alvarez Mortgage Fraud Task Force

**Forum to Explore the Causes of the Financial Crisis, American University Washington College of Law, Washington, DC, Day 1, February 26, 2010**

*Session 1: Interconnectedness of Financial Institutions; "Too Big to Fail"*

Randall Kroszner, Norman R. Bobins Professor of Economics, University of Chicago

*Session 2: Macroeconomic Factors and U.S. Monetary Policy*

Pierre-Olivier Gourinchas, Associate Professor of Economics, University of California, Berkeley

*Session 3: Risk Taking and Leverage*

John Geanakoplos, James Tobin Professor of Economics, Yale University

*Session 4: Household Finances and Financial Literacy*

Annamaria Lusardi, Joel Z. and Susan Hyatt Professor of Economics, Dartmouth University; Research Associate at the National Bureau of Economic Research

**Forum to Explore the Causes of the Financial Crisis, American University Washington College of Law, Washington, DC, Day 2, February 27, 2010**

*Session 5: Mortgage Lending Practices and Securitization*

Chris Mayer, Paul Milstein Professor of Real Estate, Columbia University; Visiting Scholar at the Federal Reserve Bank of New York and Research Associate at the National Bureau of Economic Research

*Session 6: Government-Sponsored Enterprises and Housing Policy*

Dwight Jaffee, Willis Booth Professor of Banking, Finance, and Real Estate; Co-chair, Fisher Center for Real Estate and Urban Economics, University of California, Berkeley

*Session 7: Derivatives and Other Complex Financial Instruments*

Markus Brunnermeier, Edwards S. Sanford Professor of Economics, Princeton University

*Session 8: Firm Structure and Risk Management*

Anil Kashyap, Edward Eagle Brown Professor of Economics and Finance and Richard N. Rosett Faculty Fellow, University of Chicago

*Session 9: Shadow Banking*

Gary Gorton, Professor of Finance, School of Management, Yale University

**Public Hearing on Subprime Lending and Securitization and Government-Sponsored Enterprises (GSEs), Rayburn House Office Building, Room 2123, Washington, DC, Day 1, April 7, 2010**

*Session 1: The Federal Reserve*

Alan Greenspan, Former Chairman, Board of Governors of the Federal Reserve System

*Session 2: Subprime Origination and Securitization*

Richard Bitner, Managing Director of Housingwire.com; Author, *Confessions of a Subprime Lender: An Insider's Tale of Greed, Fraud, and Ignorance*

Richard Bowen, Former Senior Vice President and Business Chief Underwriter, CitiMortgage, Inc.

Patricia Lindsay, Former Vice President, Corporate Risk, New Century Financial Corporation  
Susan Mills, Managing Director of Mortgage Finance, Citi Markets & Banking, Global Securitized Markets

*Session 3: Citigroup Subprime-Related Structured Products and Risk Management*

Murray C. Barnes, Former Managing Director, Independent Risk, Citigroup, Inc.

David C. Bushnell, Former Chief Risk Officer, Citigroup, Inc.

Nestor Dominguez, Former Co-head, Global Collateralized Debt Obligations, Citi Markets & Banking, Global Structured Credit Products

Thomas G. Maheras, Former Co-chief Executive Officer, Citi Markets & Banking

**Public Hearing on Subprime Lending and Securitization and Government-Sponsored Enterprises (GSEs), Rayburn House Office Building, Room 2123, Washington, DC, Day 2, April 8, 2010**

*Session 1: Citigroup Senior Management*

Charles O. Prince, Former Chairman of the Board and Chief Executive Officer, Citigroup, Inc.

Robert Rubin, Former Chairman of the Executive Committee of the Board of Directors, Citigroup, Inc.

*Session 2: Office of the Comptroller of the Currency*

John C. Dugan, Comptroller, Office of the Comptroller of the Currency

John D. Hawke Jr., Former Comptroller, Office of the Comptroller of the Currency

**Public Hearing on Subprime Lending and Securitization and Government-Sponsored Enterprises (GSEs), Rayburn House Office building, Room 2123, Washington, DC, Day 3, April 9, 2010**

*Session 1: Fannie Mae*

Robert J. Levin, Former Executive Vice President and Chief Business Officer, Fannie Mae

Daniel H. Mudd, Former President and Chief Executive Officer, Fannie Mae

*Session 2: Office of Federal Housing Enterprise Oversight*

Armando Falcon Jr., Former Director, Office of Federal Housing Enterprise Oversight

James Lockhart, Former Director, Office of Federal Housing Enterprise Oversight

**Public Hearing on the Shadow Banking System, Dirksen Senate Office Building,  
Room 538, Washington DC, Day 1, May 5, 2010**

*Session 1: Investment Banks and the Shadow Banking System*

Paul Friedman, Former Senior Managing Director, Bear Stearns  
Samuel Molinaro Jr., Former Chief Financial Officer and Chief Operating Officer, Bear Stearns  
Warren Spector, Former President and Co-chief Operating Officer, Bear Stearns

*Session 2: Investment Banks and the Shadow Banking System*

James E. Cayne, Former Chairman and Chief Executive Officer, Bear Stearns  
Alan D. Schwartz, Former Chief Executive Officer, Bear Stearns

*Session 3: SEC Regulation of Investment Banks*

Charles Christopher Cox, Former Chairman, U.S. Securities and Exchange Commission  
William H. Donaldson, Former Chairman, U.S. Securities and Exchange Commission  
H. David Kotz, Inspector General, U.S. Securities and Exchange Commission  
Erik R. Sirri, Former Director Division of Trading & Markets, U.S. Securities and Exchange Commission

**Public Hearing on the Shadow Banking System, Dirksen Senate Office Building,  
Room 538, Washington DC, Day 2, May 6, 2010**

*Session 1: Perspective on the Shadow Banking System*

Henry M. Paulson Jr., Former Secretary, U.S. Department of the Treasury

*Session 2: Perspective on the Shadow Banking System*

Timothy F. Geithner, Secretary, U.S. Department of the Treasury; Former President, Federal Reserve Bank of New York

*Session 3: Institutions Participating in the Shadow Banking System*

Michael A. Neal, Vice Chairman, General Electric; Chairman and Chief Executive Officer, GE Capital  
Mark S. Barber, Vice President and Deputy Treasurer, GE Capital  
Paul A. McCulley, Managing Director, PIMCO  
Steven R. Meier, Chief Investment Officer, State Street

**Public Hearing on Credibility of Credit Ratings, the Investment Decisions Made  
Based on Those Ratings, and the Financial Crisis, The New School Arnhold Hall,  
Theresa Lang Community & Student Center, 55 West 13th Street, 2nd Floor, New  
York, NY, June 2, 2010**

*Session 1: The Ratings Process*

Eric Kolchinsky, Former Team Managing Director, US Derivatives, Moody's Investors Service  
Jay Siegel, Former Team Managing Director, Moody's Investors Service  
Nicolas S. Weill, Group Managing Director, Moody's Investors Service  
Gary Witt, Former Team Managing Director, US Derivatives, Moody's Investors Service

*Session 2: Credit Ratings and the Financial Crisis*

Warren E. Buffett, Chairman and Chief Executive Officer, Berkshire Hathaway  
Raymond W. McDaniel, Chairman and Chief Executive Officer, Moody's Corporation

*Session 3: The Credit Rating Agency Business Model*

Brian M. Clarkson, Former President and Chief Operating Officer, Moody's Investors Service  
(written testimony only due to a medical emergency)  
Mark Froeba, Former Senior Vice President, US Derivatives, Moody's Investors Service  
Richard Michalek, Former Vice President/Senior Credit Officer, Moody's Investors Service

**Public Hearing on the Role of Derivatives in the Financial Crisis, Dirksen Senate Office Building, Room 538, Washington, DC, Day 1, June 30, 2010**

*Session 1: Overview of Derivatives*

Michael Greenberger, Professor, University of Maryland School of Law

Steve Kohlhagen, Former Professor of International Finance, University of California, Berkeley, and former Wall Street derivatives executive

Albert “Pete” Kyle, Charles E. Smith Chair Professor of Finance, University of Maryland

Michael Masters, Chief Executive Officer, Masters Capital Management, LLC

*Session 2: American International Group, Inc. and Derivatives*

Joseph J. Cassano, Former Chief Executive Officer, American International Group, Inc. Financial Products

Robert E. Lewis, Senior Vice President and Chief Risk Officer, American International Group, Inc.

Martin J. Sullivan, Former Chief Executive Officer, American International Group, Inc.

*Session 3: Goldman Sachs Group, Inc. and Derivatives*

Craig Broderick, Managing Director, Head of Credit, Market, and Operational Risk, Goldman Sachs Group, Inc.

Gary D. Cohn, President and Chief Operating Officer, Goldman Sachs Group, Inc.

**Public Hearing on the Role of Derivatives in the Financial Crisis, Dirksen Senate Office Building, Room 538, Washington DC, Day 2, July 1, 2010**

*Session 1: American International Group, Inc. and Goldman Sachs Group, Inc.*

Steven J. Bensinger, Former Executive Vice President and Chief Financial Officer, American International Group, Inc.

Andrew Forster, Former Senior Vice President and Chief Financial Officer, American International Group, Inc. Financial Services

Elias F. Habayeb, Former Senior Vice President and Chief Financial Officer, American International Group, Inc. Financial Services

David Lehman, Managing Director, Goldman Sachs Group, Inc.

David Viniar, Executive Vice President and Chief Financial Officer, Goldman Sachs Group, Inc.

*Session 2: Derivatives: Supervisors and Regulators*

Eric R. Dinallo, Former Superintendent, New York State Insurance Department

Gary Gensler, Chairman, Commodity Futures Trading Commission

Clarence K. Lee, Former Managing Director for Complex and International Organizations, Office of Thrift Supervision

**Public Hearing on Too Big to Fail: Expectations and Impact of Extraordinary Government Intervention and the Role of Systemic Risk in the Financial Crisis, Dirksen Senate Office Building, Room 538, Washington DC, Day 1, September 1, 2010**

*Session 1: Wachovia Corporation*

Scott G. Alvarez, General Counsel, Board of Governors of the Federal Reserve System

John H. Corston, Acting Deputy Director, Division of Supervision and Consumer Protection, U.S. Federal Deposit Insurance Corporation

Robert K. Steel, Former President and Chief Executive Officer, Wachovia Corporation

*Session 2: Lehman Brothers*

Thomas C. Baxter, Jr., General Counsel and Executive Vice President, Federal Reserve Bank of New York

Richard S. “Dick” Fuld Jr., Former Chairman and Chief Executive Officer, Lehman Brothers  
 Harvey R. Miller, Business Finance & Restructuring Partner, Weil, Gotshal & Manges, LLP  
 Barry L. Zubrow, Chief Risk Officer, JPMorgan Chase & Co.

**Public Hearing on Too Big to Fail: Expectations and Impact of Extraordinary Government Intervention and the Role of Systemic Risk in the Financial Crisis, Dirksen Senate Office Building, Room 538, Washington DC, Day 2, September 2, 2010**

*Session 1: The Federal Reserve*

Ben S. Bernanke, Chairman, Board of Governors of the Federal Reserve System

*Session 2: The Federal Deposit Insurance Corporation*

Sheila C. Bair, Chairman, U.S. Federal Deposit Insurance Corporation

**Public Hearing on the Impact of the Financial Crisis—Greater Bakersfield, Kern County Board of Supervisors Chambers, 1115 Truxtun Avenue, Bakersfield, CA, September 7, 2010**

*Session 1: Welcome*

Congressman Kevin McCarthy, California’s 22nd District  
 Ray Watson, Kern County Supervisor, District 4  
 Irma Carson, Bakersfield City Councilwoman, Ward 1

*Session 2: Local Banking*

Arnold Cattani, Chairman, Mission Bank  
 Steve Renock, President and CEO, Kern Schools Federal Credit Union  
 D. Linn Wiley, Vice Chairman, CVB Financial Corporation and Citizens Business Bank

*Session 3: Residential and Community Real Estate*

Gregory D. Bynum, President, Gregory D. Bynum and Associates, Inc.  
 Warren Peterson, Warren Peterson Construction, Inc.

*Session 4: Local Housing Market*

Gary Crabtree, Principal Owner, Affiliated Appraisers  
 Lloyd Plank, Lloyd E. Plank Real Estate Consultants

*Session 5: Foreclosures and Loan Modifications*

Brenda Amble, Escrow Manager, Ticor Title  
 Laurie McCarty, Coldwell Banker Preferred  
 Jeannie McDermott, Small Business Owner

*Session 6: Forum for Public Comment*

James Stephen Urner  
 Marvin Dean  
 Marie Vasile

**Public Hearing on the Impact of the Financial Crisis—State of Nevada, University of Nevada, Las Vegas, Student Union Building, Las Vegas, NV, September 8, 2010**

*Session 1: Economic Analysis of the Impact of the Financial Crisis on Nevada*

Jeremy Aguero, Principal, Applied Analysis

*Session 2: The Impact of the Financial Crisis on Businesses of Nevada*

Steve Hill, Founder, Silver State Materials Corporation; Immediate Past Chairman, Las Vegas Chamber of Commerce

William E. Martin, Vice Chairman and Chief Executive Officer, Service 1st Bank of Nevada

Wally Murray, President and Chief Executive Officer, Greater Nevada Credit Union  
 Philip G. Satre, Chairman, International Gaming Technology (IGT); Chairman, NV Energy, Inc.

*Session 3: The Impact of the Financial Crisis on Nevada Real Estate*

Daniel G. Bogden, United States Attorney, State of Nevada  
 Gail Burks, President and Chief Executive Officer, Nevada Fair Housing Center  
 Brian Gordon, Principal, Applied Analysis  
 Jay Jeffries, Former Southwest Regional Sales Manager, Fremont Investment & Loan

*Session 4: The Impact of the Financial Crisis on Nevada Public and Community Services*

Andrew Clinger, Director of the Department of Administration, Chief of the Budget Division, State of Nevada

Jeffrey Fontaine, Executive Director, Nevada Association of Counties  
 David Fraser, Executive Director, Nevada League of Cities  
 Dr. Heath Morrison, Superintendent, Washoe County School District

*Session 5: Forum for Public Comment*

**Public Hearing on the Impact of the Financial Crisis—Miami, Florida, Florida International University, Modesto A. Madique Campus, Miami, FL, September 21, 2010**

*Session 1: Overview of Mortgage Fraud*

William K. Black, Associate Professor of Economics and Law, University of Missouri–Kansas City

Ann Fulmer, Vice President of Business Relations, Interthinx; Co-founder, Georgia Real Estate Fraud Prevention and Awareness Coalition

Henry N. Pontell, Professor of Criminology, Law & Society and Sociology, University of California, Irvine

*Session 2: Uncovering Mortgage Fraud in Miami*

Dennis J. Black, President, D. J. Black & Company

Edward Gallagher, Executive Officer, Economic Crimes Bureau, Mortgage Fraud Task Force, Miami-Dade Police Department

Jack Rubin, Senior Vice President, JPMorgan Chase Bank

Ellen Wilcox, Special Agent, Florida Department of Law Enforcement

*Session 3: The Regulation, Oversight, and Prosecution of Mortgage Fraud in Miami*

J. Thomas Cardwell, Commissioner, Office of Financial Regulation, State of Florida

Wilfredo A. Ferrer, United States Attorney, Southern District of Florida

R. Scott Palmer, Special Counsel and Chief of the Mortgage Fraud Task Force, Office of the Attorney General, State of Florida

**Public Hearing on the Impact of the Financial Crisis—Sacramento, California Department of Education, Sacramento, CA, September 23, 2010**

*Session 1: Overview of the Sacramento Housing and Mortgage Markets and the Impact of the Financial Crisis on the Region*

Mark Fleming, Chief Economist, CoreLogic

*Session 2: Mortgage Origination, Mortgage Fraud and Predatory Lending in the Sacramento Region*

Karen J. Mann, President and Chief Appraiser, Mann and Associates Real Estate Appraisers & Consultants

Thomas C. Putnam, President, Putnam Housing Finance Consulting

Kevin Stein, Associate Director, California Reinvestment Coalition  
Benjamin B. Wagner, United States Attorney, Eastern District of California

*Session 3: The Mortgage Securitization Chain: From Sacramento to Wall Street*

Vicki Beal, Senior Vice President, Transaction Management, Clayton Holdings, LLC  
Kurt Eggert, Professor of Law, Chapman University School of Law

D. Keith Johnson, Former President and Chief Executive Officer, Washington Mutual's Long Beach Mortgage

*Session 4: The Impact of the Financial Crisis on Sacramento Neighborhoods and Families*

Pam Canada, Chief Executive Officer, NeighborWorks Home Ownership Center–Sacramento Region

Mona Tawatao, Regional Counsel, Legal Services of Northern California  
Bruce Wagstaff, Agency Administrator, County of Sacramento Countywide Services Agency  
Clarence Williams, President, California Capital Financial Development Corporation  
Henry W. Wirz, President and Chief Executive Officer, SAFE Credit Union

*Public Testimony Presented*

Allen Carpenter  
Lovie M. Hollis  
Nia Lavulo

# NOTES

Unless otherwise specified, data come from the sources listed below.

Board of Governors of the Federal Reserve System, Flow of Funds Reports: Debt, international capital flows, and the size and activity of various financial sectors

Bureau of Economic Analysis: Economic output (GDP), spending, wages, and sector profit

Bureau of Labor Statistics: Labor market statistics

BlackBox Logic and Standard & Poor's: Data on loans underlying CMLTI 2006-NC2

CoreLogic: Home prices

Inside Mortgage Finance, 2009 Mortgage Market Statistical Annual: Data on origination of mortgages, issuance of mortgage-backed securities and values outstanding

Markit Group: ABX-HE index

Mortgage Bankers Association National Delinquency Survey: Mortgage delinquency and foreclosure rates

10-Ks, 10-Qs, and proxy statements filed with the Securities and Exchange Commission: Company-specific information

Many of the documents cited on the following pages, along with other materials, are available on [www.fcic.gov](http://www.fcic.gov).

## Chapter 1

1. Charles Prince, testimony before the FCIC, Hearing on Subprime Lending and Securitization and Government-Sponsored Enterprises (GSEs), day 2, session 1: Citigroup Senior Management, April 8, 2010, transcript, p. 10.

2. Warren Buffett, testimony before the FCIC, Hearing on the Credibility of Credit Ratings, the Investment Decisions Made Based on Those Ratings, and the Financial Crisis, session 2: Credit Ratings and the Financial Crisis, June 2, 2010, transcript, p. 208; Warren Buffett, interview by FCIC, May 26, 2010.

3. Lloyd Blankfein, testimony before the First Public Hearing of the FCIC, day 1, panel 1: Financial Institution Representatives, January 13, 2010, transcript, p. 36.

4. Ben S. Bernanke, closed-door session with FCIC, November 17, 2009; Ben S. Bernanke, testimony before the FCIC, Hearing on Too Big to Fail: Expectations and Impact of Extraordinary Government Intervention and the Role of Systemic Risk in the Financial Crisis, day 2, session 1: The Federal Reserve, September 2, 2010, transcript, p. 27.

5. Alan Greenspan, written testimony for the FCIC, Subprime Lending and Securitization and Government-Sponsored Enterprises (GSEs), day 1, session 1: The Federal Reserve, April 7, 2010, p. 9.

6. Richard C. Breeden, interview by FCIC, October 14, 2010.

7. Paul A. McCulley, testimony before the FCIC, Hearing on the Shadow Banking System, day 2, session 3: Institutions Participating in the Shadow Banking System, May 6, 2010, transcript, p. 249.

8. Arnold Cattani, testimony before the FCIC, Hearing on the Impact of the Financial Crisis—Greater Bakersfield, session 2: Local Banking, September 7, 2010, transcript pp. 25, 61.

9. William Martin, testimony before the FCIC, Hearing on the Impact of the Financial Crisis—State of Nevada, session 2: The Impact of the Financial Crisis on Businesses of Nevada, September 8, 2010, transcript, p. 76.

10. Inside Mortgage Finance, *The 2009 Mortgage Market Statistical Annual*, vol. 1, *The Primary Market* (: Inside Mortgage Finance, 2009), p. 4, “Mortgage Product by Origination.”

11. Data provided to the FCIC by National Association of Realtors: national home price data from sales of existing homes, comparing second-quarter 1998 (\$135,800) and second-quarter 2006 (\$227,100), the national peak in prices.

12. Core-based statistical area house prices for Sacramento–Arden–Arcade–Roseville CA Metropolitan Statistical Area, CoreLogic data.

13. Data provided by CoreLogic, Home Price Index for Urban Areas. FCIC staff calculated house price growth from January 2001 to peak of each market. Prices increased at least 50% in 401 cities, at least 75% in 217 cities, at least 100% in 112 cities, at least 125% in 63 cities, and more than 150% in 16 cities.

14. Updated data provided by James Kennedy and Alan Greenspan, whose data originally appeared in “Sources and Uses of Equity Extracted from Homes,” Finance and Economics Discussion Series, Federal Reserve Board, 2007-20 (March 2007).

15. “Mortgage Originations Rise in First Half of 2005; Demand for Interest Only, Option ARM and Alt-A Products Increases,” Mortgage Bankers Association press release, October 25, 2005.

16. In 2007, the weekly wage of New York investment banker was \$16,849; of the average privately employed worker, \$841.

17. Federal Reserve Survey of Consumer Finances, tabulated by FCIC.

18. Angelo Mozilo, interview by FCIC, September 24, 2010.

19. Michael Mayo, testimony before the First Public Hearing of the FCIC, day 1, panel 2: Financial Market Participants, January 13, 2010, transcript, p. 114.

20. “Mortgage Originations Rise in First Half of 2005,” MBA press release, October 27, 2005.

21. Yuliya Demyanyk and Yadav K. Gopalan, “Subprime ARMs: Popular Loans, Poor Performance,” Federal Reserve Bank of St. Louis, *Bridges* (Spring 2007).

22. Ann Fulmer, vice president of Business Relations, Interthinx (session 1: Overview of Mortgage Fraud), and Ellen Wilcox, special agent, Florida Department of Law Enforcement (session 2: Uncovering Mortgage Fraud in Miami), testimony before the FCIC, Hearing on the Impact of the Financial Crisis—Miami, September 21, 2010.

23. Julia Gordon and Michael Calhoun, Center for Responsible Lending, interview by FCIC, September 16, 2010.

24. Faith Schwartz, at Consumer Advisory Council meeting, Thursday, March 30, 2006.

25. Federal Reserve Board, “Mean Value of Mortgages or Home-Equity Loans for Families with Holdings,” in *SCF Chartbook*, June 15, 2009, tables updated to February 18, 2010.

26. Christopher Cruise, interview by FCIC, August 24, 2010.

27. *Ibid.*

28. Robert Kuttner, interview by FCIC, August 5, 2010.

29. Timothy Geithner, testimony before the FCIC, Hearing on the Shadow Banking System, day 2, session 2: Perspective on the Shadow Banking System, May 6, 2010, transcript, p. 146.

30. James Ryan, chief marketing officer at CitiFinancial and John Schachtel, executive vice president of CitiFinancial, interview by FCIC, February 3, 2010.

31. These points were made to the FCIC by consumer advocates: e.g., Kevin Stein, associate director, California Reinvestment Coalition, at the Hearing on the Impact of the Financial Crisis—Sacramento, session 2: Mortgage Origination, Mortgage Fraud and Predatory Lending in the Sacramento Region, September 23, 2010; Gail Burks, president and CEO, Nevada Fair Housing Center, at the Hearing on the Impact of the Financial Crisis—State of Nevada, session 3: The Impact of the Financial Crisis on Nevada Real Estate, September 8, 2010. See also Federal Reserve Consumer Advisory Council transcripts, March 25, 2004; June 24, 2004; October 28, 2004; March 17, 2005; October 27, 2005; June 22, 2006; October 26, 2006.

32. Bob Gnaizda, interview by FCIC, March 25, 2010.
33. James Rokakis, interview by FCIC, November 8, 2010.
34. *Ibid.*
35. Fed Governor Edward M. Gramlich, “Tackling Predatory Lending: Regulation and Education,” remarks at Cleveland State University, Cleveland, Ohio, March 23, 2001.
36. Rokakis, interview.
37. John Taylor, chairman and chief executive officer, National Community Reinvestment Coalition, letter to Office of Thrift Supervision, July 3, 2000, provided to the FCIC.
38. Stein, testimony before the FCIC, transcript, pp. 73–74, 71.
39. U.S. Department of the Treasury and U.S. Department of Housing and Urban Development, “Joint Report on Recommendations to Curb Predatory Home Mortgage Lending” (June 1, 2000).
40. Federal Reserve Board press release, December 12, 2001.
41. Sheila C. Bair, written testimony for the FCIF, First Public Hearing of the FCIC, day 2, panel 1: Current Investigations into the Financial Crisis—Federal Officials, January 14, 2010, p. 11.
42. Fed Governor Edward M. Gramlich, “Predatory Lending,” remarks at the Housing Bureau for Seniors Conference, January 18, 2002.
43. Sheila C. Bair, testimony before the FCIC, First Public Hearing of the FCIC, day 2, panel 1: Current Investigations into the Financial Crisis—Federal Officials, January 14, 2010, transcript, p. 97.
44. Sheila C. Bair, interview by FCIC, March 29, 2010.
45. *2009 Mortgage Market Statistical Annual*, 1:220, “Top B&C Lenders in 2000”; 1.223, “Top B&C Lenders in 2003.”
46. *Ibid.*, 1:237, “Subprime Origination by State in 2001”; and 1:235, “Subprime Originations by State in 2003.”
47. Stein, testimony before the FCIC, September 23, 2010, transcript, p. 72.
48. Gail Burks, interview by FCIC, August 30, 2010.
49. Lisa Madigan, written testimony for the FCIC, First Public Hearing of the FCIC, day 1, panel 2: Current Investigations into the Financial Crisis—State and Local Officials, January 14, 2010, p. 4–5; “Home Mortgage Lender settled ‘Predatory Lending’ Charges,” Federal Trade Commission press release, March 21, 2002.
50. *2009 Mortgage Market Statistical Annual*, 1:220, “Top 25 B&C Lenders in 2003.”
51. Madigan, written testimony for the FCIC, January 14, 2010, pp. 4–5.
52. Ed Parker, interview by FCIC, May 26, 2010.
53. Prentiss Cox, interview by FCIC, October 15, 2010.
54. *Ibid.*
55. *2009 Mortgage Market Statistical Annual*, 1:45, 47, 49, 51.
56. Alphonso Jackson, interview by FCIC, October 6, 2010.
57. Cox, interview; Madigan, written testimony for the FCIC, January 14, 2010, p. 11.
58. Cox, interview. Madigan, testimony before the FCIC, January 14, 2010, transcript, pp. 121–122.
59. John D. Hawke Jr. and John C. Dugan, written statements for the FCIC, Hearing on Subprime Lending and Securitization and Government-Sponsored Enterprises (GSEs), day 2, session 2: Office of the Comptroller of the Currency, April 8, 2010, pp. 4–5 and pp. 4–8, respectively.
60. Madigan, written testimony for the FCIC, January 14, 2010, pp. 9, 10.
61. Cox, interview.
62. *2009 Mortgage Market Statistical Annual*, 1:4, “Mortgage Originations by Product.” Nonprime = Alt-A and subprime combined.
63. Marc S. Savitt, interview by FCIC, November 17, 2010.
64. Rob Barry, Matthew Haggman, and Jack Dolan, “Ex-convicts active in mortgage fraud,” *Miami Herald*, January 29, 2009.
65. J. Thomas Cardwell, written testimony for the FCIC, Hearing on the Impact of the Financial Crisis—Miami, session 3: The Regulation, Oversight, and Prosecution of Mortgage Fraud in Miami, September 21, 2010, p. 8.
66. Savitt, interview.
67. Gary Crabtree, written testimony for the FCIC, Hearing on the Impact of the Financial Crisis—Greater Bakersfield, session 4: Local Housing Market, September 7, 2010, p. 6.
68. *Ibid.*

69. Gary Crabtree, interview by FCIC, August 18, 2010. Crabtree, written testimony for the FCIC, September 7, 2010, pp. 6–7.

70. “FBI Warns of Mortgage Fraud ‘Epidemic’ from Terry Frieden,” CNN news report, September 17, 2004.

71. Kirstin Downey, “FBI Vows to Crack Down on Mortgage Fraud; Hot Real Estate Market Drives Reports of ‘Suspicious’ Activity, Agency Says,” *Washington Post*, February 15, 2005.

72. Financial Crimes Enforcement Network, Regulatory Policy and Programs Division, “Mortgage Loan Fraud: An Industry Assessment Based upon Suspicious Activity Report Analysis,” November 2006. See also Financial Crimes Enforcement Network, “Annual Report: Fiscal Year 2008.”

73. FinCEN response to FCIC interrogatories, October 14–15, 2010.

74. William K. Black, written testimony for the FCIC, Hearing on the Impact of the Financial Crisis—Miami, session 1: Overview of Mortgage Fraud, September 21, 2010, p. 8.

75. Alberto Gonzales, interview by FCIC, November 1, 2010; Michael Mukasey, interview by FCIC, October 20, 2010.

76. Federal Reserve Consumer Advisory Council Meeting, October 28, 2004, transcript, p. 44.

77. *Ibid.*, p. 45.

78. Ruhi Maker, interview by FCIC, October 25, 2010.

79. Kirstin Downey, “Many Buyers Opt for Risky Mortgages,” *Washington Post*, May 28, 2005.

80. “After the Fall: Soaring house prices have given a huge boost to the world economy. What happens when they drop?” *The Economist*, June 16, 2005.

81. Fed Chairman Alan Greenspan, “The Economic Outlook,” prepared testimony before the Joint Economic Committee, 109th Cong., 1st sess., June 9, 2005.

82. *Ibid.*

83. Fed Chairman Ben S. Bernanke, “The Economic Outlook,” prepared testimony before the Joint Economic Committee, U.S. Congress, 110th Cong., 1st sess., March 28, 2007.

84. Sheila Canavan, comments during of the Federal Reserve Consumer Advisory Council Meeting, October 27, 2005, transcript, p. 52.

85. David Leonhardt, “Be Warned: Mr. Bubble’s Worried Again,” *New York Times*, August 21, 2005.

86. Raghuram Rajan, interview by FCIC, November 22, 2010.

87. *Ibid.*

88. *Ibid.*

89. Raghuram G. Rajan, *Fault Lines: How Hidden Fractures Still Threaten The World Economy* (Princeton: Princeton University Press, 2010), p. 3.

90. Susan M. Wachter, interview by FCIC, October 6, 2010.

91. Mark Klipsch, quoted in “Blizzard Can’t Stop ASF 2005 Conference,” *Asset Securitization Report*, January 31, 2005.

92. Dennis J. Black, written testimony for the FCIC, Hearing on the Impact of the Financial Crisis—Miami, session 2: Uncovering Mortgage Fraud in Miami, September 21, 2010, p. 1; for the appraiser’s petition, see <http://appraiserspetition.com/>.

93. Karen Mann, written testimony for the FCIC, Hearing on the Impact of the Financial Crisis—Sacramento, session 2: Mortgage Origination, Mortgage Fraud and Predatory Lending in the Sacramento Region, September 23, 2010.

94. 2009 *Mortgage Market Statistical Annual*, vol. 2, *The Secondary Market*, p. 13, “Non-Agency MBS Issuance by Type,” and FCIC staff estimates based on analysis of Moody’s SFDRS data.

95. Jamie Dimon, testimony before the FCIC, First Public Hearing of the FCIC, day 1, panel 1: Financial Institution Representatives, January 13, 2010, transcript, p. 78.

96. Madelyn Antoncic, interview by FCIC, July 14, 2010.

97. Anton R. Valukas, Report of Examiner, *In re Lehman Brothers Holdings Inc.*, et al., Chapter 11 Case No. 08-13555 (JMP), (Bankr. S.D.N.Y.), March 11, 2010, 1:114, with n. 418.

98. Richard Bowen, interview by FCIC, February 27, 2010.

99. Richard Bowen, email to Robert Rubin, David Bushnell, Gary Crittenden, and Bonnie Howard, November 3, 2007.

100. Robert Rubin, testimony before the FCIC, Hearing on Subprime Lending and Securitization and Government-Sponsored Entities (GSEs), day 2, session 1: Citigroup Senior Management, April 8, 2010, transcript, p. 30.

101. Brad S. Karp, counsel for Citigroup, letter to FCIC, November 1, 2010, in response to FCIC request of September 21, 2010, for information regarding Richard Bowen's November 3, 2007, email, p. 2.

102. Bowen, interview.

103. J. Kyle Bass, testimony before the FCIC, First Public Hearing of the FCIC, day 1, panel 2: Financial Market Participants, January 13, 2010, transcript, pp. 143–44.

104. Herbert M. Sandler, "Comment on Joint ANPR for Proposed Revision to the Existing Risk-based Capital Rule," letter to Federal Reserve Board, Office of the Comptroller of the Currency, Federal Deposit Insurance Corporation, and Office of Thrift Supervision, January 18, 2010.

105. Lewis Ranieri, interview by FDIC, July 30, 2010.

106. Angelo Mozilo, email to Eric Sieracki, April 13, 2006, re: 1Q2006 Earnings.

107. Angelo Mozilo, email to David Sambol, April 17, 2006, subject: sub-prime seconds.

108. David Sambol, email to Angelo Mozilo, April 17, 2006, re: Sub-prime seconds (cc Kurland, McMurray, and Bartlett).

109. Angelo Mozilo, email to David Sambol, April 17, 2006, subject: re: Sub-prime seconds (cc Kurland, McMurray, and Bartlett).

110. Sabeth Siddique, interview by FCIC, September 9, 2010.

111. "Survey of Nontraditional Mortgages" (actual title redacted), confidential Federal Reserve document obtained by FCIC, produced November 1, 2005, pp. 2, 3.

112. Susan Bies, interview by FDIC, October 11, 2010.

113. John Dugan, testimony before the FCIC, Hearing on Subprime Lending and Securitization and Government-Sponsored Enterprises (GSEs), day 2, session 2: Office of the Comptroller of the Currency, April 8, 2010, transcript.

114. Sabeth Siddique, interviews by FCIC, September 9, 2010, and October 25, 2010.

115. Bies, interview.

116. Mortgage Insurance Companies of America, quoted in Kirstin Downey, "Insurers Want Action on Risky Mortgages; Firms Want More Loan Restrictions," *Washington Post*, August 19, 2006.

117. William A. Sampson, Mortgage Insurance Companies of America, "MICA Testimony on Non-Traditional Mortgages," before the Senate Subcommittee on Housing and Transportation and the Subcommittee on Economic Policy, 109th Cong., 2nd sess., September 20, 2006.

118. Siddique, interviews, October 25, 2010, and September 9, 2010.

119. Consumer Advisory Council Meeting, March 30, 2006, transcript.

120. Consumer Advisory Council Meeting, June 22, 2006, transcript.

121. Siddique, interview, October 25, 2010; Bies, interview.

122. There is no central clearinghouse to calculate structured finance assets. The FCIC's estimate is based on the amount of structured finance assets rated by Moody's along with unrated agency RMBS, along with an estimate for structured finance assets not rated by Moody's, using as sources Fannie Mae and Freddie Mac, Bloomberg, American CoreLogic Loan Performance, Fitch Ratings, Moody's, S&P, Thomson Reuters, and SIFMA.

123. Alan Greenspan, testimony before the FCIC, Hearing on Subprime Lending and Securitization and Government-Sponsored Enterprises (GSEs), day 1, session 1: The Federal Reserve, April 7, 2010, transcript, p. 29.

124. Mortgage Bankers Association, "National Delinquency Survey."

125. CoreLogic, Inc., August 26, 2010, news release, second quarter, 2010. Second-quarter figures were an improvement from 11.2 million residential properties (24%) in negative equity in the first quarter of 2010.

126. Mark Zandi, written testimony for the FCIC, First Public Hearing of the FCIC, day 1, panel 3: Financial Crisis Impacts on the Economy, January 13, 2010, pp. 14, 15.

127. Dean Baker, interview by FCIC, August 18, 2010.

128. Warren Peterson, testimony before the FCIC, Hearing on the Impact of the Financial Crisis—Greater Bakersfield, session 3: Residential and Community Real Estate, September 7, 2010, transcript, pp. 106–7, 119–20, 107–8; Warren Peterson, interview by FCIC, August 24, 2010.

## Chapter 2

1. Ben Bernanke, written testimony before the FCIC, Hearing on Too Big to Fail: Expectations and Impact of Extraordinary Government Intervention and the Role of Systemic Risk in the Financial Crisis, day 1, session 1, September 2, 2010, p. 2.

2. Alan Greenspan, "The Evolution of Banking in a Market Economy," remarks at the Annual Conference of the Association of Private Enterprise Education, Arlington, Virginia, April 12, 1997.

3. Charles Calomiris and Gary Gorton, "The Origins of Banking Panics: Models, Facts, and Bank Regulation," in Calomiris, *U.S. Bank Deregulation in Historical Perspective* (Cambridge: Cambridge University Press, 2000), pp. 98–100. Prior to the end of the Civil War, banks issued notes instead of holding deposits. Runs on that system occurred in 1814, 1819, 1837, 1839, 1857, and 1861 (*ibid.*, pp. 98–99).

4. R. Alton Gilbert, "Requiem for Regulation Q: What It Did and Why It Passed Away," *Federal Reserve Bank of St. Louis Review* 68, no. 2 (February 1986): 23.

5. FCIC, "Preliminary Staff Report: Shadow Banking and the Financial Crisis," May 4, 2010, pp. 18–25.

6. Arthur E. Wilmarth Jr., "The Transformation of the U.S. Financial Services Industry, 1975–2000: Competition, Consolidation, and Increased Risks," *University of Illinois Law Review* (2002): 239–40.

7. Frederic S. Mishkin, "Asymmetric Information and Financial Crises: A Historical Perspective," in *Financial Markets and Financial Crises*, ed. R. Glenn Hubbard (Chicago: University of Chicago Press, 1991), p. 99; Wilmarth, "The Transformation of the U.S. Financial Services Industry, 1975–2000," p. 236.

8. Federal Reserve Board Flow of Funds Release, table L.208. Accessed December 29, 2010.

9. Kenneth Garbade, "The Evolution of Repo Contracting Conventions in the 1980s," *Federal Reserve Bank of New York Economic Policy Review* 12, no. 1 (May 2006): 32–33, 38–39 (available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=918498](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=918498)). To implement monetary policy, the Federal Reserve Bank of New York uses the repo market: it sets interest rates by borrowing Treasuries from and lending them to securities firms, many of which are units of commercial banks.

10. Alan Blinder, interview by FCIC, September 17, 2010.

11. Paul Volcker, interview by FCIC, October 11, 2010.

12. Fed Chairman Alan Greenspan, "International Financial Risk Management," remarks before the Council on Foreign Relations, November 19, 2002.

13. Richard C. Breeden, interview by FCIC, October 14, 2010.

14. Wilmarth, "The Transformation of the U.S. Financial Services Industry, 1975–2000," p. 241 and n. 102.

15. Thereafter, banks were only required to lend on collateral and set terms based upon what the market was offering. They also could not lend more than 10% of their capital to one subsidiary or more than 20% to all subsidiaries. Order Approving Applications to Engage in Limited Underwriting and Dealing in Certain Securities," *Federal Reserve Bulletin* 73, no. 6 (Jul. 1987): 473–508; "Revenue Limit on Bank-Ineligible Activities of Subsidiaries of Bank Holding Companies Engaged in Underwriting and Dealing in Securities," *Federal Register* 61, no. 251 (Dec. 30, 1996), 68750–56.

16. Julie L. Williams and Mark P. Jacobsen, "The Business of Banking: Looking to the Future," *Business Lawyer* 50 (May 1995): 798.

17. Fed Chairman Alan Greenspan, prepared testimony before the House Committee on Banking and Financial Services, *H.R. 10, the Financial Services Competitiveness Act of 1997*, 105th Cong., 1st sess., May 22, 1997.

18. FCIC staff calculations.

19. FCIC staff calculations.

20. FCIC staff calculations using First American/CoreLogic, National HPI Single-Family Combined (SFC).

21. This data series is relatively new. Those series available before 2009 showed no year-over-year national house price decline. First American/CoreLogic, National HPI Single-Family Combined (SFC).

22. For a general overview of the banking and thrift crisis of the 1980s, see FDIC, *History of the Eighties: Lessons for the Future*, vol. 1, *An Examination of the Banking Crises of the 1980s and Early 1990s* (Washington, DC: Federal Deposit Insurance Corporation, 1997).

23. Specifically, between 1980 and 1994, 1,617 federally insured banks with \$302.6 billion in assets and 1,295 savings and loans with \$621 billion in assets either closed or received FDIC or FSLIC assistance. See Federal Deposit Insurance Corp., *Managing the Crisis: The FDIC and RTC Experience, 1980–1994* (Aug. 1998), pp. 4, 5.

24. William K. Black, Associate Professor of Economics and Law, University of Missouri–Kansas City, written testimony for the FCIC, Hearing on the Impact of the Financial Crisis, session 1: Overview of Mortgage Fraud, September 21, 2010, p. 4. And see Kitty Calavita, Henry N. Pontell, and Robert H. Tillman, *Big Money Crime: Fraud and Politics in the Savings and Loan Crisis* (Berkeley: University of California Press, 1997), p. 28.

25. FDIC, *History of the Eighties: Lessons for the Future*, 1:39.

26. U.S. Treasury Department, “Modernizing the Financial System: Recommendations for Safer, More Competitive Banks” (February 1991), p. 55.

27. Testimony of John LaWare, Governor, Federal Reserve Board, at Hearings before Subcommittee on Economic Stabilization of the Committee on Banking, Finance, and Urban Affairs on the “Economic Implications of the Too Big to Fail Policy,” May 9, 1991, p. 11, <http://fraser.stlouisfed.org/publications/tbtf/issue/3954/download/61094/housetbtf1991.pdf>.

FDIC, *History of the Eighties: Lessons for the Future*, 1:251.

28. George G. Kaufman, “Too Big to Fail in U.S. Banking: Quo Vadis?” in *Too Big to Fail: Policies and Practices in Government Bailouts*, ed. Benton E. Gup (Westport, CT: Praeger, 2004), p. 163.

29. FCIC, “Preliminary Staff Report: Too-Big-to-Fail Financial Institutions,” August 31, 2010, pp. 6–9. (Rep. McKinney is quoted from the transcript of the hearing before the House Committee on Banking, Housing, and Urban Affairs).

30. *Ibid.*, pp. 10, 19.

### Chapter 3

1. Federal National Mortgage Association, *Federal National Mortgage Association, Background and History* (1975).

2. Department of Housing and Urban Development, *1986 Report to Congress on the Federal National Mortgage Association* (1987), p. 100.

3. See, e.g., Kenneth H. Bacon, “Privileged Position: Fannie Mae Expected to Escape Attempt at Tighter Regulation,” *Wall Street Journal*, June 19, 1992, and Stephen Labaton, “Power of the Mortgage Twins: Fannie and Freddie Guard Autonomy,” *New York Times*, November 12, 1991.

4. Armando Falcon Jr., written testimony for the FCIC, Hearing on Subprime Lending and Securitization and Government-Sponsored Enterprises (GSEs), day 3, session 2: Office of Federal Housing Enterprise Oversight, April 9, 2010, p. 2.

5. Wayne Passmore, “The GSE Implicit Subsidy and the Value of Government Ambiguity,” Federal Reserve Board Staff Working Paper 2005–05. See also Congressional Budget Office, “Updated Estimates of the Subsidies to the Housing GSEs,” April 8, 2004.

6. Federal Housing Finance Agency, *Report to Congress*, 2009 (2010), pp. 141, 158.

7. Fannie Mae Charter Act of 1968, §309(h), codified at 12 U.S.C. §1723a(h). The 1992 Federal Housing Enterprises Financial Safety and Soundness Act repealed this provision and replaced it with more elaborate provisions. Currently, the GSEs typically define low- and moderate-income borrowers as those with income at or below median income for a given area.

8. Department of Housing and Urban Development, “Regulations Implementing the Authority of the Secretary of the Department of Housing and Urban Development over the conduct of the Secondary market Operations of the Federal National Mortgage Association (FNMA),” *Federal Register* 43, no. 158 (August 15, 1978): 36199–226.

9. President William J. Clinton, “Remarks on the National Homeownership Strategy,” June 5, 1995.

10. President George W. Bush, “President’s Remarks to the National Association of Home Builders,” Greater Columbus Convention Center, Columbus, Ohio, October 2, 2004.

11. Andrew Cuomo, interview by FCIC, December 17, 2010.

12. Daniel Mudd, testimony before the FCIC, Hearing on Subprime Lending and Securitization and Government-Sponsored Enterprises (GSEs), day 3, session 1: Fannie Mae, April 9, 2010, transcript, pp. 18–19.

13. Richard Syron, interview by FCIC, August 31, 2010.

14. Senate Lobbying Disclosure Act Database ([www.senate.gov/legislative/Public\\_Disclosure/LDA\\_reports.htm](http://www.senate.gov/legislative/Public_Disclosure/LDA_reports.htm)); figures on employees and PACs compiled by the Center for Responsive Politics from Federal Elections Commission data.

15. Falcon, written testimony for the FCIC, April 9, 2010, p. 5.

16. James Lockhart, written testimony for the FCIC, Hearing on Subprime Lending and Securitization and Government-Sponsored Enterprises (GSEs), day 3, session 2: Office of Federal Housing Enterprise Oversight, pp. 4–8, 17 (quotation).

17. Senator Mel Martinez, interview by FCIC, September 28, 2010.

18. June E. O'Neill, remarks before the Conference on Appraising Fannie Mae and Freddie Mac, Washington, D.C., May 14, 1998, p. 8.

19. Federal Housing Finance Agency, *Report to Congress, 2008* (2009), tables 3, 4, 12, and 13.

20. Lawrence Lindsey, interview by FCIC, September 20, 2010.

21. Jim Callahan, interview by FCIC, October 18, 2010.

22. Securities Industry and Financial Markets Association (SIFMA), US ABS Outstanding.

23. Scott Patterson, interview by FCIC, August 12, 2010.

24. Gillian Tett, *Fool's Gold: How the Bold Dream of a Small Tribe at J. P. Morgan Was Corrupted by Wall Street Greed and Unleashed a Catastrophe* (New York: Free Press, 2009), pp. 32–33, 49, 70, 115.

25. Emmanuel Derman, interview by FCIC, May 12, 2010.

26. Volcker, interview.

27. Vincent Reinhart, interview by FCIC, September 10, 2010.

28. Lindsey, interview.

29. A futures contract is a bilateral contract in which one party, the long position, is compensated if the price or index or rate underlying the contract rises while the other party, the short position, is compensated if it goes down. An options contract grants the right but not the obligation to purchase or sell a commodity or financial instrument at a particular price in the future; the option holder derives a benefit if the price moves in his or her favor. In a swaps contract, the two parties exchange streams of payments based on different benchmarks.

30. Securities options are regulated by the SEC.

31. Commodity Futures Trading Commission, Exemption for Certain Swap Agreements, Final Rule, *Federal Register* 58 (January 22, 1993): 5587.

32. Brooksley Born, chairperson, Commodity Futures Trading Commission, “Concerning the Over-the-Counter Derivatives Market,” prepared testimony before the House Committee on Banking and Financial Services, 105th Cong., 2nd sess., July 24, 1998.

33. GAO, “Financial Derivatives: Actions Needed to Protect the Financial System,” GGD-94-133 (Report to Congressional Requesters), May 18, 1994.

34. Commodity Futures Trading Commission, “Division of Enforcement” ([www.cftc.gov/anr/anrenf98.htm](http://www.cftc.gov/anr/anrenf98.htm)).

35. “Joint Statement by Treasury Secretary Robert E. Rubin, Federal Reserve Board Chairman Alan Greenspan, and Securities and Exchange Commission Chairman Arthur Levitt,” Treasury Department press release, May 7, 1998.

36. Fed Chairman Alan Greenspan, “The Regulation of OTC Derivatives,” prepared testimony before the House Committee on Banking and Financial Services, 105th Cong., 2nd sess., July 24, 1998.

37. GAO, “Long-Term Capital Management: Regulators Need to Focus Greater Attention on Systemic Risk,” GAO/GGD-00-3 (Report to Congressional Requesters), October 1999, pp. 7, 18, 39–40. The notional amount of OTC derivatives contracts is a standard measure used in reporting the outstanding volume of such contracts. Its calculation is based on the value of the underlying instrument, commodity, index, or rate that the swap is based on. It therefore may be of limited use in measuring the potential exposure of the parties to the contracts. For example, an interest rate swap based on changes in interest rate on a \$100 million loan would likely involve only a small percentage of the \$100 million notional amount. On the other hand, price changes on an oil swap based on \$100 million worth of oil could be even more than the notional amount, depending on the volatility in oil prices. For credit default swaps, which are discussed in more detail later in this volume, the notional amount is usually a close measure of the potential financial exposure of the issuer or seller of the swap.

38. Fed Chairman Alan Greenspan, “Private-sector Refinancing of the Large Hedge Fund, Long-Term Capital Management,” prepared testimony before the House Committee on Banking and Financial Services, 105th Cong., 2nd sess., October 1, 1998.

39. Fed Chairman Alan Greenspan, “Financial Derivatives,” remarks before the Futures Industry Association, Boca Raton, Florida, March 19, 1999.

40. “Over-the-Counter Derivatives Markets and the Commodity Exchange Act,” report of the President’s Working Group on Financial Markets, November 1999.

41. Gross market value is the current price at which the outstanding swaps contract can be sold or replaced on the market. As such, that amount reflects the current amount owing on a contract but does not reflect the possible future exposure on these generally long-term instruments.

42. Bank for International Settlements, data on semiannual OTC derivatives statistics.

43. Alan Greenspan, testimony before the FCIC, Hearing on Subprime Lending and Securitization and Government-Sponsored Entities (GSEs), day 1, session 1: The Federal Reserve, April 1, 2010, transcript, pp. 88–89.

44. Robert Rubin, testimony before the FCIC, FCIC Hearing on Subprime Lending and Securitization and Government-Sponsored Entities (GSEs), day 2, session 1: Citigroup Senior Management, April 8, 2010, transcript, pp. 108–10, 123–24.

45. Lawrence Summers, interview by FCIC, May 28, 2010.

46. Daniel K. Tarullo, *Banking on Basel: The Future of International Financial Regulation* (Washington, DC: Peterson Institute for International Economics, 2008), p. 58.

47. Final Rule—Amendment to Regulations H and Y,” *Federal Reserve Bulletin* 75, no. 3 (March 1989), 164–66.

48. Tarullo, *Banking on Basel*, pp. 61–64.

49. For more on derivatives, see FCIC, “Preliminary Staff Report: Overview on Derivatives,” June 29, 2010.

50. Warren Buffett, testimony before the FCIC, Hearing on the Credibility of Credit Ratings, the Investment Decisions Made Based on Those Ratings, and the Financial Crisis, session 2: Credit Ratings and the Financial Crisis, June 2, 2010, transcript, pp. 312, 326, 325.

51. Eric R. Dinallo, former superintendent, New York State Insurance Department, written testimony for the FCIC, Hearing on the Role of Derivatives in the Financial Crisis, session 2, Derivatives: Supervisors and Regulators, July 1, 2010, p. 7; Rochelle Katz, State of New York Insurance Department, letter to Bertil Lundqvist, Skadden, Arps, Slate, Meagher & Flom, LLP, June 16, 2000.

52. Data provided by AIG to the FCIC, CDS notional balances at year-end.

53. Bank for International Settlements, semiannual OTC derivatives statistics.

54. Dinallo testified that the market in CDS in September 2008 was estimated to be \$62 trillion at a time when there was about \$16 trillion of private-sector debt (written testimony for the FCIC, July 1, 2010, p. 9).

55. “AIGFP also participates as a dealer in a wide variety of financial derivatives transactions” (AIG, 2007 Form 10-K, p. 83). AIG’s notional derivatives outstanding were \$2.1 trillion at the end of 2007, including \$1.2 trillion of interest rate swaps, \$0.6 trillion of credit derivatives, \$0.2 trillion of currency swaps, and \$0.2 trillion of other derivatives (p. 163).

56. FCIC staff calculations using data from Office of the Comptroller of the Currency; call reports.

57. Data provided to the FCIC by Goldman Sachs.

## Chapter 4

1. 103 Public Law 103-328, September 29, 1994. Before the 1994 legislation, some states had voluntarily opened themselves up to out-of-state banks. FDIC, *History of the Eighties: Lessons for the Future*, vol. 1, *An Examination of the Banking Crises of the 1980s and Early 1990s* (Washington, DC: FDIC, 1997), p. 130.

2. These were the largest banks as of 2007. See FCIC, “Preliminary Staff Report: Too-Big-to-Fail Financial Institutions,” August 31, 2010, p. 14.

3. Data from SNL Financial ([www.snl.com/](http://www.snl.com/)).

4. Public Law 104-208, sec. 2222, codified as 12 U.S.C. § 3311; law in effect as of January 3, 2007.

5. Arthur Levitt, interview by FCIC, October 1, 2010.

6. John D. Hawke and John Dugan, testimony before the FCIC, Hearing on Subprime Lending and Securitization and Government-Sponsored Enterprises (GSEs), day 2, session 2: Office of the Comptroller of the Currency, April 8, 2010, transcript, pp. 169, 175.

7. Fed Vice Chairman Roger W. Ferguson Jr., “The Future of Financial Services—Revisited,” remarks at the Future of Financial Services Conference, University of Massachusetts, Boston, October 8, 2003.

8. Fed Chairman Alan Greenspan, “Government Regulation and Derivative Contracts,” speech at the Financial Markets Conference of the Federal Reserve Bank of Atlanta, Coral Gables, Florida, February 21, 1997.

9. Richard Spillenkothen, “Notes on the performance of prudential supervision in the years preceding the financial crisis by a former director of banking supervision and regulation at the Federal Reserve Board (1991 to 2006),” May 31, 2010, p. 28.

10. See U.S. Department of the Treasury, *Modernizing the Financial System* (February 1991), pp. XIX-5, XIX-6, 67–69: “the existence of fewer agencies would concentrate regulatory power in the remaining ones, raising the danger of arbitrary or inflexible behavior. . . . Agency pluralism, on the other hand, may be useful, since it can bring to bear on general bank supervision the different perspectives and experiences of each regulator, and it subjects each one, where consultation and coordination are required, to the checks and balances of the others’ opinion.”

11. Fed Chairman Alan Greenspan, statement before the Senate Committee on Banking, Housing, and Urban Affairs, 103rd Cong., 2nd sess., March 2, 1994, reprinted in the *Federal Reserve Bulletin*, May 1, 1994, p. 382.

12. Securities Industry Association v. Board of Governors of the Federal Reserve System, 627 F.Supp. 695 (D.D.C. 1986); Kathleen Day, “Reinventing the Bank; With Depression-Era Law about to Be Rewritten, the Future Remains Unclear,” *Washington Post*, October 31, 1999.

13. Edward Yingling, quoted in “The Making of a Law,” *ABA Banking Journal*, December 1999.

14. The two-year exemption is contained in section 4(a)(2) of the Bank Holding Company Act. The Fed could have granted up to three one-year extensions of that exemption.

15. FCIC staff computations based on data from the Center for Responsive Politics. “Financial sector” here includes insurance companies, commercial banks, securities and investment firms, finance and credit companies, accountants, savings and loan institutions, credit unions, and mortgage bankers and brokers.

16. U.S. Department of the Treasury, *Modernizing the Financial System* (February 1991); Fed Chairman Alan Greenspan, “H.R. 10, the Financial Services Competitiveness Act of 1997,” testimony before the House Committee on Banking and Financial Services, 105th Cong., 1st sess., May 22, 1997.

17. Katrina Brooker, “Citi’s Creator, Alone with His Regrets,” *New York Times*, January 2, 2010.

18. John Reed, interview by FCIC, March 24, 2010.

19. FDIC Institution Directory; SNL Financial.

20. Fed Governor Laurence H. Meyer, “The Implications of Financial Modernization Legislation for Bank Supervision,” remarks at the Symposium on Financial Modernization Legislation, sponsored by Women in Housing and Finance, Washington, D.C., December 15, 1999.

21. Ben S. Bernanke, written testimony before the FCIC, Hearing on Too Big to Fail: Expectations and Impact of Extraordinary Government Intervention and the Role of Systemic Risk in the Financial Crisis, day 1, session 1: The Federal Reserve, September 2, 2010, p. 14.

22. Patricia A. McCoy et al., “Systemic Risk through Securitization: The Result of Deregulation and Regulatory Failure,” *Connecticut Law Review* 41 (2009): 1345–47, 1353–55.

23. Fed Chairman Alan Greenspan, “Lessons from the Global Crises,” remarks before the World Bank Group and the International Monetary Fund, Program of Seminars, Washington, DC, September 27, 1999.

24. David A. Marshall, “The Crisis of 1998 and the Role of the Central Bank,” Federal Reserve Bank of Chicago, *Economic Perspectives* (1Q 2001): 2.

25. Commercial and industrial loans at all commercial banks, monthly, seasonally adjusted, from the Federal Reserve Board of Governors H.8 release; FCIC staff calculation of average change in loans outstanding over any two consecutive months in 1997 and 1998.

26. Franklin R. Edwards, “Hedge Funds and the Collapse of Long-Term Capital Management,” *Journal of Economic Perspectives* 13 (1999): 198.

27. "Hedge Funds, Leverage, and the Lessons of Long-Term Capital Management," Report of the President's Working Group on Financial Markets, April 1999, p. 14.
28. Edwards, "Hedge Funds and the Collapse of Long-Term Capital Management," pp. 200, 197; and Bloomberg.
29. *Ibid.*, pp. 197–205; Roger Lowenstein, *When Genius Failed: The Rise and Fall of Long-Term Capital Management* (New York: Random House, 2000), pp. 36–54, 77–84, 94–105, 123–30.
30. "Hedge Funds, Leverage, and the Lessons of Long-Term Capital Management," pp. 11–12.
31. William J. McDonough, president of the Federal Reserve Bank of New York, statement before the House Committee on Banking and Financial Services, 105th Cong., 2nd sess., October 1, 1998.
32. GAO, "Long-Term Capital Management: Regulators Need to Focus Greater Attention on Systemic Risk," GAO/GGD-00-3 (Report to Congressional Requesters), October 1999, p. 39.
33. "Hedge Funds, Leverage, and the Lessons of Long-Term Capital Management," pp. 13–14.
34. Lowenstein, *When Genius Failed*, pp. 205–18.
35. McDonough, statement before the House Committee on Banking and Financial Services, October 1, 1998.
36. Andrew F. Brimmer, "Distinguished Lecture on Economics in Government: Central Banking and Systemic Risks in Capital Markets," *Journal of Economic Perspectives*, no. 2 (Spring 1989) (lecture by a former Fed governor, analyzing the Fed's market interventions in 1970, 1980 and 1987, and concluding that the Fed had consciously assumed a "strategic role as the ultimate source of liquidity in the economy at large"); Keith Garbade, "The Evolution of Repo Contracting Conventions in the 1980s," Federal Reserve Bank of New York *Economic Policy Review* (May 2006): 33.
37. Harvey Miller, interview by FCIC, August 5, 2010.
38. Stanley O'Neal, interview by FCIC, September 16, 2010.
39. Fed Chairman Alan Greenspan, "Do efficient financial markets mitigate financial crises?" remarks before the 1999 Financial Markets Conference of the Federal Reserve Bank of Atlanta, October 19, 1999 ([www.federalreserve.gov/boarddocs/speeches/1999/19991019.htm](http://www.federalreserve.gov/boarddocs/speeches/1999/19991019.htm)).
40. "Hedge Funds, Leverage, and the Lessons of Long-Term Capital Management," p. 16.
41. *Ibid.*
42. *Ibid.*
43. Philip Goldstein, et al. v. SEC, Opinion, Case No. 04-1434 (D.C. Cir. June 23, 2006).
44. *Time*, February 15, 1999; Bob Woodward, *Maestro: Greenspan's Fed and the American Boom* (New York: Simon & Schuster, 2000).
45. SIFMA (Securities Industry and Financial Markets Association), *Fact Book 2008*, pp. 9–10.
46. Board of Governors of the Federal Reserve System, *Federal Reserve Statistical Release Z.1: Flow of Funds Accounts of the United States*, 4th Qtr. 1996, p. 88 (Table L.213, line 18); 4th Qtr. 2001, p. 90 (Table L.213, line 20).
47. SEC Chairman William H. Donaldson, "Testimony Concerning Global Research Analyst Settlement," before the Senate Committee on Banking, Housing and Urban Affairs, 108th Cong., 1st sess., May 7, 2003.
48. SEC, "SEC Fact Sheet on Global Analyst Research Settlements," April 30, 2003; Financial Industry Regulatory Authority news release, "NASD Fines Piper Jaffray \$2.4 Million for IPO Spinning," July 12, 2004.
49. Arthur E. Wilmarth Jr., "Conflicts of Interest and Corporate Governance Failures at Universal Banks During the Stock Market Boom of the 1990s: The Cases of Enron and WorldCom," George Washington University Public Law and Legal Theory Working Paper 234 (2007).
50. Fed Chairman Alan Greenspan, "International Financial Risk Management," remarks before the Council on Foreign Relations, Washington, DC, November 19, 2002.
51. Ferguson, "The Future of Financial Services—Revisited."
52. Spillenkothen, "Notes on the performance of prudential supervision in the years preceding the financial crisis," p. 28.
53. "First the Put; Then the Cut?" *Economist*, December 16, 2000, p. 81.

54. Fed Chairman Alan Greenspan, “Risk and Uncertainty in Monetary Policy,” remarks at the Meetings of the American Economic Association, San Diego, California, January 3, 2004. See also Fed Governor Ben S. Bernanke, “Asset-Price ‘Bubbles’ and Monetary Policy,” remarks before the N.Y. Chapter of the National Association of Business Economics, New York, October 15, 2002.

55. Fed Chairman Alan Greenspan, “Reflections on Central Banking,” remarks at a symposium sponsored by the Federal Reserve Board of Kansas City, Jackson Hole, Wyoming, August 26, 2005.

56. Lawrence Lindsey, interview by FCIC, September 20, 2010.

57. The NYSE decided in 1970 to allow members to be publicly traded. See Andrew von Nordenflycht, “The Demise of the Professional Partnership? The Emergence and Diffusion of Publicly-Traded Professional Service Firms” (draft paper, Faculty of Business, Simon Fraser University, September 2006), pp. 20–21.

58. Peter Solomon, written testimony for the FCIC, First Public Hearing of FCIC, day 1, panel 2: Financial Market Participants, January 13, 2010, p. 2.

59. Brian R. Leach, interview by FCIC, March 4, 2010, p. 22.

60. Jian Cai, Kent Cherny, and Todd Milbourn, “Compensation and Risk Incentives in Banking and Finance,” Federal Reserve Bank of Cleveland *Economic Commentary* (September 14, 2010).

61. Carola Frydman and Raven E. Saks, “Historical Trends in Executive Compensation, 1936–2005” (2007), p.3.

62. Cai, Cherny, and Milbourn, “Compensation and Risk Incentives in Banking and Finance.”

63. Goldman Sachs, 2006 and 2009 10-K; Morgan Stanley, 2008 10-K; Merrill Lynch, 2005 and 2008 10-K.

64. “Gutfreund’s Pay Is Cut,” *New York Times*, December 23, 1987.

65. Merrill Lynch, “2007 Proxy Statement,” p. 38.

66. Goldman Sachs, “Proxy Statement for 2008 Annual Meeting of Shareholders,” March 7, 2008, p. 16; Blankfein received \$600,000 base salary and a 2007 year-end bonus of \$67.9 million.

67. Lehman Brothers, “Proxy Statement for Year-end 2007,” p. 28; JP Morgan Chase, “2007 Proxy Statement,” p. 16.

68. New York State Office of the State Comptroller, “New York City Securities Industry Bonus Pool,” February 23, 2010. The bonus pool is for securities industry (NAICS 523) employees who work in New York City.

69. “Banks Set for Record Pay, Top Firms on Pace to Award \$145 Billion for 2009, Up 18%, WSJ Study Finds,” WSJ.com, January 14, 2010.

70. Sandy Weill, interview by FCIC, October 4, 2010.

71. Lord Adair Turner, interview by FCIC, November 30, 2010.

72. Ben S. Bernanke, testimony before the FCIC, Hearing on Too Big to Fail: Expectations and Impact of Extraordinary Government Intervention and the Role of Systemic Risk in the Financial Crisis, day 2, session 1: The Federal Reserve, September 2, 2010, transcript, p. 111.

73. Testimony of Armando Falcon Jr., former director Office of Federal Housing Enterprise Oversight, written testimony for the FCIC, Hearing on Subprime Lending and Securitization and Government-Sponsored Enterprises (GSEs), day 3, session 2: Office of Federal Housing Enterprise Oversight, April 9, 2010, pp. 8–10.

74. Sheila C. Bair, written testimony for the FCIC, First Public Hearing of the FCIC, day 2, panel 1: Current Investigations into the Financial Crisis—Federal Officials, January 14, 2010, p. 22.

75. Mary L. Schapiro, written testimony for the FCIC, First Public Hearing of the FCIC, day 2, panel 1: Current Investigations into the Financial Crisis—Federal Officials, January 14, 2010, p.18.

76. Bloomberg LLC, Financial Analysis Function, Public Filings for JPM, Citigroup, Bank of America, Goldman Sachs, and Lehman Brothers.

77. Fannie Mae, SEC filings 10-K and 10-Q; see the 2009 10-K, p. 70, Total Assets and Fannie Mae MBS held by Third Parties; Federal Housing Finance Agency, *Report to Congress, 2008* (2009), pp. 111, 128.

78. FCIC staff calculations.

79. SNL Financial Database and SEC public filings.

80. Calculated from proxy statements.

81. John Snow, interview by FCIC, October 7, 2010.

82. *Ibid.*

## Chapter 5

1. Gail Burks, written testimony for the FCIC, Hearing on the Impact of the Financial Crisis—State of Nevada, session 3: The Impact of the Financial Crisis on Nevada Real Estate, September 8, 2010, p. 3.

2. Tom C. Putnam, president, Putnam Housing Finance Consulting, written testimony for the FCIC, Hearing on the Impact of the Financial Crisis—Sacramento, session 2: Mortgage Origination, Mortgage Fraud and Predatory Lending in the Sacramento Region, September 23, 2010, pp. 3–4.

3. Board of Governors of the Federal Reserve System, *Federal Reserve Statistical Release Z.1: Flow of Funds Accounts of the United States*, release date, December 9, 2010, Table L.1: Credit Market Debt Outstanding, and Table L.126: Issuers of Asset-Backed Securities (ABS)

4. Jim Callahan, interview by FCIC, October 18, 2010.

5. Lewis Ranieri, former vice chairman of Salomon Brothers, interview by FCIC, July 30, 2010.

6. Federal Deposit Insurance Corporation, “Managing the Crisis: The FDIC and RTC Experience” (August 1998), pp. 29, 6–7, 407–8, 38.

7. *Ibid.*, 417.

8. *Ibid.*, pp. 9, 32, 36, 48

9. The figures throughout this discussion of CMLTI 2006-NC2 are FCIC staff calculations, based on analysis of loan-level data from Blackbox Inc. and Standard & Poor’s; Moody’s PDS database; Moody’s CDO EMS database; and Citigroup, Fannie Mae Term Sheet, CMLTI 2006-NC2, September 7, 2006, pp. 1, 3. See also Brad S. Karp, counsel for Citigroup, letter to FCIC, November 4, 2010, p. 1, pp. 2–3. All ratings of its tranches are as given by Standard & Poor’s.

10. Technically, this deal had two unrated tranches below the equity tranche, also held by Citigroup and the hedge fund.

11. Fed Chairman Ben S. Bernanke, “The Community Reinvestment Act: Its Evolution and New Challenges,” speech at the Community Affairs Research Conference, Washington, D.C., March 30, 2007.

12. *Ibid.*

13. See Glenn Canner and Wayne Passmore, “The Community Reinvestment Act and the Profitability of Mortgage-Oriented Banks,” Working Paper, Federal Reserve Board, March 3, 1997. Under the Community Reinvestment Act, low- and moderate-income borrowers have income that is at most 80% of area median income.

14. Fed Chairman Alan Greenspan, “Economic Development in Low- and Moderate-Income Communities,” speech at Community Forum on Community Reinvestment and Access to Credit: California’s Challenge, in Los Angeles, January 12, 1998.

15. John Dugan, interview by FCIC, March 12, 2010.

16. Lawrence B. Lindsey, interview by FCIC, September 20, 2010.

17. Souphala Chomsisengphet and Anthony Pennington-Cross, “The Evolution of the Subprime Mortgage Market,” *Federal Reserve Bank of St. Louis Review* 88, no. 1 (January/February 2006): 40

18. Southern Pacific Funding Corp, Form 8-K, September 14, 1998

19. The top 10 list is as of 1996, according to FCIC staff calculations using data from the following sources: Inside Mortgage Finance, *The 2009 Mortgage Market Statistical Annual*, vol. 1, *The Primary Market* (Bethesda, Md.: Inside Mortgage Finance Publications, 2009), p. 214, “Top 25 B&C Lenders in 1996”; Thomas E. Foley, “Alternative Financial Ratios for the Effects of Securitization: Tools for Analysis,” Moody’s Investor Services, September 19, 1997, p. 5; and Moody’s Investor Service, “Subprime Home Equity Industry Outlook—The Party’s Over,” Moody’s Global Credit Research, October 1998.

20. “FDIC Announces Receivership of First National Bank of Keystone, Keystone, West Virginia,” Federal Deposit Insurance Corporation and Office of the Comptroller of the Currency joint press release, September 1, 1999.

21. FCIC staff calculations using data from *Inside MBS & ABS*.

22. See Marc Savitt, interview by FCIC, November 17, 2010.

23. Henry Cisneros, interview by FCIC, October 13, 2010.

24. Glenn Loney, interview by FCIC, April 1, 2010.

25. Senate Committee on Banking, Housing, and Urban Affairs, *The Community Development, Credit Enhancement, and Regulatory Improvement Act of 1993*, 103rd Cong., 1st sess., October 28, 1993, S. Rep. 103–169, p. 18.

26. *Ibid.*, p. 19.

27. 15 U.S.C. § 1639(h) 2006.

28. Loans were subject to HOEPA only if they hit the interest rate trigger or fee trigger: i.e., if the annual percentage rate for the loan was more than 10 percentage points above the yield on Treasury securities having a comparable maturity or if the total charges paid by the borrower at or before closing exceeded \$400 or 8% of the loan amount, whichever was greater. See Senate Committee on Banking, Housing, and Urban Affairs, S. Rep. 103–169, p. 54.

29. *Ibid.*, p. 24.

30. Board of Governors of the Federal Reserve System and Department of Housing and Urban Development, “Joint Report Concerning Reform to the Truth in Lending Act and the Real Estate Settlement Procedures Act” (July 1998), p. 56.

31. Griffith L. Garwood, director, Division of Consumer and Community Affairs, Board of Governors of the Federal Reserve System, “To the Officers and Managers in Charge of Consumer Affairs Examination and Consumer Complaint Programs,” Consumer Affairs Letter CA 98–1, January 20, 1998

32. GAO, “Large Bank Mergers: Fair Lending Review Could Be Enhanced with Better Coordination,” GAO/GGD-00–16 (Report to the Honorable Maxine Waters and the Honorable Bernard Sanders, House of Representatives), November 1999, p. 20.

33. Fed and HUD, “Joint Report,” pp. I–XXVII.

34. Griffith L. Garwood, director, Division of Consumer and Community Affairs, Board of Governors of the Federal Reserve System, memorandum to the Committee on Consumer and Community Affairs, “Memorandum concerning the Board’s Report to the Congress on the Truth in Lending and Real Estate Settlement Procedures Acts,” April 8, 1998, p. 42.

35. Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation, Office of the Comptroller of the Currency, and Office of Thrift Supervision, “Interagency Guidance on Subprime Lending” (March 1, 1999), p. 1

36. *Ibid.*, pp. 1–7; quotation, p. 5.

37. U.S. Department of the Treasury and U.S. Department of Housing and Urban Development, “Curbing Predatory Home Lending” (June 1, 2000), pp. 13–14, 1–2, 81 (quotations, 2, 1–2).

38. Gail Burks, president and chief executive officer, Nevada Fair Housing Center, Inc., testimony before the FCIC, Hearing on the Impact of the Financial Crisis—State of Nevada, session 3: The Impact of the Financial Crisis on Nevada Real Estate, September 8, 2010, transcript, p. 242–43. See also Kevin Stein, associate director, California Reinvestment Coalition, written testimony for the FCIC, Hearing on the Impact of the Financial Crisis—Sacramento, session 2: Mortgage Origination, Mortgage Fraud and Predatory Lending in the Sacramento Region, September 23, 2010, pp. 8–9. See also his testimony at the same hearing, transcript, pp. 73–74. See Diane E. Thompson, of counsel, National Consumer Law Center, Inc., and Margot F. Saunders, of counsel, National Consumer Law Center, Inc., interview by FCIC, September 10, 2010.

39. Diane E. Thompson and Margot F. Saunders, both of counsel, National Consumer Law Center, interview by FCIC, September 10, 2010.

40. Gary Gensler, interview by FCIC, May 14, 2010.

41. Sheila Bair, testimony before the FCIC, First Public Hearing of the FCIC, day 2, panel 1: Current Investigations into the Financial Crisis—Federal Officials, January 14, 2010, transcript, p. 97.

42. Sheila Bair, interview by FCIC, March 29, 2010.

43. Sandra F. Braunstein, interview by FCIC, April 1, 2010, pp. 31–34.

44. Bair, interview.

45. Treasury and HUD, “Curbing Predatory Home Lending,” p. 31.

## Chapter 6

1. Figures represented the compound average growth rate and FCIC staff calculations from CoreLogic National Home Price Index, Single-Family Combined (SCF); CoreLogic Loan Performance HPI August 2010.

2. Inside Mortgage Finance, *The 2009 Mortgage Market Statistical Annual*, vol. 1, *The Primary Market* (Bethesda, Md.: Inside Mortgage Finance, 2009), p. 4, “Mortgage Originations by Product.”

3. Federal Reserve Board press release, May 27, 2004.

4. Fed Governor Ben S. Bernanke, “The Great Moderation,” remarks at the meetings of the Eastern Economic Association, Washington, D.C., February 20, 2004. See also Olivier Blanchard and John Simon, “The Long and Large Decline in U.S. Output Volatility,” *Brookings Papers on Economic Activity*, no. 1 (2001): 135–64.

5. Fed Governor Ben S. Bernanke, “Deflation: Making Sure ‘It’ Doesn’t Happen Here,” remarks before the National Economists Club, Washington, D.C., November 21, 2002.

6. FCIC staff calculations from Board of Governors of the Federal Reserve System, H.15 Selected Interest Rate release, 3-month AA Nonfinancial Commercial Paper Rate, WCPN3M (weekly, ending Friday); U.S. Department of Treasury, Daily Treasury Yield Curve Rates, 1990 to Present.

7. This example assumes that the homeowner is able to come up with a larger down payment to cover 20% of the higher-priced home. Here, the difference would be about \$13,000.

8. Federal Housing Finance Agency, “Data on the Risk Characteristics and Performance of Single-Family Mortgages Originated from 2001 through 2008 and Financed in the Secondary Market” (September 13, 2010), Table 2a: Share of Single-Family Mortgages Originated from 2001 through 2008 and Acquired by the Enterprises or Financed with Private-Label MBS by Loan-to-Value Ratio and Borrower FICO Score at Origination, Adjustable-Rate Mortgages, p. 22. Prime borrowers are defined as those whose mortgages are financed by the government-sponsored enterprises.

9. Yuliya Demyanyk and Otto Van Hemert, “Understanding the Subprime Mortgage Crisis” (December 5, 2008), table 1: Loan Characteristics at Origination for Different Vintages, p. 7.

10. FCIC staff calculations from CoreLogic/First American, Home Price Index for Single-Family Combined State HPI data, last updated August 2010, and CoreLogic State Home Price Index, provided to the FCIC by CoreLogic. Staff calculations of all annual growth rates are compound annual growth rates from January to January.

11. U.S. Census Bureau, “Housing Vacancies and Homeownership, CPS/HVS,” Table 14: Homeownership Rates for the US 1965 to Present.

12. Brian K. Bucks, Arthur B. Kennickell, and Kevin B. Moore, “Recent Changes in US Family Finances: Evidence from the 2001 and 2004 Survey of Consumer Finances,” *Federal Reserve Bulletin* (2006): Tables 8A and 8B, pp. A20–A23, A8.

13. Congressional Budget Office, “Housing Wealth and Consumer Spending,” Background Paper, January 2007, p. 15.

14. Mortgages may have been refinanced more than once in that year.

15. FCIC staff calculations with updated data provided by Alan Greenspan and James Kennedy, whose data originally appeared in “Sources and Uses of Equity Extracted from Homes,” Finance and Economics Discussion Series, Federal Reserve Board, 2007-20 (March 2007).

16. CBO, “Housing Wealth and Consumer Spending,” p. 2.

17. Fed Chairman Alan Greenspan, “The Economic Outlook,” prepared testimony before the Joint Economic Committee, 107th Cong., 2nd sess., November 13, 2002.

18. Fed Chairman Alan Greenspan, “Federal Reserve Board’s Semiannual Monetary Policy Report to the Congress,” prepared testimony before the House Committee on Financial Services, 108th Cong., 2nd sess., February 12, 2004.

19. FCIC staff calculations from *2009 Mortgage Market Statistical Annual*, 1:4, “Mortgage Originations by Product” (total subprime volume); 2:13, “Non-Agency MBS Issuance by Type” (subprime PLS).

20. *Ibid.*, 1:3, “Mortgage Origination Indicators”; 2:20, 2:27, “Mortgage Originations by Product.”

21. Bart McDade, interview by FCIC, April 16, 2010.

22. Presentation to the Lehman Board of Directors, March 20, 2007. Lehman had also acquired three international lenders during this time period.

23. New Century, 1999 10-K, March 30, 2000, p. 2.

24. Final Report of Michael J. Missal, Bankruptcy Court Examiner, in RE: New Century TRS Holdings, Chapter 11, Case No. 07-10416 (KJC), (Bankr. D.Del.), February 29, 2008, p. 42.

25. New Century, 2000 10-K, April 2, 2001, p. 15; New Century, 2003 10-K, March 15, 2004, p. 13. Rankings from *2009 Mortgage Market Statistical Annual*, 1:220, 2:23.

26. Aseem Mital and Angelo Mozilo, quoted in Erick Bergquist, “Under Scrutiny, Ameriquest Details Procedures,” *American Banker* 170, no. 125 (June 30, 2005): 1. Volume and rankings from *2009 Mortgage Market Statistical Annual*, 1:220, 2:23.

27. Lewis Ranieri, interview by FCIC, July 30, 2010.

28. James M. Lacko and Janis K. Pappalardo, “The Effect of Mortgage Broker Compensation Disclosures on Consumers and Competition: A Controlled Experiment,” Federal Trade Commission Bureau of Economics Staff Report (February 2004), p. 1.

29. Jay Jeffries, testimony before the FCIC, Hearing on the Impact of the Financial Crisis—State of Nevada, session 3: The Impact of the Financial Crisis on Nevada Real Estate, September 8, 2010, transcript, p. 177.

30. Brian Bucks and Karen Pence, “Do Borrowers Know Their Mortgage Terms?” *Journal of Urban Economics* 64 (2008): 223.

31. Michael Calloun and Julia Gordon, interview by FCIC, September 16, 2010.

32. Annamaria Lusardi, “Americans’ Financial Capability,” report prepared for the FCIC, February 26, 2010, p. 3.

33. FCIC staff estimates based on analysis of Blackbox, S&P, and IP Recovery, provided by Antje Berndt, Burton Hollifield, and Patrik Sandas, in their paper, “The Role of Mortgage Brokers in the Subprime Crisis,” April 2010.

34. William C. Apgar and Allen J. Fishbein, “The Changing Industrial Organization of Housing Finance and the Changing Role of Community-Based Organizations,” working paper (Joint Center for Housing Studies, Harvard University, May 2004), p. 9.

35. Herb Sandler, interview by FCIC, September 22, 2010.

36. Wholesale Access, “Mortgage Brokers 2006” (August 2007), pp. 35, 37.

37. Jamie Dimon, testimony before the FCIC, First Public Hearing of the FCIC, panel 1: Financial Institution Representatives, January 13, 2010, transcript, p. 13.

38. October Research Corporation, executive summary of the 2007 *National Appraisal Survey*, p. 4.

39. Dennis J. Black, written testimony for the FCIC, Hearing on the Impact of the Financial Crisis—Miami, session 2: Uncovering Mortgage Fraud in Miami, September 21, 2010, p. 8.

40. Karen J. Mann, written testimony for the FCIC, Hearing on the Impact of the Financial Crisis—Sacramento, session 2: Mortgage Origination, Mortgage Fraud and Predatory Lending in the Sacramento Region, September 23, 2010, p. 2.

41. Gary Crabtree, testimony before the FCIC, Hearing on the Impact of the Financial Crisis—Greater Bakersfield, session 4: Local Housing Market, September 7, 2010, transcript, p. 172.

42. Complaint, *People of the State of New York v. First American Corporation and First American eAppraiseIT* (N.Y. Sup. Ct. November 1, 2007), pp. 3, 7, 8.

43. Martin Eakes, quoted in Richard A. Opiel Jr. and Patrick McGeehan, “Along with a Lender, Is Citigroup Buying Trouble?” *New York Times*, October 22, 2000.

44. Pam Flaherty, quoted in Erick Bergquist, “Judging Citi, a Year Later: Subprime Reform ‘on Track’; Critics Unsatisfied,” *American Banker*, September 10, 2001.

45. “Citigroup Settles FTC Charges against the Associates Record-Setting \$215 Million for Subprime Lending Victims,” Federal Trade Commission press release, September 19, 2002.

46. Mark Olson, interview by FCIC, October 4, 2010.

47. Timothy O’Brien, “Fed Assess Citigroup Unit \$70 Million in Loan Abuse,” *The New York Times*, May 28, 2004.

48. Federal Reserve Board internal staff document, “The Problem of Predatory Lending,” December 5, 2000, pp. 10–13.

49. Federal Reserve Board, Morning Session of Public Hearing on Home Equity Lending, July 27, 2000, opening remarks by Governor Gramlich, p. 9.

50. Scott Alvarez, interview by FCIC, March 23, 2010.

51. Alan Greenspan, written testimony for the FCIC, Hearing on Subprime Lending and Securitization and Government-Sponsored Enterprises (GSEs), day one, session 1: The Federal Reserve, April 7, 2010, p. 13.

52. Alan Greenspan, quoted in David Faber, *And Then the Roof Caved In: How Wall Street’s Greed and Stupidity Brought Capitalism to Its Knees* (Hoboken, N.J.: Wiley, 2009), pp. 53–54.

53. “Truth in Lending,” *Federal Register* 66, no. 245 (December 20, 2001): 65612 (quotation), 65608.

54. Robert B. Avery, Glenn B. Canner, and Robert E. Cook, “New Information Reported under HMDA and Its Application in Fair Lending Enforcement,” *Federal Reserve Bulletin* 91 (Summer 2005): 372.

55. Alan Greenspan, interview by FCIC, March 31, 2010

56. Sheila Bair, testimony before the FCIC, Hearing on Too Big to Fail: Expectations and Impact of Extraordinary Government Intervention and the Role of Systemic Risk in the Financial Crisis, day 2, session 2: Federal Deposit Insurance Corporation, September 2, 2010, transcript, p. 191.

57. Dolores Smith and Glenn Loney, memorandum to Governor Edward Gramlich, “Compliance Inspections of Nonbank Subsidiaries of Bank Holding Companies,” August 31, 2000.

58. GAO, “Consumer Protection: Federal and State Agencies Face Challenges in Combating Predatory Lending,” GAO 04–280 (Report to the Chairman and Ranking Minority Member, Special Committee on Aging, U.S. Senate), January 2004, pp. 52–53.

59. Sandra Braunstein, interview by FCIC, April 1, 2010. Transcript pp. 32–33.

60. Greenspan, interview.

61. *Ibid.*

62. Edward M. Gramlich, “Booms and Busts: The Case of Subprime Mortgages,” *Federal Reserve Bank of Kansas City Economic Review* (2007): 109.

63. Edward Gramlich, quoted in Greg Ip, “Did Greenspan Add to Subprime Woes? Gramlich Says Ex-Colleague Blocked Crackdown On Predatory Lenders Despite Growing Concerns,” *Wall Street Journal*, June 9, 2007. See also Edmund L. Andrews, “Fed Shrugged as Subprime Crisis Spread,” *New York Times*, December 18, 2007.

64. Patricia McCoy and Margot Saunders, quoted in Binyamin Appelbaum, “Fed Held Back as Evidence Mounted on Subprime Loan Abuses,” *Washington Post*, September 27, 2009.

65. GAO, “Large Bank Mergers: Fair Lending Review Could be Enhanced with Better Coordination,” GAO/GDD-00-16 (Report to the Honorable Maxine Waters and Honorable Bernard Sanders, House of Representatives), November 1999; GAO, “Consumer Protection: Federal and State Agencies Face Challenges in Combating Predatory Lending.”

66. “Federal and State Agencies Announce Pilot Project to Improve Supervision of Subprime Mortgage Lenders,” Joint press release (Fed Reserve Board, OTC, FTC, Conference of State Bank Supervisors, American Association of Residential Mortgage Regulators), July 17, 2007.

67. “Truth in Lending,” pp. 44522–23. “Higher-priced mortgage loans” are defined in the 2008 regulations to include mortgage loans whose annual percentage rate exceeds the “average prime offer rates for a comparable transaction” (as published by the Fed) by at least 1.5% for first-lien loans or 3.5% for subordinate-lien loans.

68. Alvarez, interview.

69. Raphael W. Bostic, Kathleen C. Engel, Patricia A. McCoy, Anthony Pennington-Cross, and Susan M. Wachter, “State and Local Anti-Predatory Lending Laws: The Effect of Legal Enforcement Mechanisms,” *Journal of Economics and Business* 60 (2008): 47–66.

70. “Lending and Investment,” *Federal Register* 61, no. 190 (September 30, 1996): 50965.

71. Joseph A. Smith, “Mortgage Market Turmoil: Causes and Consequences,” testimony before the Senate Committee on Banking, Housing, and Urban Affairs, 110th Cong., 1st sess., March 22, 2007, p. 33 (Exhibit B), using data from the Mortgage Asset Research Institute.

72. Lisa Madigan, written testimony for the FCIC, First Public Hearing of the FCIC, day 2, panel 2: Current Investigations into the Financial Crisis—State and Local Officials, January 14, 2010, p. 12.

73. Commitments compiled at National Community Reinvestment Coalition, “CRA Commitments” (2007).

74. Josh Silver, NCRC, interview by FCIC, June 16, 2010.

75. Data references based on Reginald Brown, counsel for Bank of America, letter to FCIC, June 16, 2010, p. 2; Jessica Carey, counsel for JPMorgan Chase, letter to FCIC, December 16, 2010; Brad Karp, counsel for Citigroup, letter to FCIC, March 18, 2010, in response to FCIC request; Wells Fargo public commitments 1990–2010, data provided by Wells Fargo to the FCIC.

76. Karp, letter to FCIC, March 18, 2010, in response to FCIC request.

77. Carey, letter to FCIC, December 16, 2010, p. 9; Brad Karp, counsel for JP Morgan, letter to FCIC, May 26, 2010, p. 10.

78. FCIC calculation based on Federal Housing Finance Agency, “Data on the Risk Characteristics and Performance of Single-Family Mortgages Originated in 2001–2008 and Financed in the Secondary Market” (August 2010), Table 1-C; this report covers all loans purchased or securitized by the GSEs or in private-label securitizations. Delinquency data provided by Wells Fargo covered 81% of loans.

79. “Orders Issued Under the Bank Holding Company Act,” *Federal Reserve Bulletin* 75, no. 4 (April 1989): 304.

80. “Statement of the Federal Financial Supervisory Agencies Regarding the Community Reinvestment Act,” *Federal Register* 54 (April 5, 1989): 13742. This remains the interagency policy. “Community Reinvestment Act: Interagency Questions and Answers Regarding Community Reinvestment; Notice,” *Federal Register* 75 (March 11, 2010): 11666.

81. Glenn Loney, interview by FCIC, April 1, 2010.

82. “Community Reinvestment Act Regulations and Home Mortgage Disclosure; Final Rules,” *Federal Register* 60, no. 86 (May 4, 1995): 22155–223.

83. Division of Consumer and Community Affairs, memorandum to Board of Governors, August 10, 1998.

84. Federal Reserve Board press release, “Order Approving the Merger of Bank Holding Companies,” August 17, 1998, pp. 63–64.

85. Lloyd Brown, interview by FCIC, February 5, 2010.

86. Andrew Plepler, interview by FCIC, July 14, 2010.

87. Assuming 75% AAA tranche (\$1.20), 10% AA tranche (\$0.20), 8% A tranche (\$0.30), 5% BBB tranche (\$0.40), and 2% equity tranche (\$2.00). See Goldman Sachs, “Effective Regulation: Part 1, Avoiding Another Meltdown,” March 2009, p. 22.

88. David Jones, interview by FCIC, October 19, 2010. See David Jones, “Emerging Problems with the Basel Capital Accord: Regulatory Capital Arbitrage and Related Issues,” *Journal of Banking and Finance* 24, nos. 1–2 (January 2000): 35–58.

89. Henry Paulson, testimony before the FCIC, Hearing on the Shadow Banking System, day 2, session 1: Perspective on the Shadow Banking System, May 6, 2010, transcript, p. 34.

90. Jones, interview.

## Chapter 7

1. For example, an Alt-A loan may have no or limited documentation of the borrower’s income, may have a high loan-to-value ratio (LTV), or may be for an investor-owned property.

2. Inside Mortgage Finance, *The 2009 Mortgage Market Statistical Annual*, vol. 2, *The Secondary Market* (Bethesda, MD: Inside Mortgage Finance, 2009), p. 9, “Mortgage & Asset Securities Issuance” (showing Wall St. securitizing a third more than Fannie and Freddie); p. 13, “Non-Agency MBS Issuance by Type.” FCIC staff calculations from 2004 to 2006 (for growth in private label MBS).

3. Charles O. Prince, interview by FCIC, March 17, 2010.

4. John Taylor, interview by FCIC, September 23, 2010.

5. William A. Fleckenstein and Frederick Sheeham, *Greenspan’s Bubbles: The Age of Ignorance at the Federal Reserve* (New York: McGraw-Hill, 2008), p. 181.

6. Alan Greenspan, “The Fed Didn’t Cause the Housing Bubble,” *Wall Street Journal*, March 11, 2009. See also Ben Bernanke, “Monetary Policy and the Housing Bubble,” speech at the Annual Meeting of the American Economic Association, Atlanta, Georgia, January 3, 2010.

7. Alan Greenspan, testimony before the Senate Committee on Banking, Housing, and Urban Affairs, 109th Cong., 1st sess., February 16, 2005.

8. Fed Chairman Ben S. Bernanke, “The Global Saving Glut and the U.S. Current Account Deficit,” remarks at the Sandridge Lecture, Virginia Association of Economics, Richmond, Virginia, March 10, 2005.

9. Frederic Mishkin, interview by FCIC, October 1, 2010.

10. Pierre-Olivier Gourinchas, written testimony for the FCIC, Forum to Explore the Causes of the Financial Crisis, day 1, session 2: Macroeconomic Factors and U.S. Monetary Policy, February 26, 2010, pp. 25–26.

11. Paul Krugman, interview by FCIC, October 6, 2010.

12. Ellen Schloemer, Wei Li, Keith Ernst, and Kathleen Keest, "Losing Ground: Foreclosures in the Subprime Market and Their Cost to Homeowners," Center for Responsible Lending, December 2006, p. 22.
13. 2009 *Mortgage Market Statistical Annual*, vol. 1, *The Primary Market*, p. 4, "Mortgage Originations by Product."
14. Christopher Mayer, Karen Pence, and Shane M. Sherlund, "The Rise in Mortgage Defaults," *Journal of Economic Perspectives* 23, no. 1 (Winter 2009): Table 2, Attributes for Mortgages in Subprime and Alt-A Pools, p. 31.
15. 2009 *Mortgage Market Statistical Annual*, 2:13, "Non-Agency MBS Issuance by Type."
16. 2009 *Mortgage Market Statistical Annual*, 1:6, "Alternative Mortgage Originations"; previous data extrapolated in FCIC estimates from Golden West, Form 10-K for fiscal year 2005, and Federal Reserve, "Residential Mortgage Lenders Peer Group Survey: Analysis and Implications for First Lien Guidance," November 30, 2005.
17. Inside Mortgage Finance.
18. Countrywide, 2005 Form 10-K, p. 39; 2007 Form 10-K, p. 47 (showing the growth in Countrywide's originations).
19. Angelo Mozilo, email to Sambol and Kurland re: Sub-prime Seconds. See also Angelo Mozilo, email to Sambol, Bartlett, and Sieracki, re: "Reducing Risk, Reducing Cost," May 18, 2006; Angelo Mozilo, interview by FCIC. September 24, 2010.
20. David Sambol, interview by FCIC, September 27, 2010.
21. See Countrywide, Investor Conference Call, January 27, 2004, transcript, p. 5. See also Jody Shenn, "Countrywide Adding Staff to Boost Purchase Share," *American Banker*, January 28, 2004.
22. Patricia Lindsay, written testimony for the FCIC, hearing on Subprime Lending and Securitization and Government-Sponsored Enterprises (GSEs), day 1, sess. 2: Subprime Origination and Securitization, April 7, 2010, p. 3
23. Andrew Davidson, interview by FCIC, October 29, 2020.
24. *Ibid.*
25. David Berenbaum, testimony before Senate Committee on Banking, Subcommittee on Housing, Transportation and Community Development, 110th Cong., 1st sess., June 26, 2007.
26. Email and data attachment from former Golden West employee to FCIC, subject: "re: Golden West Estimated Volume of Adjustable Rate Mortgage Originations," December 6, 2010.
27. Herbert Sandler, interview by FCIC, September 22, 2010.
28. Washington Mutual, "Option ARM Focus Groups—Phase II," September 17, 2003; Washington Mutual, "Option ARM Focus Groups—Phase I," August 14, 2003, Exhibits 35 and 36 in Senate Permanent Subcommittee on Investigations, exhibits, *Wall Street and the Financial Crisis: The Role of High Risk Home Loans*, 111th Cong., 2nd sess., April 13, 2010 (hereafter cited as PSI Documents), PDF pp. 330–51, available at [http://hsgac.senate.gov/public/\\_files/Financial\\_Crisis/041310Exhibits.pdf](http://hsgac.senate.gov/public/_files/Financial_Crisis/041310Exhibits.pdf).
29. PSI Documents, Exhibits 35 and 36 pp. 330–51.
30. *Ibid.*, pp. 330–51, 334.
31. *Ibid.*, p. 345.
32. *Ibid.*, p. 346.
33. Washington Mutual, "Option ARM Credit Risk," August 2006, PSI Document Exhibit 37, p. 366.
34. PSI Documents Exhibit 37, p. 366, showing average FICO score of 698; p. 356; comparing conforming and jumbo originations.
35. *Ibid.*, p. 357.
36. Document listing Countrywide originations by quarter from 2003 to 2007, provided by Bank of America.
37. Countrywide October 2003 Loan Program Guide (depicting a maximum CLTV of 80 and minimum FICO of 680) and July 2004 Loan Program Guide (showing 90% 620 FICO).
38. Countrywide Loan Program Guide, dated March 7, 2005.
39. Federal Reserve, "Residential Mortgage Lenders Peer Group Survey: Analysis and Implications for First Lien Guidance," November 30, 2005, pp. 6, 8.
40. Angelo Mozilo, email to Carlos Garcia (cc: Stan Kurland), Subject: "Bank Assets," August 1, 2005.

41. Angelo Mozilo, email to Carlos Garcia (cc: Kurland), subject: "re: Fw: Bank Assets," August 2, 2005.
42. Countrywide, 2005 Form 10-K, p. 57; 2007 Form 10-K, p. F-45.
43. See Washington Mutual, 2006 Form 10-K, p. 53.
44. John Stumpf, interview by FCIC, September 23, 2010.
45. Countrywide, 2007 Form 10-K, p. F-45; 2005 Form 10-K, p. 57.
46. Washington Mutual, 2007 Form 10-K, p. 57; 2005 Form 10-K, p. 55.
47. Kevin Stein, testimony before the FCIC, Sacramento Hearing on the Impact of the Financial Crisis—San Francisco, day 1, session 2: Mortgage Origination, Mortgage Fraud and Predatory Lending in the Sacramento Region, September 23, 2010, transcript, p. 72.
48. Mona Tawatao, in *ibid.*, p. 228.
49. Real Estate Lending Standards, *Federal Register* 57 (December 31, 1992): 62890.
50. *Ibid.*
51. Office of the Comptroller of the Currency, Board of Governors of the Federal Deposit Insurance Corporation, Office of Thrift Supervision, "Real Estate Lending Standards: Final Rule," SR 93-1, January 11, 1993.
52. Office of the Comptroller of the Currency, Board of Governors of the Federal Deposit Insurance Corporation, Office of Thrift Supervision, "Interagency Guidance on High LTV Residential Real Estate Lending," October 8, 1999.
53. Final Report of Michael J. Missal, Bankruptcy Court Examiner, In RE: New Century TRS Holdings, Chapter 11, Case No. 07-10416 (KJC), (Bankr. D.Del.), February 29, 2008, pp. 128, 149, 128.
54. Yuliya Demyanyk and Otto Van Hemert, "Understanding the Subprime Mortgage Crisis," *Review of Financial Studies*, May 2009.
55. Sandler, interview.
56. CoreLogic loan performance data for subprime and Alt-A loans, and CoreLogic total outstanding loans servicer data provided to the FCIC.
57. Christopher Mayer, Karen Pence, and Shane M. Sherlund, "The Rise in Mortgage Defaults," *Journal of Economic Perspectives* 23, no. 1 (Winter 2009): 32.
58. William Black, testimony for the FCIC, Miami Hearing on the Impact of the Financial Crisis, day 1, session 1: Overview of Mortgage Fraud, September 21, 2010, p. 27.
59. Richard Bowen, interview by FCIC, February 27, 2010.
60. Jamie Dimon, testimony before the FCIC, January 13, 2010, p. 60.
61. This particular deal would be described as an excess-spread over-collateralized-based credit enhancement structure; see Gary Gorton, "The Panic of 2007," paper presented at the Federal Reserve Bank of Kansas City's Jackson Hole Conference, August 2008, p. 23.
62. FCIC staff estimates based on analysis of data from BlackBox, S&P, and Bloomberg. The prospective loan pool for this deal originally contained 4,507 mortgages. Eight of these had been dropped from the pool by the time the bonds were issued. Therefore, these estimates may differ slightly from those reported in the deal prospectus because these estimates are based on a pool of 4,499 loans.
63. *Ibid.*
64. *Federal Register* 69 (January 7, 2004): 1904. The rules were issued in proposed form at *Federal Register* 68 (August 5, 2003): 46119.
65. See OTS Opinion re California Minimum Payment Statute, October 1, 2002, p. 6.
66. Comptroller of the Currency John Hawke, remarks before Women in Housing and Finance, Washington, D.C., February 12, 2002, attached to OCC News Release 2002-10, p. 2.
67. John Hawke, quoted in Jess Bravin and Paul Beckett, "Friendly Watchdog: Federal Regulator Often Helps Banks Fighting Consumers," *Wall Street Journal*, January 28, 2002.
68. Oren Bar-Gill and Elizabeth Warren, "Making Credit Safer," *University of Pennsylvania Law Review* 157 (2008): 182-83, 192-94.
69. See *Watters v. Wachovia Bank NA*, 550 U.S. 1 (2007).
70. John Dugan, testimony before the FCIC, Public Hearing on Subprime Lending and Securitization and Government-Sponsored Enterprises (GSEs), day 2, session 2: Office of the Comptroller of the Currency, April 8, 2010, transcript, p. 150.
71. Lisa Madigan, testimony before the FCIC, First Public Hearing of the FCIC, day 2, panel 2: Investigations into the Financial Crisis—State and Local Officials, January 14, 2010, transcript, p. 104.

72. John D. Hawke Jr., written testimony for the FCIC, Public Hearing on Subprime Lending and Securitization and Government-Sponsored Enterprises (GSEs), day 2, session 2: Office of the Comptroller of the Currency, April 8, 2010, p. 6.

73. Citigroup Warehouse Lines of Credit with Mortgage Originators, in *Global Securitized Markets, 2000–2010* (revised), produced by Citigroup; staff calculations.

74. Charles O. Prince, interview by FCIC, March 17, 2010.

75. Moody's Special Report, "The ABCP Market in the Third Quarter of 1998," February 2, 1999.

76. Moody's 2007 Review and 2008 Outlook: US Asset-backed Commercial Paper, February 27, 2008.

77. Moody's ABCP Reviews of Park Granada and Park Sienna.

78. Moody's ABCP Program Review: Park Granada, July 16, 2007.

79. Letters from the American Securitization Forum (November 17, 2003) and State St. Bank (November 14, 2003) to the Office of Thrift Supervision.

80. Darryll Hendricks, interview by FCIC, August 6, 2010.

81. Citi August 29, 2006, Loan Sale.

82. Correspondence between Citi and New Century provided to FCIC. FCIC staff estimates from prospectus and Citigroup production dated November 4, 2010. Citi August 29, 2006, Loan Sale.

83. Fannie Mae Term Sheet.

84. For the more than 20 institutional investors around the world, see Citigroup letter to the FCIC re Senior Investors, October 14, 2010. The \$582 million figure is based on FCIC staff estimates that, in turn, were based on analysis of Moody's PDS database.

85. See Brad S. Karp, counsel for Citigroup, letter to FCIC, about senior investors, October 14, 2010, p. 2. See also Eric S. Goldstein, counsel for JPMorgan Chase & Co., letter to FCIC, November 16, 2010.

86. Citigroup letter to the FCIC, November 4, 2010.

87. See, e.g., Simon Kennedy, "BNP Suspends Funds Amid Credit-Market Turmoil," August 9, 2007. ([www.marketwatch.com/story/bnp-suspends-fund-valuations-amid-credit-market-turmoil](http://www.marketwatch.com/story/bnp-suspends-fund-valuations-amid-credit-market-turmoil)).

88. See Brad S. Karp, letter to FCIC, about mezzanine investors, November 4, 2010, p. 1. The equity tranches were not offered for public sale but were retained by Citigroup.

89. FCIC staff estimates from prospectus and Citigroup production dated November 4, 2010.

90. Patricia Lindsay, interview by FCIC, March 24, 2010.

91. PSI Documents, Exhibit 59a: "Long Beach Mortgage Production, Incentive Plan 2004," and Exhibit 60a (quoting page 2 of WaMu Home Loans Product Strategy PowerPoint presentation).

92. John M. Quigley, "Compensation and Incentives in the Mortgage Business," *Economists' Voices* (The Berkeley Electronic Press, October 2008), p. 2.

93. Barclays Capital, Bear Stearns, BNP Paribas, Citigroup, Deutsche Bank, Goldman Sachs, HSBC, JPMorgan, Lehman Brothers, Morgan Stanley, and UBS.

94. Figures are average top-tier pay worldwide in mortgages and MBS sales and trading. See Options Group, "2005 Global Financial Market Overview & Compensation Report" (October 2005), pp. 42, 52; Options Group, "2006 Global Financial Market Overview & Compensation Report" (November 2006), pp. 59, 69; and Options Group, "2007 Global Financial Market Overview & Compensation Report" (November 2007), pp. 73, 82.

95. See Merrill Lynch, 2007 Proxy Statement, p. 46.

96. See FCIC staff analysis of Moody's Form 10-Ks for years 2005, 2006, and 2007.

97. See FCIC staff calculations based on Moody's Form 10-Ks for years 2003–07.

98. "Moody's Expands Moody's Mortgage Metrics to Include Subprime Residential Mortgages," September 6, 2006; FCIC staff estimate based on analysis of Moody's SFDRS and PDS databases.

99. The ratings from the three agencies measure slightly different credit risk characteristics. S&P and Fitch base their ratings on the probability that a borrower will default; Moody's bases its ratings on the *expected loss* to the investor. Despite such differences, investors and regulators tend to view the ratings as roughly equivalent. Ratings are divided into two categories: investment grade securities are rated BBB- to AAA, while securities rated below BBB- are considered speculative and are also referred to as junk (for S&P; similar levels for Moody's are Baa to triple-A).

100. Richard Cantor and Frank Packer, "The Credit Rating Industry," *FRBNY Quarterly Review* (Summer–Fall 1994): 6.

101. Andrew J. Donahue, director, Division of Investment Management, SEC, "Speech by SEC Staff: Opening Remarks before the Commission Open Meeting," Washington, DC, June 25, 2008. See also Lawrence J. White, "Markets: The Credit Rating Agencies," *Journal of Economic Perspectives* 24, no. 2 (Spring 2010): 214.
102. Lewis Ranieri, interview by FCIC, July 30, 2010.
103. Eric Kolchinsky, testimony before the FCIC, Hearing on the Credibility of Credit Ratings, the Investment Decisions Made Based on Those Ratings, and the Financial Crisis, session 1: The Ratings Process, June 2, 2010, transcript, pp. 19–20.
104. See 15 U.S.C. 78o-7(c)(2).
105. Jerome S. Fons, testimony before the House Committee on Oversight and Government Reform, 110th Cong., 2nd sess., October 22, 2008, p. 2.
106. Arnold Cattani, testimony before the FCIC, Hearing on the Impact of the Financial Crisis—Greater Bakersfield, session 2: Local Banking, transcript, p. 60.
107. Gary Witt, testimony before the FCIC, Hearing on the Credibility of Credit Ratings, the Investment Decisions Made Based on Those Ratings, and the Financial Crisis, session 1: The Ratings Process, June 2, 2010, transcript, p. 41.
108. Moody's Investors Service, "Introducing Moody's Mortgage Metrics: Subprime Just Became More Transparent," September 7, 2009.
109. David Teicher, Moody's Investors Service, interview by FCIC, May 4, 2010; "Moody's Mortgage Metrics: A Model Analysis of Residential Mortgage Pools," April 1, 2003.
110. Jay Siegel, interview by FCIC, May 26, 2010.
111. Teicher, interview.
112. Jay Siegel, testimony before the FCIC, Hearing on the Credibility of Credit Ratings, the Investment Decisions Made Based on Those Ratings, and the Financial Crisis, session 1: The Ratings Process, June 2, 2010, transcript, p. 29.
113. Roger Stein, interview by FCIC, May 26, 2010.
114. Moody's Investors Service, "Introducing Moody's Mortgage Metrics."
115. Stein, interview.
116. Jerome Fons, interview by FCIC, April 22, 2010.
117. Moody's Rating Committee Memorandum, August 29, 2006.
118. FCIC staff estimates based on analysis of Moody's PDS database.
119. Invoice from Moody's Investors Service to Susan Mills, Citigroup Global Markets Inc., October 12, 2006.
120. Standard & Poor's, Global New Issue Billing Form, Citigroup Mortgage Loan Trust 2006-NC2, September 28, 2006.
121. FCIC staff estimates based on analysis of Moody's SFDRS data as of April 2010.
122. Chris Cox, SEC chairman, prepared testimony before the Senate Banking Committee, 109th Cong., 2nd sess., June 15, 2006; "Freddie Mac, Four Former Executives Settle SEC Action Relating to Multi-Billion Dollar Accounting Fraud," SEC press release, September 27, 2007.
123. James Lockhart, director, FHFA, speech to American Securitization Forum in Las Vegas, New Mexico, February 9, 2009 (p. 2, slide 4 of presentation shows the chart).
124. OFHEO Special Examination Report, December 2003.
125. In 2006, OFHEO issued its final *Report of the Special Examination of Fannie Mae*. OFHEO said that management engaged in numerous acts of misconduct, involving well over a dozen different forms of accounting manipulation and violations of generally accepted accounting principles. As in the case of Freddie, OFHEO said Fannie's management sought to hit ambitious earnings-per-share targets that were linked to their own compensation.
126. Donald Bisenius, interview by FCIC, September 29, 2010.
127. *Mortgage Market Statistical Annual 2009*.
128. See Tables 5.1/5.2 in FHFA Conservatorship report for third-quarter 2010.
129. OFHEO Special Examination Report, September 2004, pp. 9–10.
130. *Ibid.*, pp. 2, 10.
131. OFHEO, "2005 Report to Congress," June 15, 2005, p. 15.

132. Alan Greenspan, testimony before the FCIC, Hearing on Subprime Lending and Securitization and Government-Sponsored Enterprises (GSEs), day 1, session 1: The Federal Reserve, April 7, 2010, transcript, p. 13.

133. FHFA, “Mortgage Market Note: Goals of Fannie Mae and Freddie Mac in the Context of the Mortgage Market: 1996–2009,” February 2010, p. 22; “FCIC calculations.”

134. FHFA, *Report to Congress, 2008* (2009), pp. 116, 125.

135. BlackRock Solutions, “Fannie Mae’s Strategy and Business Model, Supplementary Exhibits,” December 2007.

136. Robert Levin, interview by FCIC, March 17, 2010.

137. Mark Winer, interview by FCIC, March 23, 2010.

138. John Weicher, former FHA commissioner, interview by FCIC, March 11, 2010.

139. Letter from Robert Levin to FCIC, June 17, 2010, p. 2.

## Chapter 8

1. Joe Donovan, Credit Suisse, quoted in Michael Gregory, “The ‘What If’s’ in ABS CDOs,” *Asset Securitization Report*, February 18, 2002.

2. FCIC staff calculations, using data from the U.S. Census, data in Moody’s CDO PDS database, and data in Moody’s CDO Enhanced Monitoring Service database. The FCIC selected CDOs with at least 10% of their collateral invested in mortgage-backed securities or with other characteristics that identified them as ABS CDOs.

3. Scott Eichel, quoted in Allison Pyburn, “CDO Machine? Managers, Mortgage Companies, Happy to Keep Fuel Coming,” *Asset Securitization Report*, May 23, 2005.

4. Patrick Parkinson, interview by FCIC, March 30, 2010.

5. Jian Hu, “Assessing the Credit Risk of CDOs Backed by Structured Finance Securities: Rating Analysts’ Challenges and Solutions,” *Journal of Structured Finance* 13, no. 3 (2007): 46.

6. Wing Chau, interview by FCIC, November 11, 2010.

7. CDOs that bought relatively senior tranches of mortgage-backed securities were known as *high-grade*; those that bought the BBB-rated and other junior tranches were known as *mezzanine*.

8. Joe Donovan, quoted in Gregory, “The ‘What If’s’ in ABS CDOs.”

9. Laurie Goodman et al., *Subprime Mortgage Credit Derivatives* (Hoboken, NJ: John Wiley, 2008), p. 315.

10. Hu, “Assessing the Credit Risk of CDOs Backed by Structured Finance Securities,” p. 47, Exhibit 5.

11. Issuance dropped in 2007 to \$194 billion and virtually disappeared in 2008. FCIC staff estimates based on data provided by Moody’s CDO Enhanced Monitoring System (EMS).

12. FCIC staff estimates based on analysis of Moody’s CDO EMS database.

13. Nestor Dominguez, interview by FCIC, September 28, 2010.

14. Michael Lamont, interview by FCIC, September 21, 2010.

15. Chris Ricciardi, interview by FCIC, September 15, 2010.

16. Lamont, interview.

17. FCIC staff calculations using data in FCIC CDO manager and underwriter survey.

18. Mark Adelson, interview by FCIC, October 22, 2010.

19. FCIC staff calculations. Our estimate assumes an annual management fee of 0.10% of the total value of the deal—that is, the lowest normally earned in the industry—applied to the mortgage-focused multisector CDOs in the FCIC database. It does not include other income, such as interest on equity tranches retained by the managers. CDO managers responding to the FCIC survey reported management fees ranging from as low as 0.10% to as high as 0.40%.

20. “Summary of Key Fee Provisions for Cash CDOs as of January 2000–2010,” prepared by Moody’s for the FCIC.

21. FCIC Hedge Fund Survey. See FCIC website for details.

22. FCIC staff estimates based on Moody’s CDO Enhanced Monitoring Service.

23. Bloomberg LLC, Financial Analyst Function; Bear Stearns Companies Inc., Form 10-K, for the fiscal year ended November 30, 2006, filed February 13, 2007, Exhibit 13.

24. The Options Group, “2005 Global Financial Market Overview & Compensation Report,” October 2005, p. 16.

25. Moody's, Kleros Real Estate CDO III, Ltd., CDO EMS Data, last updated May 27, 2008. The following discussion of CMLTI 2006-NC2 relies on FCIC staff estimates based on analysis of Moody's CDO EMS database.

26. Ricciardi, interview.

27. For example, Kleros III tranches were in Buckingham CDO, Buckingham CDO II, and Buckingham CDO III, all deals underwritten by Barclays.

28. Adelson, interview.

29. Chau, interview.

30. James Grant, "Up the Capital Structure" (December 15, 2006), in *Mr. Market Miscalculates: The Bubble Years and Beyond* (Mount Jackson, VA: Axios Press, 2008), 186.

31. UBS Global CDO Group, Presentation on Product Series (POPS), January 2007.

32. Dan Sparks, interview by FCIC, June 15, 2010.

33. Dominguez, interview.

34. The ratio of the book value of assets to equity ranged from 2.5 to 28.3 times for all SIVs; the average was 13.6 times. Moody's Investors Service, "Moody's Special Report: Moody's Update on Structured Investment Vehicles," January 16, 2008, p. 13.

35. Mark Klipsch, quoted in Colleen Marie O'Connor, "Drought of CDO Collateral Tops Concerns," *Asset Securitization Report*, October 18, 2004.

36. Bear Stearns Asset Management, Collateral Manager Presentation; Ralph Cioffi, interview by FCIC, October 19, 2010; Bear Stearns High-Grade Structured Credit Strategies Master Fund, Ltd., financial statements for the year ended December 31, 2006 (total assets were \$8,573,315,025); Bear Stearns High-Grade Structured Credit Strategies Enhanced Leverage Master Fund, Ltd., financial statements for the year ended December 31, 2006 (total assets were \$9,403,235,402).

37. James Cayne, written testimony for the FCIC, Hearing on the Shadow Banking System, day 1, session 2: Investment Banks and the Shadow Banking System, May 5, 2010, p. 2; Warren Spector, interview by FCIC, March 30, 2010.

38. Cioffi, interview.

39. AIMA's Illustrative Questionnaire for Due Diligence of Bear Stearns High Grade Structured Credit Strategies Fund; Bank of America presentation to Merrill Lynch's Board of Directors, "Bear Stearns Asset Management: What Went Wrong?"

40. Bear Stearns High-Grade Structured Credit Strategies Master Fund, Ltd., financial statements for the year ended December 31, 2006; Financial Statements, Bear Stearns High-Grade Structured Credit Strategies Enhanced Leverage Master Fund, Ltd., financial statements for the year ended December 31, 2006; BSAM fund chart prepared by JP Morgan.

41. FCIC staff calculations using data from FCIC survey of hedge funds. The hedge funds responding to the survey had a total of \$1.2 trillion in investments.

42. IMF, *Global Financial Stability Report*, April 2008, Table 1.2, page 23, "Typical 'Haircut' or Initial Margin."

43. Alan Schwartz, interview by FCIC, April 23, 2010.

44. Cioffi, interview.

45. *Ibid.*

46. *Ibid.*

47. Bear Stearns High-Grade Structured Credit Strategies, investor presentation, stating that "the fund is subject to conflicts of interest." Bear Stearns High-Grade Structured Credit Strategies Enhanced Leverage Fund, L.P., Preliminary Confidential Private Placement Memorandum, August 2006. Everquest Financial Ltd., Form S-1, p. 13.

48. Bear Stearns Asset Management Collateral Manager, presentation, stating that Klio I collateral includes 73% RMBS and ABS and 27% CDOs, Klio II collateral includes 74% RMBS and ABS and 26% CDOs, and Klio III collateral includes 74% RMBS and ABS and 26% CDOs; Cioffi, interview.

49. Everquest Financial Ltd., Form S-1, pp. 9, 3.

50. Bear Stearns Asset Management, Collateral Manager Presentation.

51. Cioffi and Tannin Compensation Table, produced by Paul, Weiss, Rifkind, Wharton & Garrison, LLP.

52. Matt Tannin, Bear Stearns, email to Bella Borg-Brenner, Stillwater Capital, March 16, 2007; Greg Quental, Bear Stearns, email to Andrew Donnellan, Bear Stearns, et al., June 6, 2007.

53. Charles Prince, interview by FCIC, March 17, 2010.

54. Regulators in Japan and the United Kingdom also came down on the company in 2004 and 2005. In September 2004, Japan's Financial Services Agency suspended Citibank's ability to operate branches in Japan because of the bank's participation in alleged illegal activity in that country, and in the following year the United Kingdom's Financial Services Authority fined Citigroup \$25 million for engaging in a bond trading scheme labeled "Dr. Evil" by Citigroup bond traders. Financial Services Agency, Government of Japan, "Administrative Actions on Citibank, N.A. Japan Branch," September 17, 2004; Financial Services Authority, "Final Notice" to Citigroup Global Markets Limited, June 28, 2005 ([www.fsa.gov.uk/pubs/final/cgml\\_28jun05.pdf](http://www.fsa.gov.uk/pubs/final/cgml_28jun05.pdf)); David Reilly, "Moving the Market: Citigroup to Take \$25 Million Hit in 'Dr. Evil' Case," *Wall Street Journal*, June 29, 2005.

55. Prince, interview.

56. Robert Rubin, interview by FCIC, March 11, 2010.

57. Dominguez, interview by FCIC, March 2, 2010. The CDO desk earned revenues of \$367 million in 2005. Paul, Weiss, Citigroup's counsel, letter to FCIC, March 31, 2010, in re the FCIC's second and third supplemental requests, "Response to Interrogatory No. 21."

58. Janice Warne, interview by FCIC, February 2, 2010; Paul, Weiss, Citigroup's counsel, letter to FCIC, March 1, 2010, "Response to Interrogatory No. 18."

59. Paul, Weiss, Citigroup's counsel, letter to FCIC, March 1, 2010, "Response to Interrogatory No. 18."

60. Moody's Investors Service, "CDOs with Short-Term Tranches: Moody's Approach to Rating Prime-1 CDO Notes," February 3, 2006, p. 11.

61. Citigroup Inc., Form 10-K, for the fiscal year ended December 31, 2007, filed February 22, 2008, p. 91.

62. Everquest Financial Ltd., Form S-1, May 9, 2007, p. 93.

63. Dominguez, interview, March 2, 2010.

64. *Ibid.*; Warne, interview.

65. Dominguez, interview, March 2, 2010.

66. Warne, interview.

67. GCIB Capital Markets Approval Committee, Coventree Capital, "Liquidity Put Option," draft as of December 13, 2002, p. 4.

68. Ron Frake, interview by FCIC, March 11, 2010.

69. "Formal Agreement" between the Comptroller of the Currency and Citibank, July 22, 2003.

70. Moody's Investors Service, "CDOs with Short-Term Tranches."

71. *Ibid.*; Bank of America Corporation, Form 10-Q for the quarterly period ended September 30, 2007, p. 19; Floyd Norris, "As Bank Profits Grew, Warning Signs Went Unheeded," *New York Times*, November 16, 2007.

72. Dominguez, interview, March 2, 2010.

73. Paul, Weiss, Citigroup's counsel, letter to FCIC, June 23, 2010, "Responses of Nestor Dominguez," p. 6.

74. OCC, "Subprime CDO Valuation and Oversight Review—Conclusion Memorandum," Memorandum from Michael Sullivan, RAD, and Ron Frake, NBE, to John Lyons, Examiner-in-Charge, Citibank, NA, January 17, 2008, p. 6.

75. *Ibid.*

76. Tobias Brushammar et al., memorandum to Nestor Dominguez et al., "Re: Liquidity Put Valuation," October 19, 2006, pp. 1, 3–4; "Liquidity Put Discussion," pt. 1, produced by Citi.

77. "Liquidity Put Discussion," produced by Citi.

78. Data provided by Moody's to the FCIC.

79. Gary Gorton, interview by FCIC, May 11, 2010.

80. AIG, 2008 10-K, p. 133. Assets are assigned a "risk weighting" or percentage that is then multiplied by 8% capital requirement to determine the amount of risk-based capital.

81. AIG, CDS notional balances at year-end 2000 through 2010 Q1, provided to the FCIC.

82. The total would reach \$78 billion by 2007 (*ibid.*).

83. Gene Park, interview by FCIC, May 18, 2010.
84. Craig Broderick, testimony before the FCIC, Hearing on the Role of Derivatives in the Financial Crisis, day 1, session 3: Goldman Sachs Group, Inc. and Derivatives, June 30, 2010, transcript, pp. 289–90.
85. Moody's, "CDOs with Short-Term Tranches"; AIG, "Information Pertaining to the Multi-sector CDS Portfolio," provided to the FCIC.
86. Park, interview.
87. AIG, CDS notional balances at year-end, 2000 through 2010 Q1.
88. Alan Frost, interview by FCIC, May 11, 2010.
89. AIG Financial Products Corp. Deferred Compensation Plan, March 18, 2005, p. 2.
90. Joseph Cassano, email to All Users, re: 2007 Special Compensation Plan, December 17, 2007.
91. Joseph Cassano compensation history, provided by AIG to the FCIC.
92. AIG, Form 8-K, filed May 1, 2005.
93. "Fact Sheet on AIGFP," provided by Hank Greenberg, p. 4.
94. AIG, CDS notional balances at year-end.
95. Gene Park, email to Joseph Cassano, re: "CDO of ABS Approach Going Forward—Message to the Dealer Community," February 28, 2006.
96. Henry M. Paulson Jr., testimony before the FCIC, Hearing on the Shadow Banking System, day 2, session 1: Perspective on the Shadow Banking System, May 6, 2010, transcript, p. 22.
97. Henry M. Paulson Jr., written testimony for the FCIC, Hearing on the Shadow Banking System, day 2, session 1: Perspective on the Shadow Banking System, May 6, 2010, p. 2.
98. Goldman Sachs, 2005 and 2006 10-K (appendix 5a to Goldman's March 8, 2010, letter to the FCIC).
99. Appendix 5c to Goldman's March 8, 2010, letter to the FCIC.
100. Goldman's March 8, 2010, letter to the FCIC, p. 28 (subprime securities).
101. "Protection Bought by GS," spreadsheet provided by Goldman Sachs to the FCIC. Specifically, IKB purchased \$30 million of Class A notes, \$40 million of Class B notes, and \$30 million of Class C notes on June 9, 2004. TCW purchased \$50 million of Class A notes in January 2005, and Wachovia purchased \$45 million of Class A notes in March 2005. See *ibid.*, Exhibit 1.
102. FCIC staff calculations based on data provided by Goldman Sachs.
103. "Protection Bought by GS," spreadsheet.
104. FCIC calculations based on data provided by Goldman Sachs.
105. FCIC staff analysis based on data provided by Goldman Sachs.
106. Sparks, interview.
107. Of course, in theory the *net* impact on the financial system is not greater, because there is a winner for every loser in the derivatives market.
108. Sparks, interview.
109. From Goldman Sachs data provided to the FCIC in a handout titled "Amplification" and quoted at the FCIC's Hearing on the Role of Derivatives in the Financial Crisis, day 1, session 3: Goldman Sachs Group, Inc. and Derivatives, June 30, 2010.
110. FCIC staff analysis based on data provided by Goldman Sachs.
111. Lloyd Blankfein, chairman of the board and chief executive officer, Goldman Sachs Group, interview by FCIC, June 16, 2010; Sparks, interview.
112. Gary Cohn, testimony before the FCIC, Hearing on the Role of Derivatives in the Financial Crisis, day 1, session 3: Goldman Sachs Group, Inc. and Derivatives, June 30, 2010, transcript, p. 351.
113. Parkinson, interview.
114. Michael Greenberger, before the FCIC, Hearing on the Role of Derivatives in the Financial Crisis, day 1, session 1: Overview of Derivatives, June 30, 2010; oral testimony, transcript, p. 109; written testimony, p. 16.
115. Moody's Investors Service, "Summary of Key Provisions for Cash CDOs as of January 2000–2010."
116. Gary Witt, written testimony for the FCIC, Hearing on Credibility of Credit Ratings, the Investment Decisions Made Based on Those Ratings, and the Financial Crisis, day 1, session 1: The Ratings Process, June 2, 2010, pp. 12, 15.

117. *Ibid.*, 12.

118. Gary Witt, testimony before the FCIC, Hearing on Credibility of Credit Ratings, the Investment Decisions Made Based on those Ratings, and the Financial Crisis, day 1, session 1: The Ratings Process, June 2, 2010, transcript, pp. 168, 436.

119. Moody's Investors Service, "Moody's Approach to Rating Multisector CDOs," September 15, 2000, p. 5.

120. Gary Witt, interview by FCIC, April 21, 2010.

121. Witt, written testimony for the FCIC, June 2, 2010, p. 17.

122. Gary Witt, follow-up interview by FCIC, May 13, 2010.

123. Witt, interview, April 21, 2010.

124. For example, Moody's assumed that borrowers with different credit ratings would not default at the same time. The agency split the securities into three subcategories based on the average FICO score of the underlying mortgages: prime (FICO greater than 700), midprime (FICO between 700 and 625), and subprime (FICO under 625). Creating three FICO-based subcategories rather than the traditional two (prime and subprime) resulted in lower correlation assumptions, because mortgage-backed securities in different subcategories were assumed to be less correlated. "Moody's Revisits Its Assumptions Regarding Structured Finance Default (and Asset) Correlations for CDOs," June 27, 2005, pp. 15, 5, 7, 9, 4; Gary Witt, interview by FCIC, May 6, 2010.

125. Hedi Katz, "U.S. Subprime RMBS in CDOs," Fitch Special Report, April 15, 2005, p. 3; Sten Bergman, "CDO Evaluator Applies Correlation and Monte Carlo Simulation to Determine Portfolio Quality," Standard & Poor's Global Credit Portal RatingsDirect, November 13, 2001, p. 8.

126. Ingo Fender and Janet Mitchell, "Structured Finance: Complexity, Risk and the Use of Ratings," *BIS Quarterly Review* (June 2005): 68 ([www.bis.org/publ/qtrpdf/r\\_qt0506.pdf](http://www.bis.org/publ/qtrpdf/r_qt0506.pdf)).

127. Based on an FCIC survey of 40 CDO managers and 11 underwriters about the process of creating and marketing CDOs.

128. Moody's Investors Service, "Structured Finance Rating Transitions: 1983–2006," January 2007, pp. 7, 64. Of structured finance securities originally rated triple-A between 1984 and 2006, 56% retained their original rating 5 years later, 5% were downgraded, and 39% were withdrawn.

129. Kyle Bass, testimony to the House Financial Services Committee, Subcommittee on Capital Markets, Insurance, and Government Sponsored Enterprises, *Hearing on the Role of Credit Rating Agencies in the Structured Finance Market*, 110th Cong., 1st sess., September 27, 2007, p. 11.

130. "Structured Finance Rating Transitions: 1983–2008," Moody's Credit Policy Special Comment, March 2009, p. 2.

131. Moody's Investors Service, "Announcement: Moody's Updates Its Key Assumptions for Rating Structured Finance CDOs," December 11, 2008.

132. Ben Bernanke, closed-door session with FCIC, November 17, 2009.

133. Ann Rutledge, email to FCIC, November 16, 2010. Ann Rutledge is a principal in R&R Consulting, a coauthor of *Elements of Structured Finance* (Oxford: Oxford University Press, 2010), and a former employee of Moody's Investor Service. She and co-principal Sylvain Raines first spoke to the FCIC on April 12, 2010.

134. From Moody's "Structured Finance: Special Report," the following page 1 headlines: "2004 U.S. CDO Review / 2005 Preview: Record Activity Levels Driven by Resecuritization CDOs and CLOs," February 1, 2005; "2005 U.S. CDO Review: Looking Ahead to 2006: Record Year Follows Record Year," February 6, 2006; "2008 U.S. CDO Outlook and 2007 Review: Issuance Down in 2007 Triggered by Subprime Mortgages Meltdown; Lower Overall Issuance Expected in 2008," March 3, 2008.

135. Moody's annual gross revenues for ABS CDO ratings was \$11,730,234 in 2003, \$22,210,695 in 2004, \$40,332,909 in 2005, \$91,285,905 in 2006, and \$94,666,014 in 2007. Information provided by Moody's, May 3, 2010. See also Moody's Corporation 2006 10-K, p. 66 and Moody's Corporation, 2007 10-K.

136. Witt, testimony before the FCIC, June 2, 2010, transcript, p. 46.

137. Witt, written testimony for the FCIC, June 2, 2010, p. 11; Witt, interview, April 21, 2010.

138. Eric Kolchinsky, interview by FCIC, April 27, 2010.

139. Witt, interview, April 21, 2010.

140. FCIC staff estimates based on analysis of Moody's CDO EMS database.

141. Yuri Yoshizawa, interview by FCIC, May 17, 2010. The chart was labeled “Derivatives (America).”

142. Brian Clarkson, interview by FCIC, May 20, 2010.

143. Harvey Goldschmid, interview by FCIC, March 24, 2010; Annette Nazareth, interview by FCIC, April 1, 2010.

144. Office of Thrift Supervision, letter to the SEC, February 11, 2004.

145. Lehman Brothers, Inc., letter to the SEC, March 8, 2004; J.P. Morgan Chase & Co., letter to the SEC, February 12, 2004; Deutsche Bank A.G. and Deutsche Bank Secs., letter to the SEC, February 18, 2004.

146. Harvey Goldschmid, interview by FCIC, April 8, 2010.

147. Closed meeting of the Securities and Exchange Commission, April 28, 2004.

148. In 2005, the Division of Market Regulation became the Division of Trading and Markets. For the sake of simplicity, throughout this report it is referred to as the Division of Market Regulation.

149. Erik Sirri, interview by FCIC, April 1, 2010. Although there are more than 1,000 SEC examiners, collectively they regulate more than 5,000 broker-dealers (with more than 750,000 registered representatives) as well as other market participants.

150. Michael Macchiaroli, interview by FCIC, March 18, 2010.

151. The monitors met with senior business and risk managers at each CSE firm every month about general concerns and risks the firms were seeing. Written reports of these meetings were given to the director of market regulation every month. In addition, the CSE monitors met quarterly with the treasury and financial control functions of each CSE firm to discuss liquidity and funding issues.

152. Erik Sirri, written testimony for the FCIC, Hearing on the Shadow Banking System, day 1, session 3: SEC Regulation of Investment Banks, May 5, 2010.

153. Internal SEC memorandum, Re: “CSE Examination of Bear Stearns & Co. Inc.,” November 4, 2005.

154. Securities and Exchange Commission, Office of Inspector General, “SEC’s Oversight of Bear Stearns and Related Entities: The Consolidated Supervised Entity Program,” Report No. 446-A, September 25, 2008, pp. 17–18.

155. Michael Macchiaroli, interview by FCIC, April 13, 2010.

156. Robert Seabolt, email to James Giles, Steven Spurry, and Matthew Eichner, October 1, 2007.

157. Matt Eichner, interview by FCIC, April 14, 2010; SEC, OIG, “SEC’s Oversight of Bear Stearns and Related Entities: The Consolidated Supervised Entity Program,” p. 109.

158. Goldschmid, interview.

159. GAO, “Financial Markets Regulation: Financial Crisis Highlights Need to Improve Oversight of Leverage at Financial Institutions,” GAO-09-739 (Report to Congressional Committees), July 2009, pp. 38–42.

160. Erik Sirri, “Securities Markets and Regulatory Reform,” remarks at the National Economists Club, Washington, D.C., April 9, 2009.

161. Harvey Goldschmid, interview, April 8, 2010.

162. “Chairman Cox Announces End of Consolidated Supervised Entities Program,” SEC press release, September 26, 2008.

163. Mary Schapiro, testimony before the FCIC, First Public Hearing of the Financial Crisis Inquiry Commission, day 2, panel 1: Current Investigations into the Financial Crisis—Federal Officials, January 14, 2010, transcript, p. 39.

164. The Fed remained the supervisor of JP Morgan at the holding company level.

165. Mark Olson, interview by FCIC, October 4, 2010.

166. Federal Reserve System, “Financial Holding Company Project,” January 25, 2008, p. 3.

## Chapter 9

1. Warren Peterson, written testimony for the FCIC, Hearing on the Impact of the Financial Crisis—Greater Bakersfield, session 3: Residential and Community Real Estate, September 7, 2010, pp. 1, 3.

2. Gary Crabtree, principal owner, Affiliated Appraisers, written testimony for the FCIC, Hearing on the Impact of the Financial Crisis—Greater Bakersfield, session 4: Local Housing Market, September 7, 2010, p. 2.

3. Lloyd Plank, Lloyd E. Plank Real Estate Consultants, written testimony for the FCIC, Hearing on the Impact of the Financial Crisis—Greater Bakersfield, session 4: Local Housing Market, September 7, 2010, p. 2.

4. CoreLogic Single Family Combined (SFC) Home Price Index, data accessed August 2010. FCIC calculation of change from January 1997 to April 2006, peak.

5. Professor Robert Shiller, Historical Housing data..

6. Final Report of Michael J. Missal, Bankruptcy Court Examiner, In RE: New Century TRS Holdings, Chapter 11, Case No. 07-10416 (KJC), (Bankr. D.Del), February 29, 2008, pp. 145, 138, 139–40 (hereafter Missal).

7. *Ibid.*, p. 3.

8. Nomura Fixed Income Research, “Notes from Boca Raton: Coverage from Selected Sessions of ABS East 2005,” September 20, 2005, pp. 5–7.

9. Alan Greenspan, “The Economic Outlook,” testimony before the Joint Economic Committee, 109th Cong., 1st sess., June 9, 2005.

10. Christopher Mayer, written testimony for the FCIC, Forum to Explore the Causes of the Financial Crisis, day 2, session 5: Mortgage Lending Practices and Securitization, February 27, 2010, pp. 5–6.

11. Antonio Fatás, Prakash Kannan, Pau Rabanal, and Alasdair Scott, “Lessons for Monetary Policy from Asset Price Fluctuations Leaving the Board,” International Monetary Fund, *World Economic Outlook* (Fall 2009), chapter 3.

12. James MacGee, “Why Didn’t Canada’s Housing Market Go Bust?” Federal Reserve Bank of Cleveland. *Economic Comment* (December 2, 2009).

13. Morris A. Davis, Andreas Lehnert, and Robert F. Martin, “The Rent-Price Ratio for the Aggregate Stock of Owner-Occupied Housing,” Federal Reserve Board Working Paper, May 2005, p. 2.

14. Price data from CoreLogic CSBA Home Price Index, Single-Family Combined. Rent data is Bureau of Labor Statistics, metro-level Consumer Price Index (CPI-U), Owners’ Equivalent Rent for Primary Residence; all index figures are adjusted so that Jan. 1997=1. Methods follow from Federal Reserve Bank of San Francisco Economic Letter, “House Prices and Fundamental Value,” Number 2004–27, October 1, 2004.

15. National Association of Realtors Housing Affordability Index, accessed from Bloomberg as composite Index (HOMECOMP). The index began in 1986.

16. The index also assumes that the qualifying ratio of 25%, so that the monthly principal & interest payment could not exceed 25% of the median family monthly income. More about the methodology can be found at National Association of Realtors, Methodology for the Housing Affordability Index.

17. Ben Bernanke, letter to FCIC Chairman Phil Angelides, December 21, 2010, p. 2.

18. Kristopher S. Gerardi, Christopher L. Foote, and Paul S. Willen, “Reasonable People Did Disagree: Optimism and Pessimism about the U.S. Housing Market Before the Crash,” Federal Reserve Bank of Boston Public Policy Discussion Paper No. 10-5, August 12, 2010.

19. Donald L. Kohn, “Monetary Policy and Asset Prices,” speech delivered at “Monetary Policy: A Journey from Theory to Practice,” a European Central Bank Colloquium held in honor of Otmar Issing, Frankfurt, Germany, March 16, 2006.

20. Richard A. Brown, “Rising Risks in Housing Markets,” memorandum to the National Risk Committee of the Federal Deposit Insurance Corporation, March 21, 2005, pp. 1–2.

21. Board of Governors, memorandum from Josh Gallin and Andreas Lehnert to Vice Chairman [Roger] Ferguson, “Talking Points on House Prices,” May 5, 2005, p. 3.

22. Missal, p. 40.

23. William Black, testimony before the FCIC, Hearing on the Impact of the Financial Crisis—Miami, Florida, session 1: Overview of Mortgage Fraud, September 21, 2010, transcript, p. 78; and email from William Black to FCIC, December 12, 2010.

24. Reply of Attorney General Lisa Madigan (Illinois) to the FCIC, April 27, 2010, p. 7.

25. Chris Swecker, Assistant Director Criminal Investigative Division Federal Bureau of Investigation, statement before the House Financial Services Subcommittee on Housing and Community Opportunity, 108th Cong., 2nd sess., October 7, 2004.

26. Florida Department of Law Enforcement, “Mortgage Fraud Assessment,” November 2005.

27. Wilfredo Ferrer, testimony before the FCIC, Hearing on the Impact of the Financial Crisis—Miami, Florida, session 3: The Regulation, Oversight, and Prosecution of Mortgage Fraud in Miami, September 21, 2010, transcript, pp. 186–87.
28. Ann Fulmer, supplemental written testimony for the FCIC, Hearing on the Impact of the Financial Crisis—Miami, Florida, session 1: Overview of Mortgage Fraud, September 21, 2010, p. 2; Fulmer, testimony, transcript, pp. 80–81.
29. Ed Parker, interview by FCIC, May 26, 2010.
30. David Gussmann, interview by FCIC, March 30, 2010.
31. William H. Brewster, interview by FCIC, October 29, 2010.
32. Henry Pontell, written testimony for the FCIC, Hearing on the Impact of the Financial Crisis—Miami, Florida, session 1: Overview of Mortgage Fraud, September 21, 2010, p. 1.
33. Department of Justice, Office of the Inspector General, “The Internal Effects of the FBI’s Reprioritization, September 2004,” p. 1.
34. Chris Swecker, interview by FCIC, March 8, 2010.
35. Patrick Crowley, MortgageDaily.com, November 24, 2003.
36. Swecker, statement to the House Financial Services Subcommittee on Housing and Community Opportunity, October 7, 2004.
37. William Black, written testimony for the FCIC, September 21, 2010, p. 17.
38. Francisco San Pedro, interview by FCIC, September 20, 2010.
39. FinCEN report to the FCIC on Countrywide SAR activity, 1999–2009.
40. OCC, letter to Bank of America, June 5, 2007.
41. Darcy Parmer, interview by FCIC, June 4, 2010.
42. FinCEN, “Mortgage Loan Fraud: An Industry Assessment Based on SAR Analysis,” November 2006, pp. 2, 6.
43. Swecker, statement before the House Financial Services Subcommittee on Housing and Community Opportunity, October 7, 2004.
44. Swecker, interview.
45. FinCEN, “Mortgage Loan Fraud Update: Suspicious Activity Report Filings from April–June 30, 2010,” p. 21.
46. DOJ, letter from Assistant Attorney General Ronald Welch to the FCIC, April 28, 2010, pp. 1, 3, October 21, 2010, p. 2.
47. Robert Mueller, interview by FCIC, December 14, 2010.
48. Alberto Gonzales, interview by FCIC, November 1, 2010.
49. OFHEO, “2007 Performance and Accountability Report,” pp. 13, 17.
50. Richard Spillenkothen, interview by FCIC, March 19, 2010.
51. Michael J. Mukasey, interview by FCIC, October 20, 2010.
52. DOJ response to FCIC request, April 16, 2010; see also DOJ response to FCIC request, April 28, 2010.
53. William Black, testimony before the FCIC, September 21, 2010, transcript, p. 38.
54. Swecker, interview.
55. Ellen Wilcox, special agent, Florida Department of Law Enforcement, testimony before the FCIC, Hearing on the Impact of the Financial Crisis—Miami, session 2: Uncovering Mortgage Fraud in Miami, September 21, 2010, transcript, p. 80; “Participant in \$13 Million Mortgage Fraud Scheme Convicted by Polk County Jury,” Office of Florida Attorney General Bill McCollum press release, August 28, 2008.
56. Tenth Judicial Circuit in and for Polk County, Florida, *State of Florida vs. Scott Almeida, et al.*, OSWP No. 2005-0256-TPA; July 23, 2007, see paragraphs 2, 17, 18, 19, 28, and 32.
57. Wilcox, testimony before the FCIC, September 21, 2010, transcript, pp. 98–99.
58. Gary Gorton, “The Panic of 2007,” paper presented at the Federal Reserve Bank of Kansas City, Jackson Hole Conference, “Maintaining Stability in a Changing Financial System,” August 2008.
59. Adam B. Ashcraft and Til Schuermann, “Understanding the Securitization of Subprime Mortgage Credit,” Federal Reserve Bank of New York Staff Report No. 318, March 2008, pp. 5–11.
60. Raymond McDaniel, quoted in the transcript of Moody’s Managing Director’s Town Hall Meeting, September 11, 2007.

61. Keith Johnson, former president and chief operating officer of Clayton Holdings, Inc., interview by FCIC, September 2, 2010.

62. Frank Filippis, interview by FCIC, August 9, 2010.

63. Vicki Beal, testimony before the FCIC, Hearing on the Impact of the Financial Crisis—Sacramento, session 3: The Mortgage Securitization Chain: From Sacramento to Wall Street, September 23, 2010, transcript, pp. 155, 155–56.

64. Beal, testimony before the FCIC, September 23, 2010, transcript, pp. 169, 157; see also Martha Coakley, Massachusetts Attorney General, comment letter to the Securities and Exchange Commission regarding proposed rule regarding asset-backed securities, Release No. 33-9117; 34-61858; File No. S7-08-10, August 2, 2010, p. 6.

65. Beal, testimony before the FCIC, September 23, 2010, transcript, pp. 169–70.

66. D. Keith Johnson, testimony before the FCIC, Hearing on the Impact of the Financial Crisis—Sacramento, session 3: The Mortgage Securitization Chain: From Sacramento to Wall Street, September 23, 2010, transcript, pp. 183–84.

67. *Ibid.*, p. 211.

68. Beal, testimony before the FCIC, September 23, 2010, transcript, p. 172.

69. John J. Goggins, senior vice president and general counsel, Moody's, letter to FCIC regarding "September 27, 2010 Article Published in *The New York Times* Misconstruing Commission Testimony," September 30, 2010.

70. Johnson, testimony before the FCIC, September 23, 2010, transcript, p. 174.

71. Missal, p. 67.

72. Roger Ehrnman, interview by FCIC, September 2, 2010; Johnson, testimony before the FCIC, September 23, 2010, transcript, p. 178.

73. Tony Peterson, interview by FCIC, October 14, 2010.

74. Joseph Schwartz, vice president in charge of mortgage acquisition due diligence, Deutsche Bank, interview by FCIC, July 21, 2010; William Collins Buell VI, head of mortgage acquisition, JP Morgan, interview by FCIC, September 15, 2010.

75. Richard M. Bowen, written testimony for the FCIC, Hearing on Subprime Lending and Securitization and Government-Sponsored Enterprises (GSEs), day 1, session 2: Subprime Origination and Securitization, April 7, 2010, p. 2.

76. Richard M. Bowen, interview by FCIC, February 27, 2010; FCIC correspondence with Richard M. Bowen.

77. Inside Mortgage Finance, *The 2009 Mortgage Market Statistical Annual*, vol. 2, *The Secondary Market* (Bethesda, MD: Inside Mortgage Finance, 2009), p. 156; FCIC staff estimate based on analysis of Moody's CDO EMS database.

78. See, for example, James C. Treadway Jr., "An Overview of Rule 415 and Some Thoughts About the Future," remarks to the thirteenth annual meeting of the Securities Industry Association, Hot Springs, Virginia, October 8, 1983.

79. Shelley Parratt and Paula Dubberly, interview by the FCIC, October 1, 2010.

80. 17 C.F.R. Part 229.1111(a)(3), "Pool Assets," revised as of April 1, 2005.

81. See Part V of complaint filed by Cambridge Place Investment Management Inc., dated July 9, 2010, in Suffolk County (Massachusetts) Superior Court, Cambridge Place Investment Management, Inc., v. Morgan Stanley & Co., Inc., Case No. 10-27841, p. 71 (hereafter Cambridge Complaint), and Part V of complaint filed by Federal Home Loan Bank of Chicago, dated October 15, 2010, in Circuit Court of Cook County, Illinois (Chancery Division), Federal Home Loan Bank of Chicago v. Banc of America Funding Corp. et al., Case No. 10CH450B3, p. 173.

82. Cambridge Complaint, pp. 32–33, 61–63, 70–71, 75–76.

83. Bowen, interview.

84. D. Keith Johnson, former president and chief operating officer, Clayton Holdings, Inc., interview by FCIC, June 8, 2010.

85. A QIB was defined under Rule 144A to include "entities, acting for its own account or the accounts of other qualified institutional buyers, that in the aggregate owns and invests on a discretionary basis at least \$100 million in securities of issuers that are not affiliated with the entity." See 17 C.F.R. 230.144A, "Private Resale of Securities to Institutions."

86. Dennis Voigt Crawford, testimony before the FCIC, First Public Hearing of the FCIC, day 2, session 2: Current Investigation into the Financial Crisis—State and Local Officials, January 14, 2010, p. 112.

87. Richard Breeden, interview by FCIC, October 14, 2010. See Public Law 104–290 (Oct. 11, 1996); Rule 144A contained provisions that ensured it did not expand to the securities markets in which retail investors did participate.

88. Federal Reserve Board, SR 9724, “Risk-Focused Framework for Supervision of Large Complex Institutions,” October 27, 1997.

89. Alan Greenspan, “The Evolution of Bank Supervision,” speech before the American Bankers Association, Phoenix, Arizona, October 11, 1999.

90. Eugene Ludwig, interview by FCIC, September 2, 2010.

91. Federal Reserve Bank of New York, “Report on Systemic Risk and Supervision,” Draft of August 5, 2009, p. 2.

92. Rich Spillenkothen, “Notes on the performance of prudential supervision in the years preceding the financial crisis by a former director of banking supervision and regulation at the Federal Reserve Board (1991 to 2006),” May 31, 2010, 12.

93. Susan Bies, interview by FCIC, October 11, 2010.

94. Bernanke, letter to the FCIC, December 21, 2010.

95. John Snow, interview by FCIC, October 7, 2010.

96. Office of the Comptroller of the Currency, Board of Governors of the Federal Deposit Insurance Corporation, Office of Thrift Supervision, and National Credit Union Administration, “Credit Risk Management Guidance for Home Equity Lending,” May 16, 2005.

97. *2009 Mortgage Market Statistical Annual*, 1:3; “Residential Mortgage Lenders Peer Group Survey: Analysis and Implications for Guidance,” PowerPoint presentation, November 30, 2005, pp. 13, 3.

98. Sabeth Siddique, interview by the FCIC, September 9, 2010.

99. “Residential Mortgage Lenders Peer Group Survey: Analysis and Implications for Guidance,” PowerPoint, November 30, 2005.

100. Bies, interview.

101. Office of the Comptroller of the Currency, Board of Governors of the Federal Deposit Insurance Corporation, Office of Thrift Supervision, and National Credit Union Administration, “Interagency Guidance on Nontraditional Mortgage Products,” *Federal Register* 70 (December 29, 2005): 77,249, 72,252, 72,253.

102. Paul Smith, American Bankers Association, letter to the Federal Deposit Insurance Corporation, Board of Governors of the Federal Reserve System, Office of Thrift Supervision, and Office of the Comptroller of the Currency, March 29, 2006, p. 2.

103. Letter from American Financial Services Association to federal regulators 8, available at [http://www.ots.treas.gov/\\_files/comments/d1e85ce1-07ab-4acf-8db5-8d1747afba0a.pdf](http://www.ots.treas.gov/_files/comments/d1e85ce1-07ab-4acf-8db5-8d1747afba0a.pdf).

104. Letters to the Office of Thrift Supervision from the American Bankers Association (March 29, 2006), p. 2; the American Financial Services Association (March 28, 2006), p. 8; and Indymac Bank (March 29, 2006), p. 4.

105. The Housing Policy Council of the Financial Services Roundtable, letter to the Office of Thrift Supervision, March 29, 2006, p. 6.

106. Siddique, interview.

107. Binyamin Appelbaum and Ellen Nakashima, “Banking Regulator Played Advocate Over Enforcer: Agency Let Lenders Grow Out of Control, Then Fail,” *Washington Post*, November 23, 2008.

108. Bies, interview.

109. See, e.g. “Countrywide Seeks to Become Savings Bank; The Mortgage Lender Says It Is Planning to Apply to Convert Its Charter So It Will Be Regulated by One Federal Agency instead of Two,” *Los Angeles Times*, November 11, 2006, based on *Bloomberg, Reuters*.

110. Kim Sherer, interview by FCIC, August 3 2003.

111. Countrywide, “Briefing Paper: Meeting with Office of Thrift Supervision, Thursday July 13, 2006.”

112. Angelo Mozilo, email to John McMurray (cc Dave Sambol, Carlos Garcia), re: Pay Options, August 12, 2006; John McMurray, email to Angelo Mozilo (cc Kevin Bartlett, Carlos Garcia, Dave Sambol, re: Pay Options, August 13, 2006.

113. The cost of borrowing is reflected by credit spreads, the portion of interest rates that compensate investors for credit risk. Credit spreads are the interest rates that investors require above the so-called risk-free interest rate, usually measured in terms of Treasuries or interest rate swaps with similar characteristics.

114. Congressional Oversight Panel, "Commercial Real Estate Losses and the Risk to Financial Stability," February 10, 2010, pp. 58–60.

115. Loan Syndication Trading Association, "The US Loan Market Today," presentation.

116. Loan Syndication Trading Association, "Financial Reform and the Leveraged Loan Market," presentation.

117. *Ibid.*, Loan Syndication Trading Association, "Challenges Facing CLOs ... and the Loan Market," presentation.

118. *Ibid.*, p. 14. SEC, "Risk Management Reviews at Consolidated Supervised Entities," memorandum, April 26, 2007.

119. Michael Flaherty and Dena Aubin, "For Private Equity Market, All Eyes on First Data," *Reuters*, September 4, 2007.

120. SEC, "Risk Management Reviews of Consolidated Supervised Entities," memorandum, July 5, 2007.

121. Charles Prince, quoted in "Citigroup chief stays bullish on buyouts," *Financial Times*, July 9, 2007; testimony before the FCIC, Hearing on Subprime Lending and Securitization and Government-Sponsored Enterprises (GSEs), day 2, session 1: Citigroup Senior Management, April 8, 2010, transcript, pp. 49–50.

122. Roben Farzad, Matthew Goldstein, David Henry, and Christopher Palmeri, "Not So Smart," *BusinessWeek*, September 3, 2007.

123. Joseph Gyourko, "Understanding Commercial Real Estate: Just How Different from Housing Is It?" NBER Working Paper 14708, National Bureau of Economic Research, February 2009, pp. 23, 38.

124. CRE Finance Council, *Compendium of Statistics*, November 5, 2010, Exhibits 3, 2.

125. Joe Keohane, "Heartbreak Hotels," *Portfolio*, November 11, 2008.

126. "Hilton Debt Clogs Lenders' Balance Sheets," Commercial Mortgage Alert, February 20, 2009.

127. Tom Marano, interview by FCIC, April 19, 2010.

128. Jeff Mayer and Tom Marano, "Fixed Income Overview," Bear Stearns, March 29, 2007, p. 18.

129. Gyourko, "Understanding Commercial Real Estate: Just How Different from Housing Is It?" p. 1.

130. New York Federal Reserve Bank, "Maiden Lane LLC Holdings as of 9/30/2008."

131. Anton R. Valukas, Report of Examiner, *In re Lehman Brothers Holdings Inc.*, et al., Chapter 11 Case No. 08-13555 (JMP), (Bankr. S.D.N.Y.), March 11, 2010, 2:356 (hereafter cited as Valukas).

132. *Ibid.*, 2:356–58.

133. Madelyn Antoncic, "Lehman Brothers Risk Management," August 7, 2007, p. 5; and Antoncic, interview by FCIC, July 14, 2010.

134. Valukas, 1:43, 4; Antoncic, interview.

135. Valukas, 1:45–62, 79–80.

136. Jody Shenn, "Lehman Said to Return to Mortgage Market through Aurora Unit (Update 1)," *Bloomberg*, October 21, 2009.

137. SEC, "Risk Management Reviews of Consolidated Supervised Entities," memoranda, October 6, 2006; December 6, 2007; February 2, 2007; March 30, 2007; May 31, 2007; July 5, 2007; August 3, 2007; September 5, 2007; October 5, 2007.

138. Erik Sirri, interview by FCIC, April 1, 2010.

139. Valukas, 1:7; 18 nn. 63, 64; 3: 742, 815–22.

140. Valukas, 1:8, 20–21.

141. *The People of the State of New York v. Ernst & Young LLP* (N.Y. Sup. Ct. filed Dec. 21, 2010).

142. Ronald Marcus, interview by FCIC, July 23, 2010.

143. See Ronald S. Marcus, OTS, "Report of Examination Lehman Brothers Holdings Inc.," July 7, 2008, pp. 1–2.

144. David Sambol, interview by FCIC, September 27, 2010.
145. See Countrywide Financial Corporation, Form 10-K, February 29, 2007, p. 47. See also Fannie Mae, "Single-Family Conventional Acquisition Characteristics: Overall" (2007); Fannie Mae, "Single Family Conventional Acquisition Characteristics: Countrywide Financial Corporation" (2007); Countrywide, "Response to June 23 Request: 11 and 12: Summary."
146. "Single Family Guarantee Business: Facing Strategic Crossroads," June 27, 2005.
147. *Ibid.*
148. Daniel Mudd, interview by FCIC, March 26, 2010.
149. "Single Family Guarantee Business: Facing Strategic Crossroads"
150. "Single Family Guaranty Business Strategic Review Summary," PowerPoint presentation, July 19, 2005.
151. Citigroup, "Project Phineas: Presentation to the Board of Directors," executive summary, July 18 and 19, 2005.
152. "Single Family Conventional Acquisition Characteristics Overall," produced by Fannie Mae.
153. Tom Lund, interview by FCIC, March 4, 2010.
154. Christopher Dickerson to James B. Lockhart III, "Proposed Appointment of the Federal Housing Finance Agency as Conservator for the Federal National Mortgage Association," memorandum, September 6, 2008, p. 14
155. Fannie Mae, 3Q 2008 Form 10-Q, p. at 115; Fannie Mae, 2007 Form 10K, pp. 126–30.
156. By December 31, 2005, Freddie reported capital of \$36.4 billion; \$173 billion in loans to borrowers with FICO scores below 660; \$80 billion in high LTV; and \$93 billion in loans for non-owner-occupied homes. Federal Home Loan Mortgage Corporation, "Information Statement and Annual Report to Stockholders: For the fiscal year ended December 31, 2007," February 28, 2008, p. 74.
157. Richard Syron, interview by FCIC, August 31, 2010.
158. Anurag Saksena, interview by FCIC, June 22, 2010.
159. Donald Bisenius, interview by FCIC, September 29, 2010.
160. Saksena, interview.
161. "OFHEO, SEC Reach Settlement with Fannie Mae; Penalty Imposed," Office of Federal Housing Enterprise Oversight press release, May 23, 2006.
162. "Freddie Mac Voluntarily Adopts Temporary Limited Growth for Retained Portfolio," Federal Home Loan Mortgage Corporation press release, August 1, 2006.
163. OFHEO, Report of the Special Examination of Fannie Mae, May 2006.
164. OFHEO Report: "Fannie Mae Façade; Fannie Mae Criticized for Earnings Manipulation," Office of Federal Housing Enterprise Oversight press release, May 23, 2006.
165. James Lockhart, written testimony for the FCIC, Hearing on Subprime Lending and Securitization and Government-Sponsored Enterprises (GSEs), day 3, session 2: Office of Federal Housing Enterprise Oversight, April 9, 2010, p. 2.
166. *Ibid.*, p. 1.
167. Robert J. Levin, Board of Director Presentation, PowerPoint presentation, January 2006.
168. Minutes of the February 21, 2006, meeting of the Board of Directors of Fannie Mae (approved on April 25, 2006).
169. Stephen B. Ashley, Chairman Fannie Mae, remarks prepared for delivery at the Senior Management Meeting, Cambridge, Maryland, June 27, 2006.
170. Fannie Mae, "Notes to Single Family Conventional Acquisition Report," August 3, 2007; See also Federal National Mortgage Association, Form 10-K, for the fiscal year ended December 31, 2006, filed August 16, 2007.
171. FCIC staff estimates based on data provided by Fannie Mae.
172. Federal National Mortgage Association, "Form DEF 14A," November 2, 2007, p. 42; Federal National Mortgage Association, Form 10-K, May 2, 2007, p. 202.
173. OFHEO, Report of the Special Examination for Fannie Mae, May 2006, p. 8.
174. Federal Home Loan Mortgage Corporation, Form 10-K, for the fiscal year ended December 31, 2005, filed June 28, 2006, pp. 3, 19. Federal Home Loan Mortgage Corporation, Form 10-K, for the fiscal year ended December 31, 2006, filed March 23, 2007, pp. 3, 22.

175. Federal Home Loan Mortgage Corporation, Proxy Statement and Notice of Annual Meeting of Stockholders (May 7, 2007), Summary Compensation Table, p. 52 (for 2006 figures). Federal Home Loan Mortgage Corporation, Proxy Statement and Notice of Annual Meeting of Stockholders (July 12, 2006), Summary Compensation Table, p. 37 (for 2005 figures).
176. *Ibid.*
177. OFHEO, Report of the Special Examination for Fannie Mae, May 2006, pp. 3, 9–10, 15.
178. *Ibid.*, p. 2.
179. *Ibid.*
180. *Ibid.*, pp. 7–8.
181. *Ibid.*
182. Mark Winer, interview by FCIC, March 23, 2010.
183. Todd Hempstead, interview by FCIC, March 23, 2010.
184. Daniel Mudd, interview by FCIC, March 26, 2010.
185. Dickerson to Lockhart, Fannie Mae conservatorship memo, September 6, 2008, p. 14.
186. Minutes of a Meeting of the Fannie Mae Board of Directors, April 21, 2007.
187. Minutes of a Meeting of the Fannie Mae Board of Directors, May 21, 2007.
188. Federal National Mortgage Association, Form 10-K, for the fiscal year ended December 31, 2007, p. 24.
189. FCIC staff estimate based on data provided by Fannie Mae.
190. “Deepen Segments—Develop Breadth,” Fannie Mae Strategic Plan, 2007–2011.
191. Enrico Dallavecchia, email to Daniel Mudd, “Budget 2008 and strategic investments,” July 16, 2007.
192. Enrico Dallavecchia, email to Michael Williams, “RE:,” July 16, 2007.
193. Daniel Mudd, email to Enrico Dallavecchia, “RE: Budget 2008 and strategic investments,” July 17, 2007.
194. Enrico Dallavecchia, interview by FCIC, March 16, 2010.
195. Freddie Mac, “Freddie Mac’s Business Strategy, Board of Directors Meeting,” March 2–3, 2007, pp. 3–4.
196. Freddie Mac, “Freddie Mac’s Business Strategy, Board of Directors Meeting,” March 2–3, 2007, pp. 3–4, 70, 73.
197. OFHEO, 2006 Report of Examination for the Federal Home Loan Mortgage Corporation, pp. 8–9, 10–11.
198. Federal Housing Finance Agency, “Mortgage Market Note 10–2: The Housing Goals of Fannie Mae and Freddie Mac in the Context of the Mortgage,” February 1, 2010.
199. “HUD Announces New Regulations to Provide \$2.4 Trillion in Mortgages for Affordable Housing for 28.1 Million Families,” Department of Housing and Urban Development, press release, October 31, 2000.
200. Mudd, interview.
201. Robert Levin, interview by FCIC, March 17, 2010.
202. “HUD Finalizes Rule on New Housing Goals for Fannie Mae and Freddie Mac,” Department of Housing and Urban Development press release, November 1, 2004.
203. Mudd, testimony before the FCIC, Hearing on Subprime Lending and Securitization and Government-Sponsored Enterprises (GSEs), day 3, session: 1 Fannie Mae, April 9, 2010, transcript, pp. 63–64.
204. See FHFA, “Annual Report to Congress 2009,” pp. 131, 148. The numbers are for mortgage assets + outstanding MBS guaranteed. Total assets + MBS are slightly greater.
205. OFHEO, “2008 Report to Congress,” April 15, 2008.
206. Robert Levin, interview by FCIC, March 17, 2010; Robert Levin, testimony before the FCIC, Hearing on Subprime Lending and Securitization and Government-Sponsored Enterprises (GSEs), day 3, session 1: Fannie Mae, April 9, 2010, transcript, pp. 68–72.
207. Tom Lund, interview by FCIC, March 4, 2010.
208. Dallavecchia, interview.
209. Todd Hempstead, interview by FCIC, March 23, 2010.
210. Kenneth Bacon, interview by FCIC, March 5, 2010.

211. Stephen Ashley, interview by FCIC, March 31, 2010.
212. Levin, interview.
213. Mike Quinn, interview by FCIC, March 10, 2010.
214. Ashley, interview.
215. Armando Falcon, testimony before the FCIC, Hearing on Subprime Lending and Securitization and Government-Sponsored Enterprises (GSEs), day 3, session 2: Office of Federal Housing Enterprise Oversight, April 9, 2010, transcript, pp. 155–56, 192; .written testimony, p. 10.
216. Lockhart, written testimony for the FCIC, April 9, 2010, p. 6; Lockhart, testimony before the FCIC, April 9, 2010, transcript, pp. 156–61.
217. James Lockhart, interview by FCIC, March 19, 2010.
218. Edward DeMarco, interview by FCIC, March 18, 2010; Maria Fernandez (with Alfred Pollard, Chris Dickerson, Jeffrey Spohn, and Jamie Newell), interview by FCIC, March 5, 2010.
219. Mike Price (with Janice Kuhl, Paul Manchester, Charlotte Reid, Alfred Pollard, and Kevin Sheehan), interview by FCIC, February 19, 2010.
220. Department of Housing and Urban Development, “HUD’s Housing Goals for the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac) for the Years 2005–2008 and Amendments to HUD’s Regulation of Fannie Mae and Freddie Mac,” *Federal Register* 69, no. 211 (2 Nov. 2004): 63629.
221. FHFA, “The Housing Goals of Fannie Mae and Freddie Mac in the Context of the Mortgage Market.”
222. Daniel Mudd, letter to Brian Montgomery re affordable housing goals, December 21, 2007.
223. “Deepen Segments—Develop Breadth,” Fannie Mae Strategic Plan.
224. Brian D. Montgomery, Federal Housing Commissioner, to Daniel Mudd, Fannie Mae, typed letter, April 24, 2008; Brian D. Montgomery, Federal Housing Commissioner, to Richard F. Syron, Fannie Mae, typed letter, April 24, 2008.
225. “Cost of Freddie Mac’s Affordable Housing Mission,” PowerPoint presentation, June 4, 2009, pp. 7–8, 10–11.
226. Freddie’s net income was \$4.8 billion in 2003, \$2.6 billion in 2004, \$2.1 billion in 2005, \$2.3 billion in 2006, net loss of \$3.1 billion in 2007, and net loss of \$50.1 billion in 2008. Federal Home Loan Mortgage Corporation, Form 10-K, for the fiscal year ended December 31, 2009, filed February 24, 2010, Item 6, Selected Financial Data, p. 57 (for 2008 figure). Federal Home Loan Mortgage Corporation, “Information Statement and Annual Report to Stockholders: For the fiscal year ended December 31, 2007,” February 28, 2008, Selected Financial Data and Other Operating Measures, p. 28 (for 2003–07 figures).
227. “Cost and Benefits of Mission Activities: Project Phineas,” presentation, June 14, 2005.
228. March 13, 2007, Business Review Briefing; information confirmed by counsel to Fannie Mae on January 4, 2011.
229. “Fannie Mae’s Housing Goals,” Audit Team briefing, May 8, 2007.
230. “Fannie Mae Board of Directors Management Report,” PowerPoint presentation, July 17, 2007.
231. “Cost of Freddie Mac’s Affordable Housing Mission,” PowerPoint presentation, June 4, 2009, pp. 7–8, 10–11.

## Chapter 10

1. Gary Gorton, interview by FCIC, May 11, 2010.
2. Lewis Ranieri, interview by FCIC, July 30, 2010.
3. Complaint, SEC v. Goldman Sachs & Co. and Fabrice Tourre (S.D.N.Y. April 16, 2010).
4. Office of the Comptroller of the Currency, Treasury; Office of Thrift Supervision, Treasury; Board of Governors of the Federal Reserve System; Federal Deposit Insurance Corporation; and Securities and Exchange Commission, “Interagency Statement on Sound Practices Concerning Elevated Risk Complex Structured Finance Activities” (Notice of final interagency statement), January 5, 2007.
5. Wing Chau, interview by FDIC, November 11, 2010.
6. FCIC, Survey of 40 CDO Managers, Schedule A and B (1st production served on 28 managers, 2nd production served on 12 managers).
7. Vertical Capital, email response to FCIC survey, October 29, 2010.

8. As two market observers would later write, “Starting in 2004, CDOs and CDO investors became the dominant class of agents pricing credit risk on sub-prime mortgage loans. . . . In the absence of restraints, lenders started originating unreasonably risky loans in late 2005 and continued to do so into 2007.” Mark Adelson and David Jacob, “The Sub-prime Problem: Causes and Lessons,” January 8, 2008, p. 1.

9. Scott Simon, quoted in Allison Pyburn, “CDO Investors Debate Morality of Spread Environment,” *Asset Securitization Report*, May 9, 2005, p. 1.

10. Armand Pastine, quoted in *ibid.* According to the FCIC database, PIMCO did manage one more new CDO, Costa Bella CDO, which was issued in December 2006.

11. Source on downgrades: Bloomberg. Source on events on default: Moody’s Investors Service, “Moody’s downgrades ratings of Notes issued by Maxim High Grade CDO I, Ltd.,” April 18, 2008, and “Moody’s downgrades ratings of Notes issued by Maxim High Grade CDO II, Ltd.,” April 18, 2008.

12. ACA Capital, 2006 10-K, p. 12.

13. “ISDA Publishes Template for Credit Default Swaps on Asset-Backed Securities with Pay As You Go Settlement,” International Swaps and Derivatives Association press release, June 21, 2005 ([www.isda.org/press/press062105.html](http://www.isda.org/press/press062105.html)). Under the terms of the pay-as-you-go swap, if the referenced mortgage-backed security does not receive the full interest and principal payments, the pay-as-you-go protection seller is required to pay the buyer the amount of the shortfall. For long investors—the protection provider under the swap—the advantage was the leverage embedded in the trade: they did not have to come up with the cash up front for the principal amount of the bond; they simply agreed to receive quarterly swap fees in return for accepting the risk of loss if the securities experienced a shortfall.

14. Laura Schwartz, interview by FCIC, May 10, 2010.

15. Laurie S. Goodman, Shumin Li, Douglas J. Lucas, Thomas A. Zimmerman, and Frank J. Fabozzi, *Subprime Mortgage Credit Derivatives* (Frank J. Fabozzi Series) (Hoboken, NJ: John Wiley, 2008), p. 176.

16. Greg Lippmann, interview by FCIC, May 20, 2010.

17. FCIC staff estimates based on analysis of Moody’s CDO EMS database.

18. FCIC Hedge Fund Survey. From July through December 2006, several hedge funds with average assets under management of \$4–\$8 billion accumulated positions totaling more than \$1.4 billion in mortgage-related CDO equity tranches and almost \$3 billion of short positions in mortgage-related CDO mezzanine tranches. FCIC staff used a Moody’s proprietary CDO database to estimate the total mortgage-related CDO equity tranche issuance. Please see FCIC website for more information about the hedge fund survey. Note: the FCIC did not survey hedge funds that fully liquidated or closed. These funds may have purchased substantial “long only” positions in mortgage-related securities.

19. FCIC Hedge Fund Survey. See FCIC website for details.

20. Rabobank’s counsel, letter to Judge Fried of the Supreme Court of NY, May 11, 2010.

21. Norma Flow of Funds, information provided by Merrill Lynch.

22. Steven Ross, email to FCIC, December 21, 2010.

23. See letter from Rabobank’s counsel, letter to Judge Fried, May 11, 2010; the letter was never filed with the court because the case was settled.

24. Document of Magnetar Investments in Norma, Attachment G-13 (showing Magnetar purchases of equity tranche in Norma); provided by Merrill Lynch.

25. Information provided by Merrill Lynch, December 22, 2010.

26. Complaint, SEC v. Goldman Sachs & Co. and Fabrice Tourre.

27. Ira Wagner, interview by FCIC, April 20, 2010.

28. Alan Roseman, interview by FCIC, May 17, 2010.

29. Schwartz, interview.

30. John Paulson, interview by FCIC, October 28, 2010.

31. “Goldman Sachs to Pay Record \$550 Million to Settle SEC Charges Related to Subprime Mortgage CDO,” SEC press release, July 15, 2010.

32. Jamie Mai and Ben Hockett, interview by FCIC, April 22, 2010.

33. Sihan Shu, interview by FCIC, September 27, 2010.

34. Steven Eisman, interview by FCIC, April 22, 2010.

35. James Grant, “Inside the Mortgage Machine,” in *Mr. Market Miscalculates: The Bubble Years and Beyond* (Mount Jackson, VA: Axios, 2008), pp. 180–81, 182–83.

36. Eisman, interview.

37. Michael Burry, interview by FCIC, May 18, 2010.
38. Paulson, interview.
39. Burry, interview.
40. FCIC Hedge Fund Survey. See FCIC website for details.
41. John Geanakoplos, written testimony for the FCIC, Forum to Explore the Causes of the Financial Crisis, day 1, session 3: Risk Taking and Leverage, February 26, 2010, p. 16.
42. OCC, "Subprime CDO Valuation and Oversight Review—Conclusion Memorandum," memorandum from Michael Sullivan, RAD, and Ron Frake, NBE, to John Lyons, Examiner-in-Charge, Citibank, NA, January 17, 2008, p. 6; Paul, Weiss, Citigroup's counsel, letter to FCIC, June 23, 2010, "Responses of Nestor Dominguez."
43. Richard Bookstaber, interview by FCIC, May 11, 2010.
44. "RMBS and Citi-RMBS as a Percentage of Citi-CDO Portfolio Notionals," produced by Citi for the FCIC.
45. Federal Reserve Bank of New York, Federal Reserve Board, Office of the Comptroller of the Currency, Securities and Exchange Commission, U.K. Financial Services Authority, and Japan Financial Services Authority, "Notes on Senior Supervisors' Meetings with Firms," November 19, 2007, p. 3.
46. FCIC staff estimates, based on analysis of Moody's CDO EMS database.
47. Paul, Weiss, Citigroup's counsel, letter to FCIC, March 1, 2010, in re the FCIC's second supplemental request, "Response to Interrogatory no. 7"; Paul, Weiss, letter to FCIC, March 31, 2010, updated response to interrogatory no. 7, p. 5.
48. Nestor Dominguez, interview by FCIC, March 2, 2010; Paul, Weiss, letter of March 31, 2010, pp. 3–6.
49. Board Analyst Profile for Citigroup Inc., April 16, 2007.
50. SEC staff (Sam Forstein, Tim McGarey, Mary Ann Gadziala, Kim Mavis, Bob Sollazo, Suzanne McGovern, and Chris Easter), interview by FCIC, February 9, 2010.
51. Comptroller of the Currency, memorandum, Examination of Citigroup Risk Management (CRM), January 13, 2005, p. 3.
52. Ronald Frake, Comptroller of the Currency, letter to Geoffrey Coley, Citibank, N.A., December 22, 2005.
53. Federal Reserve, "New York Operations Review, May 17–25, 2005," p. 4.
54. Federal Reserve Bank of New York Bank Supervision Group, "Operations Review Report," December 2009.
55. Federal Reserve Bank of New York, "Summary of Supervisory Activity and Findings, Citigroup Inc., January 1, 2005–December 31, 2005," April 10, 2006; Federal Reserve Bank of New York, "Summary of Supervisory Activity and Findings," Citigroup Inc., January 1, 2004–December 31, 2004," April 5, 2005.
56. Citigroup Inc., Form 8-K, April 3, 2006, Exhibit 99.1.
57. Federal Reserve Board, memo to Governor Susan Bies, February 17, 2006.
58. The board reversed a 15% reduction that had been implemented when the issues began and then added a 5% raise. Citigroup, 2006 Proxy Statement, p. 37.
59. Comptroller of the Currency, letter to Citigroup CEO Vikram Pandit (Supervisory Letter 2008-05), February 14, 2008; quotation, p. 2.
60. Federal Reserve Bank of New York, letter to Vikram Pandit and the Board of the Directors of Citigroup, April 15, 2008, pp. 6–7.
61. Timothy Geithner, testimony before the FCIC, Hearing on the Shadow Banking System, day 2, session 1: Perspective on the Shadow Banking System, May 6, 2010, transcript, p. 128.
62. Gene Park, interview by FCIC, May 18, 2010.
63. Andrew Forster, email to Gary Gorton, Alan Frost, et al., July 21, 2005.
64. Park, interview.
65. Gorton, interview.
66. Park, interview.
67. Gene Park, email to Joseph Cassano, February 28, 2006.
68. Park, interview.

69. Data supplied by AIG. The CDO—RFC CDO III Ltd.—was 93% subprime and 7% RMBS Home Equity, according to the AIG credit committee. A review by FCIC staff showed that the remaining 7% designated as RMBS Home Equity included subprime collateral.

70. AIG, “Residential Mortgage Presentation (Financial Figures are as of June 30, 2007),” August 9, 2007, p. 28.

71. Park, interview.

72. Joseph Cassano, interview by FCIC, June 25, 2010.

73. Park, interview.

74. Dow Kim, interview by FCIC, September 9, 2010.

75. Stanley O’Neal, interview by FCIC, September 16, 2010.

76. Kim, interview.

77. FCIC staff estimates based on analysis of Moody’s CDO EMS database.

78. Complaint, Coöperatieve Centrale Raiffeisen=Boerenleenbank v. Merrill Lynch, No. 601832/09 (N.Y.S. June 12, 2009), paragraph 147.

79. Kim, interview.

80. FCIC analysis based on Moody’s CDO EMS database.

81. Presentation to Merrill Lynch and Co. Board of Directors, “Leveraged Finance and Mortgage/CDO Review,” October 21, 2007, p. 35.

82. Chau, interview.

83. FCIC staff analysis of Moody’s CDO EMS database.

84. FCIC staff estimates based on Moody’s CDO EMS database. Data supplied by Merrill Lynch. Relevant information not provided for Robeco High Grade CDO I.

85. FCIC staff analysis of Moody’s CDO EMS database.

86. Data supplied by Merrill Lynch.

87. FCIC staff analysis of Moody’s CDO EMS database. The total value of Baa tranches issued by CDOs in the FCIC database was \$684 million in 2003 and \$3.9 billion in 2007; Aa tranches, \$1.4 billion in 2003 and \$8.3 billion in 2007; A tranches, \$522 million in 2003 and \$4.3 billion in 2007.

88. FCIC staff telephone discussion with SEC staff, September 1, 2010.

89. FCIC staff analysis of Moody’s CDO EMS database.

90. Chau, interview; for number of the CDOs he managed, FCIC staff analysis of Moody’s Enhanced CDO Monitoring Database.

91. Super Senior Credit Transactions Principal Collateral Provisions, December 7, 2007, produced by AIG.

92. Presentation to the Merrill Lynch Board, “Leveraged Finance and Mortgage/CDO Review,” p. 23; Jeff Kronthal, former head of Merrill Lynch’s Global Credit, Real Estate and Structured Products, interview by FCIC, September 14, 2010.

93. Al Yoon, “Merrill’s Own Subprime Warnings Unheeded,” Reuters, October 30, 2007.

94. SEC, “Risk Management Reviews of Consolidated Supervised Entities,” internal memo to Erik Sirri and others, February 2, 2007, p. 3.

95. *Ibid.*, p. 1.

96. Yoon, “Merrill’s Own Subprime Warnings Unheeded.”

97. Kim, interview.

98. Senate Permanent Subcommittee on Investigations, *Fishtail, Bacchus, Sundance, and Slapshot: Four Enron Transactions Funded and Facilitated by U.S. Financial Institutions*, 107th Cong., 2nd sess., January 2, 2003, S-Prt 107–82, pp. 36, 37.

99. “Interagency Statement on Sound Practices” (Notice of final interagency statement), January 5, 2007 (see n. 4, above).

100. Office of the Comptroller of the Currency, Treasury; Office of Thrift Supervision, Treasury; Board of Governors of the Federal Reserve System; Federal Deposit Insurance Corporation; and Securities and Exchange Commission, “Interagency Statement on Sound Practices Concerning Complex Structured Finance Activities” (Notice of interagency statement with request for public comments), May 13, 2004.

101. *Ibid.*, pp. 7–8.

102. John C. Dugan, Comptroller of the Currency, written testimony for the FCIC, Hearing on Subprime Lending and Securitization and Government-Sponsored Enterprises (GSEs), day 2, session 2: Office of the Comptroller of the Currency, April 8, 2010, Appendix E: OCC Supervision of Citibank, N.A., p. 10.

103. "Interagency Statement on Sound Practices" (Notice of final interagency statement), January 5, 2007, p. 6.

104. Basel Committee on Banking Supervision: Joint Forum, "Credit Risk Transfer," Bank for International Settlements, March 2005, pp. 3–4, 6–7, 5–10.

105. *Ibid.*, p. 4.

106. *Ibid.*

107. *Ibid.*, pp. 3–4.

108. SEC, Office of Compliance Inspections and Examinations, "Examination Report to Moody's Investor Services, Inc.," p. 4 (examination begun August 31, 2007).

109. Warren Buffett, testimony before the FCIC, Hearing on the Credibility of Credit Ratings, the Investment Decisions Made Based on Those Ratings, and the Financial Crisis, session 2: Credit Ratings and the Financial Crisis, June 2, 2010, transcript, p. 301.

110. Warren Buffett, interview by FCIC, May 26, 2010; Buffett, testimony before the FCIC, June 2, 2010, transcript, p. 302.

111. Eric Kolchinsky, written testimony for the FCIC, Hearing on the Credibility of Credit Ratings, the Investment Decisions Made Based on Those Ratings, and the Financial Crisis, session 1: The Ratings Process, June 2, 2010, p. 2.

112. Brian Clarkson, interview by FCIC, May 20, 2010.

113. Gary Witt, interview by FCIC, April 21, 2010. John Rutherford was the president and CEO of Moody's Corporation from the time of its spin-off from Dun & Bradstreet in 2000 until he retired from the firm in 2005.

114. Jerome Fons, interview by FCIC, April 22, 2010.

115. Raymond McDaniel, interview by FCIC, May 21, 2010.

116. Clarkson, interview.

117. *Ibid.*

118. McDaniel, interview.

119. Raymond McDaniel, testimony before the FCIC, Hearing on the Credibility of Credit Ratings, the Investment Decisions Made Based on Those Ratings, and the Financial Crisis, session 2: Credit Ratings and the Financial Crisis, June 2, 2010, transcript, pp. 203–4.

120. Scott McCleskey, interview by FCIC, April 16, 2010.

121. Clarkson, interview.

122. Witt, interview.

123. Mark Froeba, testimony before the FCIC, Hearing on the Credibility of Credit Ratings, the Investment Decisions Made Based on Those Ratings, and the Financial Crisis, session 3: The Credit Rating Agency Business Model, June 2, 2010, transcript, p. 347.

124. Clarkson, interview; McDaniel, interview.

125. Witt, interview; Gary Witt, testimony before the FCIC, Hearing on the Credibility of Credit Ratings, the Investment Decisions Made Based on those Ratings, and the Financial Crisis, Session 3: The Credit Rating Agency Business Model, June 2, 2010, transcript, p. 394.

126. Brian Clarkson, email to Ed Bankole, Pramila Gupta, Michael Kanef, Andrew Kriegler, Sam Pilcer, Andrew Silver, and Linda Stesney, subject: "June YTD AFG by analyst.xls," July 5, 2001.

127. William May, email to Gus Harris, subject: "RE: BES and PEs," January 12, 2006.

128. Yuri Yoshizawa, email to direct report managing directors, subject: "3Q Market Coverage-CDO," October 5, 2007.

129. Clarkson, interview.

130. McDaniel, interview.

131. Witt, testimony before the FCIC, June 2, 2010, transcript, pp. 456–57.

132. Moody's Investors Service: Managing Director's Town Hall Meeting, September 11, 2007, transcript, pp. 42, 51–52.

133. Witt, interview.

134. Andrew Kimball, internal email, October 21, 2007, attaching memorandum, “Credit policy issues at Moody’s suggested by the subprime/liquidity crisis.” The susceptibility of a ratings committee to external pressures was shown in the constant proportion debt obligation (CPDO) scandal in Europe.

135. *Ibid.*, p. 3.

136. David Teicher, project manager at Moody’s, interview by FCIC, May 4, 2010; Standard & Poor’s, “Credit FAQ: The Basics of Credit Enhancement in Securitizations,” RatingsDirect, June 24, 2008.

137. Richard Michalek, testimony before the FCIC, Hearing on the Credibility of Credit Ratings, the Investment Decisions Made Based on Those Ratings, and the Financial Crisis, session 3: The Credit Rating Agency Business Model, June 2, 2010, transcript, p. 361.

138. Witt, interview.

139. Clarkson, interview.

140. Fons, interview.

141. Kimball, memorandum, “Credit policy issues at Moody’s,” p. 1.

142. Eric Kolchinsky, testimony before the FCIC, Hearing on the Credibility of Credit Ratings, the Investment Decisions Made Based on Those Ratings, and the Financial Crisis, session 1: The Ratings Process, June 2, 2010, transcript, pp. 68–69.

143. E. Kolchinsky, email to Y Fu and Y Yoshizawa, May 30, 2005.

144. Kolchinsky, testimony before the FCIC, June 2, 2010, transcript, pp. 68–69.

145. Eric Kolchinsky, interview by FCIC, April 14, 2010.

146. FCIC staff estimates, based on analysis of Moody’s SFDRS database.

147. Riachra O’Driscoll, email to Yuri Yoshizawa, subject: “Magnolia 2006–5 Class Ds,” April 27, 2006.

148. Kimball, memorandum, “Credit policy issues at Moody’s,” p. 2.

149. SEC, Office of Compliance Inspections and Examinations, “Examination Report for Moody’s Investors Services, Inc.,” p. 2.

## Chapter 11

1. William Dudley, interview by FCIC, October 15, 2010.

2. Inside Mortgage Finance, *The 2009 Mortgage Market Statistical Annual*, vol. 2, *The Secondary Market* (Bethesda, Md.: Inside Mortgage Finance, 2009), p. 13, “Non-Agency MBS Issuance by Type.”

3. FCIC staff estimates based on Moody’s CDO Enhanced Monitoring System (EMS) database.

4. *2009 Mortgage Market Statistical Annual*, 2:373, “Commercial MBS Issuance.”

5. Ben S. Bernanke, chairman of the Federal Reserve, letter to Phil Angelides, chairman of the FCIC, December 21, 2010.

6. Mark Zandi, Celia Chen, and Brian Carey, “Housing at the Tipping Point,” Moody’s Economy.com, October 2006, pp. 6–7.

7. CoreLogic Home Price Index, Single-Family Combined (available at [www.corelogic.com/Products/CoreLogic-HPI.aspx](http://www.corelogic.com/Products/CoreLogic-HPI.aspx)), FCIC staff calculations, January to January.

8. CoreLogic Census Bureau Statistical Area (CBSA) Home Price Index, FCIC staff calculations.

9. Data provided by Mark Fleming, chief economist for CoreLogic, in his written testimony for the FCIC, Hearing on the Impact of the Financial Crisis—Sacramento, session 1: Overview of the Sacramento Housing and Mortgage Markets and the Impact of the Financial Crisis on the Region, September 9, 2010, figures 4, 5.

10. Mark Fleming, testimony before the FCIC, Hearing on the Impact of the Financial Crisis—Sacramento, session 1: Overview of the Sacramento Housing and Mortgage Markets and the Impact of the Financial Crisis on the Region, September 9, 2010, transcript, p. 14.

11. Mortgage Bankers Association, National Delinquency Survey, data provided to the FCIC.

12. *Ibid.*, with FCIC staff calculations.

13. FCIC staff analysis, “Analysis of housing data,” July 7, 2010. The underlying data come from CoreLogic and Loan Processing Svcs. Tabulations were provided to the FCIC by staff at the Federal Reserve.

14. Subprime and Alt-A mortgages are defined as those included in subprime or Alt-A securitizations, respectively. GSE mortgages included mortgages purchased or guaranteed by Fannie Mae or Freddie Mac. FHA mortgages included mortgages insured by the FHA or VA.

15. FCIC staff analysis.

16. A recent analysis published by FHFA comes to very similar conclusions. See “Data on the Risk Characteristics and Performance of Single-Family Mortgages Originated from 2001 through 2008 and Financed in the Secondary Market,” September 13, 2010.

17. FCIC staff analysis, “Analysis of housing data and comparison with Ed Pinto’s analysis,” August 9, 2010. In the sample data provided by the Federal Reserve, Fannie Mae and Freddie Mac mortgages with a FICO score below 660 had an average rate of serious delinquency of 6.2% in 2008. In public reports, the GSEs stated that the average serious delinquency rates for loans with FICO scores less than 660 in their guarantee books was 6.3%. Fannie Mae 2008 Credit Supplement, p. 5; Freddie Mac Fourth Quarter 2008 Financial Results Supplement, March 11, 2009, p. 15.

18. In the sample data provided by the Federal Reserve, Fannie Mae and Freddie Mac mortgages with LTVs above 90% had an average rate of serious delinquency of 5.7% in 2008. In public reports, the GSEs stated that the average serious delinquency rates for loans with LTVs above 90% in their guarantee books was 5.8%. Fannie Mae 2008 Credit Supplement, p. 5;

Freddie Mac Fourth Quarter 2008 Financial Results Supplement, March 11, 2009, p. 15.

19. Edward Pinto, “Memorandum: Sizing Total Federal Government and Federal Agency Contributions to Subprime and Alt-A Loans in U.S. First Mortgage Market as of 6.30.08,” Exhibit 2 with corrections through October 11, 2010 ([www.aei.org/docLib/PintoFCICTriggersMemo.pdf](http://www.aei.org/docLib/PintoFCICTriggersMemo.pdf)). The 26.7 million loans include 6.7 million loans in subprime securitizations and another 2.1 million loans in Alt-A securitizations, for a total of 8.8 million mortgages in subprime or Alt-A pools, which Pinto calls “self-denominated” subprime and Alt-A, respectively. To these, he adds another 8.8 million loans with FICO scores below 660, which he labels “subprime by characteristic.” He also adds 6.3 million loans at the GSEs that are either interest-only loans, negative amortization loans, or loans with an LTV—including any second mortgage—greater than 90%, which he collectively refers to as “Alt-A by characteristic.” The last additions include an estimated 1.4 million loans insured by the FHA and VA with an LTV greater than 90%—out of a total of roughly 5.5 million FHA and VA loans—and 1.3 million loans in bank portfolios that are inferred to have his defined “Alt-A characteristics.”

20. Fannie Mae 2008 Credit Supplement, p. 5; Freddie Mac Fourth Quarter 2008 Financial Results Supplement, March 11, 2009.

21. Edward Pinto, “Yes, the CRA Is Toxic,” *City Journal*, Autumn 2009.

22. Neil Bhutta and Glenn Canner, “Did the CRA Cause the Mortgage Market Meltdown?” Federal Reserve Board of Governors, March 2009. The authors use the Home Mortgage Disclosure Act data, which cover roughly 80% of the mortgage market in the United States—see Robert B. Avery, Kenneth P. Brevoort, and Glenn B. Canner, “Opportunities and Issues in Using HMDA Data,” *Journal of Real Estate Research* 29, no. 4 (October 2007): 351–79.

23. Elizabeth Laderman and Carolina Reid, “Lending in low and moderate income neighborhoods in California: The Performance of CRA Lending During the Subprime Meltdown,” November 26, 2008, working paper to be presented at the Federal Reserve System Conference on Housing and Mortgage Markets, Washington, DC, December 4, 2008.

24. FCIC, “Preliminary Staff Report: The Mortgage Crisis,” April 7, 2010.

25. Bank of America response letter to FCIC, August 20, 2010.

26. John Reed, interview by FCIC, March 4, 2010.

27. Lewis Ranieri, interview by FCIC, July 30, 2010.

28. Nicolas Weill, interview by FCIC, May 11, 2010.

29. *Ibid.*

30. Nicolas Weill, email to Raymond McDaniel and Brian Clarkson, July 4, 2007.

31. Moody’s Investors Service, “Early Defaults Rise in Mortgage Securitizations,” *Structured Finance: Special Report*, January 18, 2007, pp. 1, 3.

32. Moody’s Investors Service, “Moody’s Downgrades Subprime First-lien RMBS-Global Credit Research Announcement,” July 10, 2007.

33. Weill, interview.

34. FCIC staff estimates, based on analysis of Blackbox data.

35. Data on Bear Stearns provided by JP Morgan to the FCIC.

36. Moody's Investors Service, "Moody's Downgrades \$33.4 billion of 2006 Subprime First-Lien RMBS and Affirms \$280 billion Aaa's and Aa's," October 11, 2007; "October 11 Rating Actions Related to 2006 Subprime First-Lien RMBS," Structured Finance: Special Report, October 17, 2007, pp. 1–2.

37. FCIC staff estimates, based on analysis of Blackbox data.

38. FCIC staff estimates, based on analysis of Moody's SFDRS data as of April 2010.

39. Moody's Investors Service, "The Impact of Subprime Residential Mortgage-Backed Securities on Moody's-Rated Structured Finance CDOs: A Preliminary Review," Structured Finance: Special Comment, March 23, 2007, p. 2.

40. Yuri Yoshizawa, email to Noel Kirnon and Raymond McDaniel, cc Eric Kolchinsky, subject: "CSFB Pipeline information," March 28, 2007.

41. Moody's Investors Service, "First Quarter 2007 U.S. CDO Review: Climbing the Wall of Subprime Worry," Structured Finance: Special Report, May 31, 2007, p. 2.

42. Richard Michalek, testimony before the FCIC, Hearing on the Credibility of Credit Ratings, the Investment Decisions Made Based on Those Ratings, and the Financial Crisis, session 3: The Credit Rating Agency Business Model, June 2, 2010, transcript, pp. 448–49.

43. "2007 MCO Strategic Plan Overview," presentation by Ray McDaniel, July 2007.

44. Eric Kolchinsky—retaliation complaint, Chronology Prepared by Eric Kolchinsky.

45. FCIC staff estimates based on analysis of Moody's SFDRS; FCIC, "Preliminary Staff Report: Credit Ratings and the Financial Crisis," June 2, 2010.

46. Eric Kolchinsky, interview by FCIC, April 27, 2010. 4838–2303–6167 (checked–BLK); Kolchinsky—retaliation complaint.

47. Eric Kolchinsky—retaliation complaint.

48. FCIC, "PSR: Credit Ratings and the Financial Crisis," pp. 30–33.

49. Bingham McCutchen, Fannie Mae counsel, letter to FCIC, September 21, 2010 (hereafter "Bingham Letter"); O'Melveny & Meyers LLP, Freddie Mac counsel, letter to FCIC, September 21, 2010 (hereafter "O'Melveny Letter").

50. Federal Housing Finance Agency, "Conservator's Report on the Enterprises' Financial Performance: Third Quarter 2010," tables 3.1 and 4.1.

51. Raymond Romano, interview by FCIC, September 14, 2010; Bingham Letter.

52. Bingham Letter.

53. Bingham Letter, Tab 3; Tab 1, "Repurchase Collections by Top Ten Sellers/Serviceers."

54. O'Melveny letter.

55. "Bank of America announces fourth-quarter actions with respect to its home loans and insurance business," Bank of America press release, January 3, 2011.

56. Mortgage Insurance Companies of America, *2009–2010 Fact Book and Member Directory*, Exhibit 3: Primary Insurance Activity (Insurance in Force) p 17.

57. Documents produced for the FCIC by United Guaranty Residential Insurance, MGIC, Genworth, RMIC, Triad, PMI, and Radian.

58. FCIC staff calculations based on productions from Fannie and Freddie. Figures are for Alt-A, option ARM Alt-A, and subprime loans.

59. FHFA, "Conservator's Report: Third Quarter 2010." Accounting changes for impairments have resulted in offsetting gains of \$8 billion.

60. "FHFA Issue Subpoenas for PLS Documents," Federal Housing Finance Agency news release, July 12, 2010.

61. Covington & Burling LLP, Freddie Mac counsel, letter to FCIC, October 19, 2010; see O'Melveny & Meyers LLP, letter to FCIC, dated October 19, 2010.

62. NERA Economic Consulting, "Credit Crisis Litigation Revisited: Litigating the Alphabet of Structured Products," Part VII of a NERA Insights Series, June 4, 2010, p. 1.

63. Defendants Wells Fargo Asset Securities Corp. and Wells Fargo Bank, N.A.'s Notice of Removal, Charles Schwab Corp. v. BNP Paribas Securities Corp., et al., No. cv-10-4030 (N.D. Cal. September 8, 2010).

64. Attorney General of Massachusetts, “Attorney General Martha Coakley and Goldman Sachs Reach Settlement Regarding Subprime Lending Issues,” May 11, 2009; “Morgan Stanley to Pay \$102 Million for Role in Massachusetts Subprime Mortgage Meltdown under Settlement with AG Coakley’s Office,” June 24, 2010.

65. Complaint, *Cambridge Place v. Morgan Stanley et al.*, No. 10-2741 (Mass. Super. Ct. filed July 9, 2010), p. 28.

66. Sarah Johnson, “How Far Can Fair Value Go?” *CFO.com*, May 6, 2008.

67. Vikas Shilpiekandula and Olga Gorodetsky, “Who Owns Residential Credit Risk?” Lehman Brothers Fixed Income, U.S. Securitized Products Research, September 7, 2007.

68. Moody’s Investor Service, “Default & Loss Rates of Structured Finance Securities: 1993–2009,” Special Comment, September 23, 2010.

69. Ben Bernanke, closed-door session with the FCIC, November 17, 2009.

70. Vikas Shilpiekandula and Olga Gorodetsky, “Who Owns Residential Credit Risk?,” September 7, 2007, p. 1. The Lehman analysts pegged ultimate subprime and Alt-A losses at \$200 billion. Those forecasts were based, the analysts said, on a scenario in which house prices fell an average of 30% across the country. For the securitization figures, see Inside Mortgage Finance, *The 2009 Mortgage Market Statistical Annual*, vol. 2, *The Secondary Market*.

71. IMF, “Financial Stress and Deleveraging: Macro-Financial Implications and Policy,” *Global Financial Stability Report*, October 2008, p. 78; IMF, “Containing Systemic Risks and Restoring Financial Soundness,” *Global Financial Stability Report*, April 2008.

72. FCIC staff estimates, based on Moody’s Investor Service, “Default & Loss Rates of Structured Finance Securities: 1993–2009,” Special Comment, September 23, 2010, and analysis of Moody’s Structured Finance Default Risk Service.

73. Ben Bernanke, testimony before the FCIC, Hearing on Too Big to Fail: Expectations and Impact of Extraordinary Government Intervention and the Role of Systemic Risk in the Financial Crisis, day 2, session 1: The Federal Reserve, September 2, 2010, transcript, p. 54.

## Chapter 12

1. FCIC staff calculations using data in worksheets Markit ABX.HE. 06-1 prices and ABX.HE. 06-2 prices, produced by Markit; Nomura Fixed Income Research, *CDO/CDS Update 12/18/06*. The figures refer to the BBB- index of the ABX.HE. 06-2.

2. Nomura Fixed Income Research, *CDO/CDS Update 12/18/06*, p. 2.

3. SEC, “Risk Management Reviews of Consolidated Supervised Entities,” internal memo to Erik Sirri and others, January 4, 2007.

4. Jim Chanos, interview by FCIC, October 5, 2010.

5. SEC, “Risk Management Reviews of Consolidated Supervised Entities,” memo, January 4, 2007.

6. Fed Chairman Ben S. Bernanke, “The Economic Outlook,” testimony before the Joint Economic Committee, U.S. Congress, 110th Cong., 1st sess., March 28, 2007.

7. Henry Paulson, quoted in Julie Haviv, “Bernanke Allays Subprime Fears as Beazer Faces Probe,” Reuters, March 28, 2007.

8. David Viniar, written testimony, *Wall Street and the Financial Crisis: The Role of Investment Banks*, Senate Permanent Subcommittee on Investigation, 111th Cong., 2nd sess., April 27, 2010, pp. 3–4.

9. Michael Dinias, email to David Viniar and Craig Broderick, December 13, 2006, Senate Permanent Subcommittee on Investigations, Exhibit 2.

10. Viniar, written testimony, Permanent Subcommittee on Investigation, pp. 3–4; Daniel Sparks, email to Tom Montag and Richard Ruzika, December 14, 2006, Senate Permanent Subcommittee on Investigations, Exhibit 3.

11. Kevin Gasvoda, email to Genevieve Nestor and others, December 14, 2006, Senate Permanent Subcommittee on Investigations, Exhibit 72.

12. David Viniar, email to Tom Montag, December 15, 2006, Senate Permanent Subcommittee on Investigations, Exhibit 3.

13. Stacy Bash-Polley, email to Michael Swenson and others, December 20, 2006, Senate Permanent Subcommittee on Investigations, Exhibit 151.

14. Tetsuya Ishikawa, email to Darryl Herrick, October 11, 2006, Senate Permanent Subcommittee on Investigations, Exhibit 170c; Geoffrey Williams, email to Ficc-Mtgcorr-desk, October 24, 2006, Senate Permanent Subcommittee on Investigations, Exhibit 170d.

15. Fabrice Tourre, email to Jonathan Egol and others, December 28, 2006, Senate Permanent Subcommittee on Investigations, Exhibit 61.

16. Daniel Sparks, email to Tom Montag, January 31, 2007, Senate Permanent Subcommittee on Investigations, Exhibit 91.

17. Fabrice Tourre, email to Marine Serres, January 23, 2007, Senate Permanent Subcommittee on Investigations, Exhibit 62.

18. Lloyd Blankfein, email to Tom Montag, February 11, 2007, Senate Permanent Subcommittee on Investigations, Exhibit 130.

19. FCIC calculations using data from “2004–2007 GS Synthetic CDOs,” produced by Goldman Sachs.

20. Gretchen Morgenson and Louise Story, “Banks Bundled Bad Debt, Bet Against It and Won,” *New York Times*, December 24, 2009.

21. Lloyd Blankfein, testimony before the FCIC, First Public Hearing of the FCIC, first day, panel 1: Financial Institution Representatives, January 13, 2010, transcript, pp. 26–27.

22. “Goldman Sachs Clarifies Various Media Reports of Aspect of FCIC Hearing,” Goldman Sachs press release, January 14, 2010.

23. Gary Cohn, testimony before the FCIC, Hearing on the Role of Derivatives in the Financial Crisis, day 1, session 3: Goldman Sachs Group, Inc. and Derivatives, June 30, 2010, transcript, p. 267.

24. Michael Swenson, opening statement, *Hearing on Wall Street and the Financial Crisis: The Role of Investment Banks*, Senate Permanent Subcommittee on Investigations, pp. 2–3.

25. Complaint, *Basis Yield Alpha Fund v. Goldman Sachs Group, Inc., et al.* (S.D.N.Y. June 9, 2010), p. 29.

26. Blankfein, testimony before the FCIC, January 13, 2010, transcript, p. 140.

27. Craig Broderick, written testimony for the FCIC, Hearing on the Role of Derivatives in the Financial Crisis, day 1, session 3: Goldman Sachs Group, Inc. and Derivatives, June 30, 2010, p. 1.

28. Craig Broderick, email to Alan Rapfogel and others, May 11, 2007, Senate Permanent Subcommittee on Investigations, Exhibit 84.

29. High Grade Risk Analysis, April 27, 2007, p. 4; High Grade—Enhanced Leverage Q&A, June 13, 2007, stating “the percentage of underlying collateral in our investment grade structures collateralized by “sub-prime” mortgages is approximately 60. On the March 12, 2007, investor call, Matthew Tannin told investors that “most of the CDOs that we purchased are backed in some form by subprime” (Conference Call transcript, pp. 21–22).

30. Email from matt.tannin@gmail.com to matt.tannin@gmail.com, November 23, 2006.

31. Matthew Tannin, Bear Stearns, email to Chavanne Klaus, MEAG New York, March 7, 2007.

32. BSAM Conference Call, April 25, 2007, transcript, p. 5.

33. Matt Tannin, Bear Stearns, email to Klaus Chavanne, MEAG New York, March 7, 2007; Matthew Tannin, email to Steven Van Solkema, March 30, 2007; Complaint, *SEC v. Cioffi*, No. 08 Civ. 2457 (E.D.N.Y. June 19, 2008), p. 32.

34. Jim Crystal, Bear Stearns, email to Ralph Cioffi (and others), March 22, 2007; Ralph Cioffi, Bear Stearns, email to Ken Mak, Bear Stearns, March 23, 2007.

35. Warren Spector, testimony before the FCIC, Hearing on the Shadow Banking System, day 1, session 1: Investment Banks and the Shadow Banking System, May 5, 2010, transcript, pp. 83–84.

36. Information provided to FCIC by legal counsel to Bank of America, September 28, 2010.

37. *Ibid.*

38. Alan Schwartz, interview by FCIC, April 23, 2010. Notably, as one of only two tri-party repo clearing banks, JP Morgan had more information about BSAM’s lending obligations than did most other market participants or regulators. As discussed in greater detail later in this chapter, this superior market knowledge later put JP Morgan in a position to step in and purchase Bear Stearns virtually overnight.

39. Email from Goldman to Bear, April 2, 2007.

40. Steven Van Solkema, Bear Stearns, internal email, Summary of CDO Analysis Using Credit Model, April 19, 2007.

41. Matt Tannin, Bear Stearns, email from Gmail account to Ralph Cioffi, Bear Stearns, at his Hotmail account, April 22, 2007.

42. BSAM Conference Call, April 25, 2007, transcript.

43. Iris Semic, email to Matthew Tannin et al., May 1, 2007.

44. Robert Ervin, email to Ralph Cioffi et al., May 1, 2007; email from Goldman (ficc-ops-cdopricing) to rervin@bear.com, May 1, 2007.

45. BSAM Pricing Committee minutes, June 5, 2007; Robert Ervin, email to Greg Quental et al., May 10, 2007, showing that losses for the High Grade fund would be 7.02% if BSAM used the prices Lehman's repo desk was using, rather than 11.45%—the loss without Lehman's marks.

46. Email from "BSAM Hedge Fund Product Management (Generic)," May 16, 2007, produced by JP Morgan.

47. BSAMFCIC-e0000013. An untitled chart produced by JPMorgan shows losses would have been over \$50 million less; NAV estimate reconciliation chart, produced by JPMorgan, shows losses would have been almost \$25 million less.

48. BSAM Pricing Committee minutes, June 4, 2007.

49. Ralph Cioffi, interview by FCIC, October 19, 2010.

50. Ralph Cioffi, email to John Geissing, June 6, 2007.

51. Schwartz, interview.

52. *Ibid.*

53. *Ibid.*; CSE Program Memorandum to Erik Sirri and others through Matthew Eichner, July 5, 2007.

54. CSE Program Memorandum, July 5, 2007.

55. CSE Program Memorandum, July 5, 2007; Merrill Lynch analysis, "Bear Stearns Asset Mgm't: What Went Wrong"; Paul Friedman, interview by FCIC, April 28, 2010. While most of the Bear Stearns executives interviewed by FCIC staff did not recall the percentage discount at which the collateral seized by Merrill Lynch was auctioned, they did believe that it was significant (e.g., Robert Upton, interview by FCIC, April 13, 2010).

56. "While the High Grade fund was not in default/had not missed any margin calls, creditors were cutting off its liquidity by increasing haircuts or not rolling repo facilities." Bear Stearns Packet dated May 30, meeting held on June 20, produced by the Securities and Exchange Commission, p. 3; Upton, interview.

57. Warren Spector, email to Mary Kay Scucci, April 26, 2007.

58. Friedman, interview; Warren Spector, interview by FCIC, March 30, 2010; Sam Molinaro, interview by FCIC, April 9, 2010.

59. Thomas Marano, interview by FCIC, April 19, 2010; Spector, interview (on Marano's being sent to Marin).

60. Fed Chairman Ben S. Bernanke, letter to FCIC Chairman Phil Angelides, December 21, 2010.

61. James Cayne, interview by FCIC, April 21, 2010.

62. SEC, "Risk Management Reviews of Consolidated Supervised Entities," memo to Erik Sirri and others, August 3, 2007, p. 2; SEC, "Risk Management Reviews of Consolidated Supervised Entities," memo to Erik Sirri and others, July 5, 2007, p. 3, both produced by SEC.

63. Marano, interview.

64. Bill Jamison, internal email, June 21, 2007, produced by Federated.

65. JPMorgan, Directors Risk Policy Committee, "Worldwide Securities Services Risk Review," September 18, 2007; Michael Alix, interview by FCIC, April 8, 2010.

66. For the downgrades, see Moody's Investor Service, "Announcement: Moody's Downgrades Subprime First-Lien RMBS," July 10, 2007; Standard & Poor's, "S&P Correct: 612 U.S. Subprime RMBS Classes Put on Watch Neg; Methodology Revisions Announced," July 11, 2007; Standard & Poor's, "Various U.S. First-Lien Subprime RMBS Classes Downgraded," July 12, 2007, p. 2; Glenn Costello, "U.S. Subprime Rating Surveillance Update," Fitch Ratings, July 2007.

67. FCIC, "Preliminary Staff Report: Credit Ratings and the Financial Crisis," June 2, 2010, p. 29.

68. Steven Eisman and Tom Warrack, Standard & Poor's Structured Finance, July 10, 2007, teleconference, transcript, p. 16.

69. Andrew Forster, telephone conversation, July 11, 2007, transcript, pp. 3–5.

70. Martin Sullivan, interview by FCIC, June 17, 2010; Steve Bensinger, interview by FCIC, June 16, 2010; Robert Lewis, interview by FCIC, June 15, 2010; Kevin McGinn, interview by FCIC, June 10, 2010; Andrew Forster, Elias Habayeb, and Steve Bensinger, testimony before the FCIC, Hearing on the Role of Derivatives in the Financial Crisis, day 2, session 1: American International Group, Inc. and Goldman Sachs Group, Inc., July 1, 2010, transcript, pp. 11, 61–62.

71. Clarence K. Lee, former managing director for Complex and International Organizations, Office of Thrift Supervision, testimony before the FCIC, Hearing on the Role of Derivatives in the Financial Crisis, day 2, session 2: Derivatives: Supervisors and Regulators, July 1, 2010, transcript, pp. 232–35.

72. Alan Frost, interview by FCIC, May 11, 2010.

73. Joseph Cassano, interview by FCIC, June 25, 2010.

74. “Information Pertaining to the Multi-Sector CDS Portfolio,” produced by AIG, with FCIC staff calculations.

75. Andrew Davilman, email to Alan Frost, subject: “Sorry to bother you on”; Frost, email to Davilman, subject: “Re: Sorry to bother you on”; Davilman, email to Frost, subject: “Re: Sorry to bother you on”—all July 26, 2007.

76. Goldman Sachs International, Collateral Invoice to AIG Financial Products Corp., July 27, 2007, produced by Goldman Sachs.

77. AIG hedges, January 2006–December 2008, produced by Goldman Sachs.

78. Andrew Forster, interview by FCIC, June 23, 2010.

79. Daniel Sparks, interview by FCIC, May 11, 2010.

80. “Valuation & Pricing Related to Initial Collateral Calls on Transactions with AIG,” produced by Goldman Sachs.

81. Jon Liebergall and Andrew Forster, telephone conversation, July 30, 2007, transcript, pp. 402–4.

82. David Viniar, written testimony for the FCIC, Hearing on the Role of Derivatives in the Financial Crisis, day 2, session 1: American International Group, Inc. and Goldman Sachs Group, Inc., July 1, 2010, p. 2.

83. Liebergall and Forster, telephone conversation, July 30, 2007, transcript, p. 407.

84. Tom Athan, email to Andrew Forster, August 1, 2007.

## Chapter 13

1. Henry Paulson, quoted in Kevin Carmichael and Peter Cook, “Paulson Says Subprime Rout Doesn’t Threaten Economy,” *Bloomberg*, July 26, 2007.

2. Moody’s Investors Service, “Moody’s ABCP Program Index: CP Outstanding as of 06/30/2007.”

3. Moody’s Investors Service, “Moody’s Performance Overview: Rhineland Funding Capital Corporation,” June 30, 2007.

4. As noted, in the United States, there was a minimal capital charge for liquidity puts equal to 10% of the base 8%, or 0.8%. Staff of Bundesanstalt für Finanzdienstleistungsaufsicht (the Federal Financial Services Supervisory Authority, Germany’s bank regulators), interview by FCIC, September 8, 2010. See also Office of the Comptroller of the Currency, “Interagency Guidance on the Eligibility of Asset-Backed Commercial Paper Liquidity Facilities and the Resulting Risk-Based Capital Treatment,” August 4, 2005. For example, Citigroup would have held \$200 million in capital against potential losses on the \$25 billion in liquidity put exposure that it had accumulated on CDOs it had issued.

5. IKB, 2006/2007 Annual Report, June 28, 2007, p. 78.

6. Securities Fraud Complaint, Securities and Exchange Commission v. Goldman Sachs & Co. and Fabrice Tourre, no. 10-CV-3229 (S.D.N.Y. April 15, 2010), p. 6.

7. IKB staff, interview by FCIC, August 27, 2010; Securities and Exchange Commission (plaintiff) v. Goldman Sachs & Co. and Fabrice Tourre (defendants), Securities Fraud Complaint, 10-CV-3229, United States District Court, Southern District of New York, April 15, 2010, at 17, paragraph 58.

8. “Preliminary results for the first quarter (1 April–30 June 2007),” IKB press release, July 20, 2007.

9. IKB staff, interview; IKB, clarification of interview by FCIC, November 15, 2010; IKB, restated 2006/2007 Annual Report, p. 5.

10. Steven Meier, testimony before the FCIC, Hearing on the Shadow Banking System, day 2, session 3: Institutions Participating in the Shadow Banking System, May 6, 2010, transcript, p. 307.

11. Angelo Mozilo, testimony taken by the SEC in the matter of Countrywide Financial Corp., File No. LA-03370-A, November 9, 2007, pp. 150, 36–37.

12. Angelo Mozilo, email to Lyle Gramley, member of Board of Countrywide Financial Corporation (cc Michael Perry, chief executive officer, IndyMac Bank), August 1, 2007.

13. Eric Sieracki, quoted in Mark DeCambre, “Countrywide Defends Liquidity,” *TheStreet.com*, August 2, 2007.

14. “Minutes of a Special Telephonic Meeting of the Board of Directors of Countrywide Financial Corporation,” August 6, 2007, pp. 1, 2, 1.

15. Fed Chairman Ben Bernanke, letter to FCIC Chairman Phil Angelides, December 21, 2010.

16. Federal Reserve Staff, memo to Board of Governors of the Federal Reserve System, “Background on Countrywide Financial Corporation,” August 14, 2007, pp. 1–2.

17. *Ibid.*, pp. 12–13.

18. Countrywide Financial Corporation, Form 8-K, Exhibit 99.1, filed August 6, 2007. See also “Minutes of a Special Telephonic Meeting of the Boards of Directors of Countrywide Financial Corporation and Countrywide Bank, FSB,” August 15, 2007.

19. Angelo Mozilo, interview by FCIC, September 24, 2010.

20. Kenneth Bruce, “Liquidity Is the Achilles Heel,” Merrill Lynch Analyst Report, August 15, 2007, p. 4; Kenneth Bruce, “Attractive Upside, but Not without Risk,” Merrill Lynch Analyst Report, August 13, 2007, p. 4.

21. Mozilo, interview; the article, by E. Scott Reckard and Annette Haddad, was titled “Credit Crunch Imperils Lender: Worries Grow about Countrywide’s Ability to Borrow—and Even a Possible Bankruptcy.”

22. Angelo Mozilo, quoted in “One on One with Angelo Mozilo, Chairman and CEO of Countrywide Financial,” *Nightly Business Report*, PBS, August 23, 2007, transcript; and in “CEO Exclusive: Countrywide CEO, Pt. 1,” *The Call*, CNBC, interview by Maria Bartiromo, August 23, 2007, transcript, p. 1.

23. Sebastian Boyd, “BNP Paribas Freezes Funds as Loan Losses Roil Markets,” *Bloomberg*, August 9, 2007.

24. “BNP Paribas Investment Partners Temporally [*sic*] Suspends the Calculation of the Net Asset Value of the following funds: Parvest Dynamic ABS, BNP Paribas ABS EURIBOR and BNP Paribas ABS EONIA,” BNP Paribas press release, August 9, 2007.

25. Paul A. McCulley, testimony before the FCIC, Hearing on the Shadow Banking System, day 2, session 3: Institutions Participating in the Shadow Banking System, May 6, 2010, pp. 237, 309.

26. Daniel M. Covitz, Nellie Liang, and Gustavo A. Suarez, “The Evolution of a Financial Crisis: Panic in the Asset-Backed Commercial Paper Market,” August 24, 2009, p. 39.

27. *Ibid.*, figure 1, panel B, p. 33.

28. “The Federal Reserve Is Providing Liquidity to Facilitate the Orderly Functioning of Financial Markets,” Federal Reserve Board press release, August 10, 2007.

29. Federal Reserve Board, press release, August 17, 2007.

30. Henry Tabe, Moody’s Investors Service, “SIVs: An Oasis of Calm in the Sub-prime Maelstrom: Structured Investment Vehicles,” *International Structured Finance: Special Report*, July 20, 2007, p. 1.

31. *Ibid.*

32. Henry Tabe, interview by FCIC, October 4, 2010.

33. Moody’s Investors Service, “From Illiquidity to Liquidity: The Path Toward Credit Market Normalization,” *Moody’s International Policy Perspectives*, September 5, 2007, p. 1.

34. Tabe, interview.

35. Moody’s Investors Service, “Moody’s Update on Structured Investment Vehicles,” *Moody’s Special Report*, January 16, 2008, p. 12.

36. Information provided to the FCIC by Deloitte LLP’s counsel, August 2, 2010.

37. Moody’s Rating Action, “Sigma Finance,” September 30, 2008; Henry Tabe, *The Unravelling of Structured Investment Vehicles: How Liquidity Leaked through SIVs: Lessons in Risk Management and Regulatory Oversight* ([Chatham, Kent]: Thoth Capital, 2010), p. 60.

38. The SEC indicated it is aware of at least 44 money market funds that were supported by affiliates because of SIV investments. See Securities and Exchange Commission, “Money Fund Reform” (Proposed rule), June 20, 2009, p. 14 n. 38.

39. Christopher Condon and Rachel Layne, “GE Bond Fund Investors Cash Out After Losses from Subprime,” *Bloomberg*, November 15, 2007.

40. The identity of the investor has never been publicly disclosed. See Shannon D. Harrington and Sree Vidya Bhaktavatsalam, “Bank of America to Liquidate \$12 Billion Cash Fund,” *Bloomberg*, December 10, 2007. See also Michael M. Grynbaum, “Mortgage Crisis Forces the Closing of a Fund,” *New York Times*, December 11, 2007.

41. Rich Rokus, portfolio manager at Marshall Money Market Funds, interview by Crane Data, *Money Fund Intelligence*, June 2009; Crane Data, *Money Fund Intelligence*, January 2008.

42. Credit Suisse Institutional Money Market Fund, Inc., Notes to Financial Statements, December 31, 2008, Note 3, p. 30.

43. Florida Legislature, Office of Program Policy Analysis and Government Accountability, “The SBA [State Board of Administration] Is Correcting Problems Relating to Its Oversight of the Local Government Investment Pool,” Research Memorandum, March 31, 2009, p. 2.

44. SBA report, “Update on Sub-Prime Mortgage Meltdown and State Board of Administration Investments,” November 9, 2007, pp. 721–22.

## Chapter 14

1. Bloomberg Professional, Write downs and Credit Losses vs. Capital Raised (WDCI) function, data reported for second half of 2007. Write-downs are for losses to holdings in structured finance and mortgages.

2. Roy C. Smith, *Paper Fortune\$: Modern Wall Street: Where It's Been and Where It's Going* (New York: St. Martin's 2009), p. 341.

3. Bloomberg Historical Prices Index December 31, 2007; CGS1U5; CBSC1U5; and CLEH1U5. Figures refer to credit default swaps on five-year senior debt.

4. Presentation to Merrill Lynch & Co. Board of Directors, “Leveraged Finance and Mortgage/CDO Review,” October 21, 2007, p. 23.

5. Presentation to Merrill board, October 21, 2007, p. 23.

6. Dow Kim, interview by FCIC, September 10, 2010.

7. Presentation to Merrill Board of Directors, October 21, 2007, p. 23.

8. *Ibid.*, pp. 23–24.

9. Presentation to Merrill Lynch Risk Oversight Committee, “Market Risk Management Update,” September 26, 2007, p. 7.

10. Merrill Lynch, 1Q 2007 Earnings Call transcript, April 19, 2007, p. 3.

11. Merrill Lynch, 2Q 2007 Earnings Release, July 17, 2007, p. 1.

12. Merrill Lynch, 2Q 2007 Earnings Call transcript, July 17, 2007, pp. 8, 20.

13. Merrill Lynch Finance Committee Summary, July 22, 2007, p. 7.

14. *Ibid.*

15. Kim, interview.

16. Stanley O'Neal, interview by FCIC, September 16, 2010.

17. “ABS CDO Update” by Dale Lattanzio, July 2007, p. 10.

18. O'Neal, interview.

19. Merrill Lynch, 3Q 2007 Earnings Call transcript, October 24, 2007, pp. 7, 10.

20. SEC narrative chronology, Merrill Lynch specific, p. 1.

21. Nancy Moran and Rodney Yap, “O'Neal Ranks No. 5 on Payout List, Group Says: Table (Update),” *Bloomberg*, November 2, 2007.

22. Kim interview; Merrill Lynch, 2007 Proxy Statement, April 27, 2007, p. 47.

23. Charles Prince, interview by FCIC, March 17, 2010; Robert Rubin, interview by FCIC, March 11, 2010.

24. Prince, interview.

25. Moody's Investors Service, “Structured Finance Rating Transitions: 1983–2006,” Special Comment, January 2007.

26. Charles Prince, testimony before the FCIC, Hearing on Subprime Lending and Securitization and Government-Sponsored Enterprises (GSEs), day 2, session 1: Citigroup Senior Management, April 8, 2010, transcript, p. 11.

27. Prince, interview.
28. Tobias Brushammar, James Hua, Graham Jackson, and Subra Viswanathan, Citigroup memorandum to Nestor Dominguez, Janice Warne, Michael Raynes, and Jo-Anne Williams, subject: Liquidity Put Valuation, October 19, 2006.
29. Susan Mills, interview by FCIC, February 3, 2010; James Xanthos, interview by Financial Industry Regulatory Authority (FINRA), March 24, 2009.
30. Susan Mills, testimony before the FCIC, hearing on Subprime Lending and Securitization and Government-Sponsored Enterprises (GSEs), day 1, session 2: Subprime Origination and Securitization, April 7, 2010, transcript, pp. 186–87.
31. Mills, interview.
32. Murray Barnes, former managing director of Independent Risk, interview by FCIC, March 2, 2010.
33. Notes on Senior Supervisors' Meeting with Firms, meeting between Citigroup and Federal Reserve Bank of New York, Federal Reserve Board, Office of the Comptroller of the Currency, Securities and Exchange Commission, U.K. Financial Services Authority, and Japan FSA, November 19, 2007, p. 17.
34. Janice Warne, interview by FCIC, February 2, 2010; Nestor Dominguez, interview by FCIC, March 2, 2010.
35. Dominguez, interview.
36. Nestor Dominguez, testimony before the FCIC, Hearing on Subprime Lending and Securitization and Government-Sponsored Enterprises (GSEs), day 1, session 3: Citigroup Subprime-Related Structured Products and Risk Management, April 7, 2010, transcript, pp. 282–83.
37. Barnes, interview.
38. *Ibid.*
39. Notes on Senior Supervisors' Meeting with Firms, meeting with Citigroup, November 19, 2007, p. 6.
40. FCIC staff calculations.
41. Prince, testimony before the FCIC, April 8, 2010, transcript, p. 118; David Bushnell, interview by FCIC, April 1, 2010.
42. Bushnell, interview.
43. Ellen "Bebe" Duke, Citigroup Independent Risk, interview by FCIC, March 18, 2010.
44. Barnes, interview.
45. James Xanthos, interview by Financial Industry Regulatory Authority (FINRA), March 24, 2009.
46. Barnes, interview.
47. Prince, interview.
48. Robert Rubin, former chairman of the Executive Committee and adviser, interview by FCIC, March 11, 2010.
49. Thomas Maheras, former co-CEO of Citi Markets & Banking, interview by FCIC, March 10, 2010.
50. Prince, interview.
51. Citigroup, Presentation to the Securities and Exchange Commission Regarding Overall CDO Business and Subprime Exposure, June 2007, p. 11.
52. Paul, Weiss, Citigroup's counsel, response to FCIC Interrogatory #18, March 1, 2010.
53. Citigroup, 2Q 2007 Earnings Call Q&A transcript, July 20, 2007.
54. Complaint, Securities and Exchange Commission v. Citigroup Inc., 1:10-cv-01277 (D.D.C.), July 29, 2010.
55. Federal Reserve Board of New York, letter to Vikram Pandit and the Board of the Directors of Citigroup, April 15, 2008, p. 11.
56. Dominguez, testimony before the FCIC, April 7, 2010, transcript, p. 281.
57. Maheras, interview, and testimony before the FCIC, Hearing on Subprime Lending and Securitization and Government-Sponsored Enterprises (GSEs), day 1, session 3: Citigroup Subprime-Related Structured Products and Risk Management, April 7, 2010, transcript, p. 269.
58. Bushnell, interview.
59. Prince, interview.
60. Complaint, Securities and Exchange Commission v. Citigroup Inc., p. 13.
61. Maheras, interview.

62. Prince, interview; Charles Prince, email to Robert Rubin, re, September 9, 2007, 9:43 A.M. (on Thomas Maheras and super seniors).
63. Robert Rubin, email to Charles Prince, September 9, 2007, 5:30 P.M.; Charles Prince, email to Robert Rubin, September 9, 2007, 5: 51 P.M.
64. Robert Rubin, interview by FCIC, March 11, 2010.
65. Prince, interview.
66. Ibid.
67. Citigroup, "Risk Management Review: An Update to the Corporate Audit and Risk Management Committee," October 15, 2007, p. 4.
68. Citigroup, Q3 2007 Earnings Call transcript, October 15, 2007.
69. Prince, interview.
70. Paul, Weiss, Citigroup's counsel, letter to FCIC in re the FCIC's second and third supplemental requests, March 31, 2010; Citigroup, 2008 Proxy Statement for fiscal year 2007, March 13, 2008, p. 74.
71. Federal Reserve Board of New York, letter to Vikram Pandit and the Board of Directors of Citigroup, April 15, 2008, p. 8.
72. FCIC staff calculations from Citigroup proxy statements (information for 2000–06) and information on 2007–09 provided by Paul, Weiss (on behalf of Citigroup), letter to FCIC, March 31, 2010, "Response to Interrogatory No. 7," pp. 3–6.
73. Robert Rubin, testimony before the FCIC, Hearing on Subprime Lending and Securitization and Government-Sponsored Enterprises (GSEs), day 2, session 1: Citigroup Senior Management, April 8, 2010, transcript, pp. 15–16.
74. John Reed, interview by FCIC, March 24, 2010.
75. AIG, Earnings Call credit supplement, August 9, 2007.
76. Joseph St. Denis, letter to House Committee on Oversight and Government Reform, U.S. House of Representatives, October 4, 2008, p. 4.
77. Joseph St. Denis, interview by FCIC, April 23, 2010.
78. Gene Park, interview by FCIC, May 18, 2010.
79. Jake Sun, interview by FCIC, June 21, 2010.
80. Alan Frost, interview by FCIC, May 11, 2010.
81. Pierre Micottis, interview by FCIC, June 24, 2010.
82. Park, interview.
83. PricewaterhouseCooper audit team, memo re 3Q07 review of AIG's super-senior CDS portfolio, November 7, 2007, p. 2.
84. Joseph Cassano, interview by FCIC, June 25, 2010.
85. Park, interview.
86. Goldman's submissions to the FCIC on its valuation and pricing related to collateral calls made to AIG are available on Goldman Sachs's website (<http://www2.goldmansachs.com/our-firm/on-the-issues/responses-fcic.print.html>).
87. Andrew Forster, telephone call to Jon Liebergall, July 30, 2007, transcript.
88. PricewaterhouseCooper, memo to AIGFP 2007 2Q review files, August 8, 2007.
89. Andrew Forster, email to Joseph Cassano and Pierre Micottis, November 9, 2007, enclosing marks from Merrill Lynch,
90. AIG, Earnings Call credit supplement, August 9, 2007, pp. 28, 14, 21, 22.
91. These estimates are based on Federal Reserve Bank of New York, "Maiden Lane III Quarterly Holdings Report," January 2010. This probably isn't a complete list of their positions, because not all CDO tranches are part of the Maiden Lane III portfolio. Of the 335 securities listed in that document, FCIC staff found data on 327 in Moody's CDO EMS database and Bloomberg. For those 327 securities, 313 suffered a downgrade and 206 became materially impaired (i.e., were downgraded to Ca/C). Of the 139 initially rated Aaa, 134 suffered downgrades and 55 became materially impaired.
92. Alan Frost, email to Andrew Forster, August 16, 2007.
93. Cassano, interview.
94. Frost, email to Forster, August 16, 2007.
95. Tom Athan, email to Andrew Forster, cc Adam Budnick, September 11, 2007.
96. Joseph Cassano, email to Elias Habayeb, November 11, 2007.

97. Minutes of the meeting of the AIG Audit Committee, November 6, 2007, p. 5.
98. Andrew Forster, email to Joseph Cassano, subject: GS Prices vs Others, November 18, 2007.
99. Goldman, submission to the FCIC, "Valuation & Pricing Related to Initial Collateral Calls on Transactions with AIG," pp. 2-3.
100. Based on staff analysis of data provided to the FCIC by the Depository Trust & Clearing Corporation and Markit. ABX includes all tranches of the ABX.HE 06-2. TABX is constructed based on the reference obligations for the 06-2 and 07-1 BBB and BBB- tranches of the ABX.
101. Cassano, interview.
102. Andrew Forster, email to Alan Frost, August 16, 2007.
103. Tim Ryan, PricewaterhouseCooper, interview by FCIC, June 1, 2010.
104. SEC staff briefing of FCIC staff, June 4, 2010.
105. Joseph Cassano, email to Andrew Forster, Pierre Miccittis, James Bridgwater, and Peter Robinson, subject: Fw: SS CDS Valuation, October 8, 2007.
106. PricewaterhouseCooper, minutes of meeting at AIGFP, October 11, 2007. See also PwC audit team, memo re 3Q07 review of AIG's super-senior CDS portfolio, November 7, 2007, pp. 230-31.
107. AIG, 3Q 2007 Earnings Call transcript, November 7, 2007, pp. 5, 17.
108. PwC audit team memo, p. 6.
109. Goldman Sachs International, to AIG Financial Products Corp., "Amended Side Letter Agreement," November 23, 2007.
110. Joe Cassano, email to Bill Dooley, November 27, 2007, attaching memo from Andrew Forster, "Collateral Call Status."
111. Andrew Forster, "Collateral Call Status," memo prepared for Joe Cassano.
112. Joe Cassano, email to Bill Dooley, subject: Collateral Calls, November 27, 2007.
113. Joe Cassano, email to Bill Dooley, subject: GS call back, November 30, 2007.
114. Goldman Sachs International, Collateral Invoice to AIG Financial Products Corp., margin call, November 23, 2007.
115. PwC audit team, memo, November 7, 2007, p. 5.
116. PricewaterhouseCooper, notes of a meeting to discuss super-senior valuations and collateral disputes, November 29, 2007, p. 2, produced by PwC.
117. Andrew Forster, interview by FCIC, June 21, 2010.
118. Martin Sullivan, interview by FDIC, June 17, 2010.
119. PwC, notes of meeting of November 29, 2007, p. 2.
120. *Ibid.*, p. 3.
121. Kevin McGinn, email to Paul Narayanan, November 20, 2007.
122. Sullivan, interview.
123. AIG Investor Conference Call, December 5, 2007, transcript, pp. 4-6, 25.
124. Joseph Cassano, email to Michael Sherwood and David Viniar, subject: CDO Valuations, January 16, 2008.
125. Andrew Davilman, interview by FCIC, June 18, 2010; David Lehman, interview by FCIC, June 23, 2010.
126. "AIG/Goldman Sachs Collateral Call Timeline," available on FCIC website at <http://fcic.gov/hearings/pdfs/2010-0701-AIG-Goldman-supporting-docs.pdf>.
127. PricewaterhouseCooper, memo to AIG workpaper files, February 24, 2008, pp. 2-3, 10.
128. PricewaterhouseCooper, notes on a February 6, 2008, meeting with AIG, February 13, 2008, p. 2.
129. Martin Sullivan, testimony before the FCIC, Hearing on the Role of Derivatives in the Financial Crisis, day 1, session 2: American International Group, Inc. and Derivatives, June 30, 2010, transcript, p. 233.
130. PricewaterhouseCooper, notes on the AIG Audit Committee meeting, February 7, 2008, p. 2.
131. Joseph Cassano, testimony before the FCIC, Hearing on the Role of Derivatives in the Financial Crisis, day 1, session 2: American International Group, Inc. and Derivatives, June 30, 2010, p. 233; Cassano, interview.
132. Office of Thrift Supervision, letter to AIG General Counsel and Board, March 7, 2008.
133. William Dudley, interview by FCIC, October 15, 2010.

134. Adam B. Ashcraft, Morten L. Bech, and W. Scott Frame, "The Federal Home Loan Bank System: The Lender of Next to Last Resort?" Federal Reserve Bank of New York Staff Reports, no. 357 (November 2008), p. 4.
135. Federal Reserve Board, "October 2007 Senior Loan Officer Opinion Survey on Bank Lending Practices," October 2007.
136. Frederic Mishkin, interview by FCIC, October 1, 2010.
137. Dudley, interview.
138. Ibid.
139. Ibid.
140. Standard & Poor's, "Detailed Results of Subprime Stress Test of Financial Guarantors," Ratings-Direct, February 25, 2008.
141. Alan Roseman, interview by FCIC, May 17, 2010.
142. SEC, "Risk Management Reviews of Consolidated Supervised Entities," internal memo to Erik Sirri and others, November 6, 2007, p. 3.
143. Roseman, interview, May 17, 2010.
144. SEC, "Risk Management of Consolidated Supervised Entities," internal memo to Erik Sirri and others, January 2, 2008, p. 2.
145. Bill Lockyer, *State of California 2008 Debt Affordability Report: Making the Municipal Bond Market Work for Taxpayers in Turbulent Times* (October 1, 2008), p. 4.
146. John J. McConnell and Alessio Saretto, "Auction Failures and the Market for Auction Rate Securities" (The Krannert School of Management, Purdue University, April 2009), p. 10.
147. Erik R. Sirri, director of Trading and Markets, U.S. Securities and Exchange Commission, "Municipal Bound Turmoil: Impact on Cities, Towns and States," testimony before the House Financial Services Committee, 110th Cong., 2nd sess., March 12, 2008.
148. Georgetown University, "Annual Financial Report, 2008–2009," p. 5.
149. Jacqueline Doherty, "The Sad Story of Auction-Rate Securities, Barrons, May 26, 2008.
150. "SEC Finalizes ARS Settlements with Bank of America, RBC, and Deutsche Bank," SEC press release, June 3, 2009.

## Chapter 15

1. "Prime Asset," 2007 Upper HedgeWorld Prime Brokerage League Table, accessible at Gregory Zuckerman, "Hedge Funds, Once a Windfall, Contribute to Bear's Downfall," *Wall Street Journal*, March 17, 2008.
2. Jeff Mayer and Thomas Marano, "Fixed Income Overview," March 29, 2007, p. 8, produced by JP Morgan.
3. Inside Mortgage Finance, *The 2009 Mortgage Market Statistical Annual*, vol. 2, *The Secondary Market* (Bethesda, MD: Inside Mortgage Finance, 2009), pp. 18–25.
4. FCIC staff estimates, based on Moody's CDO EMS database. Different numbers are provided in Jeff Mayer and Thomas Marano, "Fixed Income Overview," March 29, 2007, p. 16.
5. Samuel Molinaro, interview by FCIC, April 9, 2010; Michael Alix, interview by FCIC, April 8, 2010.
6. SEC, "Risk Management Reviews of Consolidated Supervised Entities," memorandum to Robert Colby and others, May 8, 2006.
7. Robert Upton, interview by FCIC, April 13, 2010.
8. SEC, "Risk Management Reviews of Consolidated Supervised Entities," memorandum to Erik Sirri and others, March 1, 2007.
9. Ibid.
10. Bear Stearns, "Fitch Presentation," PowerPoint slides, August 2007.
11. Upton, interview.
12. Bear Stearns, Form 10-K for the year ended November 30, 2007, filed January 29, 2008, pp. 52, 22.
13. Upton, interview.
14. Ibid.
15. Standard & Poor's, Global Credit Portal RatingsDirect, "Research Update: Bear Stearns Cos. Inc. Outlook Revised to Negative; 'A+/A-1' Rating Affirmed," August 3, 2007.
16. Jimmy Cayne, interview by FCIC, April 21, 2010.

17. Matthew Eichner, interview by FCIC, April 14, 2010.
18. Wendy de Monchaux, interview by FCIC, April 27, 2010; Steven Meyer, interview by FCIC, April 22, 2010.
19. Mike Alix, interview by FCIC, April 8, 2010.
20. Eichner, interview.
21. Timeline Regarding Bear Stearns Companies Inc., April 3, 2008, produced by SEC.
22. SEC Office of Inspector General, Office of Audits, "SEC's Oversight of Bear Stearns and Related Entities: The Consolidated Supervised Entity Program," Report No. 446-A, September 25, 2008, pp. ix-x.
23. Michael Halloran, interview by FCIC.
24. Cayne, interview.
25. Samuel Molinaro, testimony before the FCIC, Hearing on the Shadow Banking System, day 1, session 1: Investment Banks and the Shadow Banking System, May 5, 2010, transcript, p. 43; Cayne, interview.
26. "Changes in Approved Commercial Paper List—10/01/2007–12/31/2007" and "Changes in Approved Commercial Paper List—1/01/2008–3/31/2008," produced by Federated Advised Funds.
27. Federal Reserve Bank of New York, "Tri-Party Repo Infrastructure Reform," white paper, May 17, 2010, p. 7.
28. Seth Carpenter, interview by FCIC, September 20, 2010.
29. Information provided by Federated to the FCIC.
30. Scott Goebel, Kevin Gaffney, and Norm Lind (Fidelity employees), interview by FCIC, February 25, 2010.
31. Steve Meier, executive vice president State Street Global Advisors, interview by FCIC, March 15, 2010.
32. Timeline Regarding the Bear Stearns Companies Inc., April 3, 2008, pp. 1–2, provided to the FCIC.
33. Alan Schwartz, interview by FCIC, April 23, 2010.
34. Lucian A. Bebchuk et al., "The Wages of Failure: Executive Compensation at Bear Stearns and Lehman 2000–2008," November 22, 2009, Table 2, p. 15; SNL Financial.
35. Thomas Marano, interview by FCIC, April 19, 2010.
36. Paul Friedman, quoted in William Cohan, *House of Cards: A Tale of Hubris and Wretched Excess on Wall Street* (New York: Doubleday, 2009), p. 71. Although Friedman acknowledged to the FCIC making the cited statements, and many others as well, he attributes them to anger and frustration over Bear Stearns's failure. Currently, Friedman is employed at Guggenheim Securities, Inc., where he works for Alan Schwartz, the former president of Bear Stearns. Paul Friedman, interview by FCIC, April 28, 2010.
37. The Corporate Library, "The Bear Stearns Companies Inc.: Governance Profile," June 20, 2008, p. 4.
38. Cayne, interview.
39. Molinaro, interview.
40. Cayne, interview; Schwartz (interview by FCIC) stated that bonuses for individual executives were discussed by the Compensation Committee, and the final recommendation for bonuses came from the CEO.
41. Alix, interview.
42. Bear Stearns, 2007 Performance Compensation Plan, p. I-1 (provided to the FCIC); Alix, interview. The salary cap had been raised from \$200,000 to \$250,000 in 2006 (Alix, interview; Cayne, interview).
43. Bebchuk et al., "The Wages of Failure," Table 1, p. 12; Table 2, p. 15; Table 4, p. 20. The budget authority for the SEC in 2008 was \$906 million; in 2010, it was \$1.026 billion.
44. In 2006, Alix received \$3 million in total compensation, Cayne received more than \$38.3 million in salary and bonus, and Schwartz received more than \$35.7 million in salary and bonus. SNL Financial; interviews with Spector and Alix.
45. Marano, interview.
46. Tom Marano, email to Alan Schwartz and Richie Metrick, February 12, 2008.
47. Matthew Eichner, email to James Giles et al., January 30, 2008.
48. Lou Lebedin, interview by FCIC, April 23, 2010.

49. Timeline Regarding Bear Stearns Companies Inc., April 3, 2008, produced by SEC.
50. Upton, interview.
51. Minutes of Special Meeting of Bear Stearns Board of Directors, March 13, 2008.
52. Pat Lewis, Bear Stearns, email to Matthew Eichner, Steven Spurry, James Giles, and Kevin Silva, March 10, 2008.
53. Matthew Eichner, email to Brian Peters, March 11, 2008.
54. David Fetting, "The History of a Powerful Paragraph," Federal Reserve Bank of Minneapolis, June 2008.
55. James Embersit, email to Deborah Bailey, March 3, 2008.
56. In response to the FCIC's interrogatories, JP Morgan produced a list of all payments Bear Stearns made to or received from OTC derivatives counterparties from March 10, 2008, through March 14, 2008. The spreadsheet was created in September 2008 by Bear Stearns in response to a request by the SEC Division of Trading and Markets. The large volume of novations away from Bear Stearns during the week of March 10, 2008 and the previous week was confirmed by the New York Federal Reserve and International Swaps and Derivatives Association. (New York Federal Reserve personnel, interview by FCIC; ISDA personnel, interviews by FCIC, May 13 and 27, 2010).
57. Brian Peters, email to Matthew Eichner, March 11, 2008.
58. Stuart Smith, email to Bear Stearns, March 11, 2008; Marvin Woolard, email Stuart Smith et al., March 11, 2008; Kyle Bass, interview by FCIC, April 30, 2010.
59. Bass, interview.
60. Debby LaMoy, email to Faina Epshteyn, March 12, 2008; Faina Epshteyn, email to Debby LaMoy, March 12, 2008.
61. Marvin Woolard, email to Stuart Smith et al., March 12, 2008.
62. CNBC video, Schwartz and CNBC's David Faber, original air date March 12, 2008.
63. Yalman Onaran, "Bear Stearns Investor Lewis May Increase His Stake," Bloomberg News, March 11, 2008.
64. Matthew Eichner, email to Erik Sirri, Robert Colby, and Michael Macchiaroli, March 12, 2008.
65. Minutes of Special Meeting of Bear Stearns Board of Directors, March 13, 2008, pp. 1–2.
66. Upton, interview.
67. Matthew Eichner, email to Erik Sirri, Robert Colby, and Michael Macchiaroli, March 12, 2008.
68. Alan Schwartz, interview by FCIC; Matthew Eichner, email to Erik Sirri, Robert Colby, and Michael Macchiaroli, March 13, 2008.
69. Upton, interview.
70. Minutes of Special Meeting of Bear Stearns Board of Directors, March 13, 2008 ("[Schwartz] said there had been seventeen billion dollars in cash with a two billion eight hundred million dollar backstop, unsecured line. The Board was told that twelve to fifteen billion dollars had gone out of TBSCI in the last two days and that TBSCI had received a billion dollars in margin calls").
71. Upton, interview; Goebel, Gaffney, and Lind, interview; Steven Meier, interview by FCIC, March 15, 2010; Michael Macchiaroli, interview by FCIC, April 13, 2010.
72. Christopher Cox, written testimony for the FCIC, Hearing on the Shadow Banking System, day 1, session 3: SEC Regulation of Investment Banks, May 5, 2010, p. 6.
73. Timeline Regarding Bear Stearns Companies Inc., April 3, 2008, produced by SEC.
74. Jamie Dimon, interview by FCIC, October 20, 2010.
75. Alan Schwartz, testimony before the FCIC, Hearing on the Shadow Banking System, day 1, session 2: Investment Banks and the Shadow Banking System, May 5, 2010, transcript, p. 167; Schwartz, interview.
76. Schwartz., interview.
77. Ibid.; Molinaro, interview; Alix, interview.
78. John Chrin, interview by FCIC, April 28, 2010.
79. Dimon, interview by FCIC, October 20, 2010; minutes of Special Meeting of Bear Stearns Board of Directors, March 16, 2008.
80. Federal Reserve, "Report Pursuant to Section 129 of the Emergency Economic Stabilization Act of 2008: Loan to Facilitate the Acquisition of The Bear Stearns Companies, Inc. by JP Morgan & Co.," pp. 1, 4; Ernst & Young, "Project LLC: Summary of Findings and Observations Report," June 26, 2008, p. 10.

81. Contrary to what is stated in the board minutes (Special Meeting of Bear Stearns Board of Directors, March 16, 2008, p. 5), when FCIC staff interviewed Schwartz he said that the \$2 a share price came from JP Morgan, not Paulson. Schwartz also told staff that because Bear did not receive “a lot of competing offers,” it had to accept JP Morgan’s offer of \$2 a share.

82. Chrin, interview.

83. Alan Schwartz, testimony before the FCIC, Hearing on the Shadow Banking System, day 1, session 2: Investment Banks and the Shadow Banking System, May 5, 2010, transcript, p. 142.

84. Macchiaroli, interview.

85. Ben Bernanke, closed-door session with FCIC, November 17, 2009.

86. *Ibid.*

87. Timothy Geithner, president, Federal Reserve Bank of New York, “Actions by the New York Fed in Response to Liquidity Pressures in Financial Markets,” prepared testimony before the Senate Committee on Banking, Housing, and Urban Affairs, 110th Cong., 2nd sess., April 3, 2008, p. 10.

88. Henry Paulson, testimony before the FCIC, Hearing on the Shadow Banking System, day 2, session 1: Perspective on the Shadow Banking System, May 6, 2010, transcript, pp. 68, 59, 78.

## Chapter 16

1. David Wong, interview by FCIC, October 15, 2010.

2. Josh Fineman and Yalman Onaran, “Lehman’s Fuld Says ‘Worst Is Behind Us’ in Crisis (Update3), Bloomberg, April 15, 2008.

3. Henry Paulson, testimony before the FCIC, Hearing on the Shadow Banking System, day 2, session 1: Perspective on the Shadow Banking System, May 6, 2010, transcript, p. 28.

4. Viral V. Acharya and T. Sabri Öncü, “The Dodd-Frank Wall Street Reform and Consumer Protection Act and a Little Known Corner of Wall Street: The Repo Market,” *Regulating Wall Street*, July 16, 2010.

5. Sandie O’Connor, JP Morgan, interview by FCIC, March 4, 2010.

6. Jamie Dimon, interview by FCIC, October 20, 2010.

7. Adam Copeland, Antoine Martin, Michael Walker, “The Tri-Party Repo Market Before the 2010 Reforms,” FRBNY Staff Report No. 477, November 2010, p. 24.

8. Steven Meier, testimony before the FCIC, Hearing on the Shadow Banking System, day 2, session 3: Institutions Participating in the Shadow Banking System, May 6, 2010, transcript, p. 276.

9. William Dudley, interview by FCIC, October 15, 2010.

10. Darryll Hendricks, interview by FCIC, August 6, 2010.

11. James Cayne, testimony before the FCIC, Hearing on the Shadow Banking System, day 1, session 2: Investment Banks and the Shadow Banking System, May 5, 2010, transcript, p. 168.

12. Seth Carpenter, interview by FCIC, September 20, 2010.

13. Federal Reserve, “Regulatory Reform: Primary Dealer Credit Facility (PCDF),” Usage of Federal Reserve Credit and Liquidity Facilities, data available at [www.federalreserve.gov/newsevents/reform\\_pdcf.htm](http://www.federalreserve.gov/newsevents/reform_pdcf.htm).

14. Anton R. Valukas, Report of Examiner, *In re Lehman Brothers Holdings Inc., et al.*, Chapter 11 Case No. 08-13555 (JMP), (Bankr. S.D.N.Y.), March 11, 2010, 4:1396–98; quotation, 1396 (hereafter cited as Valukas; available at <http://lehmanreport.jenner.com/>).

15. William Dudley, email to Chairman, June 17, 2008.

16. Dimon, interview.

17. *Ibid.*

18. Hendricks, interview.

19. Lucinda Brickler, email to Patrick Parkinson, July 11, 2008; Lucinda Brickler et al., memorandum to Timothy Geithner, July 11, 2008.

20. The \$200 billion figure is noted in Patrick Parkinson, email to Ben Bernanke et al., July 20, 2008.

21. Brickler et al., memorandum, p. 1.

22. Patrick Parkinson, email to Lucinda Brickler, July 11, 2008.

23. Patrick Parkinson, email to Ben Bernanke et al., July 20, 2008.

24. *Ibid.*

25. Based on chart in Federal Reserve Bank of New York, *Developing Metrics for the Four Largest Securities Firms*, August 2008, p. 5.

26. *Ibid.*

27. Tobias Adrian, Christopher Burke, and James McAndrews, “The Federal Reserve’s Primary Dealer Credit Facility,” Federal Reserve Bank of New York, *Current Issues in Economics and Finance* 15, no. 4 (August 2009): 2.

28. Erik Sirri, interview by FCIC, April 9, 2010, p. 3.

29. Fed Chair Ben Bernanke, “Lessons from the Failure of Lehman Brothers,” testimony before the House Financial Services Committee, 111th Cong., 2nd sess., April 20, 2010, p. 1.

30. Valukas, 1:8 n. 30; Examiner’s Interview of Timothy F. Geithner, Nov. 24, 2009, p. 4.

31. Valukas, 4:1486.

32. Sirri, interview.

33. William Brodows and Til Schuermann, Federal Reserve Bank of New York, “Primary Dealer Monitoring: Initial Assessment of CSEs,” May 12, 2008, slides 9–10, 15–16.

34. Federal Reserve Bank of New York, “Primary Dealer Monitoring: Liquidity Stress Analysis,” June 25, 2008, p. 3.

35. *Ibid.*, p. 5.

36. Valukas, 4:1489.

37. *Ibid.*, 4:1496, 1497.

38. Christopher Cox, statement before the House Financial Services Committee, 111th Cong., 2nd sess., April 20, 2010, p. 5.

39. Patrick Parkinson, email to Steven Shafran, August 8, 2008.

40. Counterparty Risk Management Policy Group, “Toward Greater Financial Stability: A Private Sector Perspective, The Report of the CRMPG II,” July 27, 2005.

41. Federal Reserve Bank of New York, “Statement Regarding Meeting on Credit Derivatives,” September 15, 2005; Federal Reserve Bank of New York, “New York Fed Welcomes New Industry Commitments on Credit Derivatives,” March 13, 2006; Federal Reserve Bank of New York, “Third Industry Meeting Hosted by the Federal Reserve Bank of New York,” September 27, 2006.

42. See Comptroller of the Currency, “OCC’s Quarterly Report on Bank Trading and Derivatives Activities, First Quarter 2009,” Table 1; the figures in the text are reached by subtracting exchange traded futures and options from total derivatives.

43. Chris Mewbourne, interview by FCIC, July 28, 2010.

44. This figure compares with a low in 2005, at the height of the mortgage boom, of \$7 billion in problem assets. “Problem” institutions are those with financial, operational, or managerial weaknesses that threaten their continued financial viability; they are rated either a 4 or 5 under the Uniform Financial Institutions Rating System. FDIC reporting for insured institutions—i.e., the regulated banking and thrift industry overall. See *Quarterly Banking Profile: Fourth Quarter 2007 = FDIC Quarterly* 2, no. 1 (December 31, 2007): 1, 4; *Quarterly Banking Profile: First Quarter 2008 = FDIC Quarterly* 2, no. 2 (March 31, 2008): 2, 4; *Quarterly Banking Profile: Second Quarter 2008 = FDIC Quarterly* 2, no. 3 (June 30, 2008): 1.

45. By 2009, the problem list would swell to 702 banks, with assets of \$403 billion. *Quarterly Banking Profile: Fourth Quarter 2009 = FDIC Quarterly* 4, no. 1 (December 31, 2009): 4.

46. *Quarterly Banking Profile: First Quarter 2008*, p. 4.

47. Roger Cole, interview by FCIC, August 2, 2010.

48. FCIC interview with Michael Solomon and Fred Phillips-Patrick, September 20, 2010.

49. Federal Reserve Bank of New York, letter to Charles Prince, April 9, 2007.

50. Federal Reserve Bank of New York, Federal Reserve Board, Office of the Comptroller of the Currency, Securities and Exchange Commission, U.K. Financial Services Authority, and Japan Financial Services Authority, “Notes on Senior Supervisors’ Meetings with Firms,” November 19, 2007, p. 3.

51. Federal Reserve Board, “FRB New York 2009 Operations Review: Close Out Report,” p. 3.

52. Timothy Geithner, testimony before the FCIC, Hearing on the Shadow Banking System, day 2, session 1: Perspective on the Shadow Banking System, May 6, 2010, transcript, p. 210.

53. Steve Manzari and Dianne Dobbeck, interview by FCIC, April 26, 2010.

54. Federal Reserve Board, “Wachovia Case Study,” November 12 and 13, p. 20;

55. Angus McBryde, interview by FCIC, July 30, 2007.

56. Thompson received a severance package worth about \$8.7 million in compensation and accelerated vesting of stock. In addition, he negotiated himself three years of office space and a personal assistant at Wachovia's expense. Thompson had previously received more than \$21 million in salary and stock compensation in 2007 and more than \$23 million in 2006; his total compensation from 2002 through 2008 exceeded \$112 million.

57. Federal Reserve Bank of Richmond, letter to Wachovia, July 22, 2008, pp. 3–5.

58. Comptroller of the Currency, letter to Wachovia, August 4, 2008, with Report of Examination; letter, pp. 8, 3.

59. *Ibid.*, pp. 3–6.

60. *Ibid.*, letter, p. 2; Report of Examination, p. 18.

61. *Ibid.*, Report of Examination, p. 12.

62. "Home Loans Discussion," materials prepared for WaMu Board of Directors meeting, April 18, 2006, p. 4; Senate Permanent Subcommittee on Investigations, *Wall Street and the Financial Crisis: The Role of High Risk Home Loans*, 111th Cong., 2nd sess., April 13, 2010, Exhibits, p. 83.

63. Senate Permanent Subcommittee on Investigations, *Wall Street and the Financial Crisis: Role of the Bank Regulators*, 111th Cong., 2nd sess., April 16, 2010, Exhibits, p. 6.

64. OTS Regional Director Darrel Dochow, letter to FDIC Regional Director Stan Ivie, July 22, 2008.

65. Offices of Inspector General, Department of the Treasury and Federal Deposit Insurance Corporation, "Evaluation of Federal Regulatory Oversight of Washington Mutual Bank," Report No. EVAL 10-002, April 2010, pp. 31, 12.

66. FDIC, Confidential Problem Bank Memorandum, September 8, 2008, p. 4.

67. Treasury and FDIC IGs, "Evaluation of Federal Regulatory Oversight of WaMu," p. 39.

68. Confidential OTS Memorandum to FDIC Regional Director, September 11, 2008; Treasury and FDIC IGs, "Evaluation of Federal Regulatory Oversight of WaMu," pp. 45–47.

69. Quoted in Damian Paletta, "FDIC Presses Bank Regulators to Use Warier Eye," *Wall Street Journal*, August 19, 2008.

70. Sheila Bair, interview by FCIC, August 18, 2010.

71. Treasury and FDIC IGs, "Evaluation of Federal Regulatory Oversight of WaMu," p. 3.

72. Comptroller of the Currency, *Large Bank Supervision: Comptroller's Handbook*, January 2010, p. 3.

73. Cole, interview.

74. Rich Spillenkothen, "Observations and Perspectives of the Director of Banking Supervision and Regulation at the Federal Reserve Board from 1991 to 2006 on the Performance of Prudential Supervision in the Years Preceding the Financial Crisis," paper prepared for the FCIC, May 21, 2010, p. 24.

75. Doug Roeder, interview by FCIC, August 4, 2010.

76. "Treasury Releases Blueprint for Stronger Regulatory Structure," Treasury Department press release, March 31, 2008.

## Chapter 17

1. Henry Paulson, interview by FCIC, April 2, 2010; Henry Paulson, *On The Brink: Inside the Race to Stop the Collapse of the Global Financial System* (New York: Business Plus, 2010), p. 57.

2. Paulson, interview.

3. James Lockhart, testimony before the FCIC, Hearing on Subprime Lending and Securitization and Government-Sponsored Enterprises (GSEs), day 3, session 2: Office of Federal Housing Enterprise Oversight, April 9, 2010, transcript, p. 163.

4. Daniel Mudd, letter to James Lockhart, August 1, 2007, p. 1.

5. *Ibid.*, pp. 1, 5.

6. Daniel Mudd, letter to shareholders, in Fannie Mae, "2007 Annual Report," p. 3.

7. Thomas Lund, interview by FCIC, March 4, 2010.

8. Robert Levin, interview by FCIC, March 17, 2010.

9. James Lockhart, letter to Daniel Mudd, August 10, 2007, p. 1.

10. James Lockhart, letter to Senator Charles Schumer, August 10, 2007.

11. James Lockhart, written testimony for the FCIC, Hearing on Subprime Lending and Securitization and Government-Sponsored Enterprises (GSEs), day 3, session 2: Office of Federal Housing Enterprise Oversight, April 4, 2010, pp. 12, 2, 12.

12. *Ibid.*, pp. 2, 4, 7.
13. Paulson, interview.
14. David Nason, Tony Ryan, and Jeremiah Norton, Treasury officials, interview by FCIC, March 12, 2010.
15. James Lockhart, quoted in Steven Sloan, "Setting an OFHEO Plan, But Wishing Otherwise," *American Banker*, December 21, 2007.
16. Fannie Mae, "Single-Family Book Characteristics Report," September 2008.
17. "OFHEO Provides Flexibility on Fannie Mae, Freddie Mac Mortgage Portfolios," OFHEO news release, September 19, 2007, p. 1.
18. Lockhart, written testimony for the FCIC, April 4, 2010, p. 13.
19. Ben Bernanke, quoted in Eric Dash, "Fannie Mae to Be Allowed to Expand Its Portfolio," *New York Times*, September 20, 2007.
20. Senator Charles E. Schumer, letter to OFHEO Director James B. Lockhart III, February 25, 2008; Schumer continued, "If you have decided that you will be keeping the capital surcharge in place . . . , I would like an explanation as to why you think upholding that restriction outweighs the importance of providing capital relief that could better position the GSEs to provide rescue products for borrowers stuck in unaffordable loans."
21. "Fannie Mae Reports 2007 Financial Results," Fannie Mae press release, February 17, 2008.
22. Daniel Mudd, interview by FCIC, March 26, 2010.
23. Robert Steel, email to Jeremiah Norton, February 28, 2008.
24. Michael Farrell, email to Robert Steel, March 6, 2008.
25. Emails between Robert K. Steel and Daniel Mudd, March 7, 2008.
26. Daniel Mudd, email to Robert Levin, March 7, 2008.
27. "Fannie Mae Insolvency and Its Consequences," p. 1; attachment to email from Jason Thomas to Robert Steel, March 8, 2008.
28. Robert Steel, email to David Nason, Tony Ryan, Jeremiah Norton, and Neel Kashkari, subject: "re: GSEs," March 16, 2008.
29. James Lockhart, interview by FCIC, March 19, 2010.
30. Paulson, interview.
31. James Lockhart, email to Daniel H. Mudd, Robert Steel, and Dick Syron, subject: "Re: announcement draft," March 17, 2008.
32. *Ibid.*
33. "OFHEO, Fannie Mae and Freddie Mac Announce Initiative to Increase Mortgage Market Liquidity," OFHEO news release, March 19, 2008.
34. Paulson, interview.
35. Joshua Rosner, "OFHEO Got Rolled," *GrahamFisher Weekly Spew*, March 19, 2008.
36. Donald Bisenius, interview by FCIC, September 29, 2010.
37. "Freddie Mac CEO Richard Syron Talks about the Stock Slide," *PBS Nightly Business Report*, Wednesday, August 6, 2008, transcript.
38. Lockhart, interview.
39. Daniel Mudd, letters to James Lockhart, August 1, 2008, and August 15, 2008.
40. Timothy P. Clark (senior adviser, Division of Banking and Supervision, Federal Reserve Board) and Scott Alvarez (general counsel, Federal Reserve Board), interview by FCIC, February 23, 2010.
41. "Board Grants Federal Reserve Bank of New York the Authority to Lend to Fannie Mae and Freddie Mac Should Such Lending Prove Necessary," Federal Reserve Board press release, July 13, 2008.
42. Alvarez, interview.
43. Treasury Secretary Henry Paulson, testimony on GSE initiatives, *Recent Developments in U.S. Financial Markets and the Regulatory Responses to Them*, Senate Committee on Banking, Housing, and Urban Affairs, 110th Cong., 2nd sess., July 15, 2008.
44. "Statement by Daniel H. Mudd, President and CEO," Fannie Mae press release, July 13, 2008.
45. Clark, interview.
46. Mudd, interview.
47. Clark, interview.
48. Susan Eckert, Kevin Bailey, and other OCC staff, interview by FCIC, February 19, 2010.

49. *Ibid.*

50. Office of the Comptroller of the Currency, “Observations—Allowance Process and Methodology,” August 2008 (last revised September 8, 2008), p. 3.

51. Paulson, interview.

52. Christopher H. Dickerson (FHFA Acting Deputy Director, Division of Enterprise Regulation), letter to Daniel H. Mudd (President and CEO of Fannie Mae), “Re: Notice of Proposed Capital Classification at June 30, 2008,” August 22, 2008, pp. 1, 2; Christopher H. Dickerson (FHFA Acting Deputy Director, Division of Enterprise Regulation), letter to Richard F. Syron (President and CEO of Freddie Mac), “Re: Notice of Proposed Capital Classification at June 30, 2008,” August 22, 2008.

53. “Draft—Mid-year Letter,” pp. 11–13 (quotation, p. 13), attached to Christopher H. Dickerson, letter to Daniel H. Mudd, September 4, 2008.

54. Dickerson to Mudd, September 4, 2008; Christopher H. Dickerson, letter to Richard Syron, September 4, 2008, with “Draft Mid Year Letter” attached.

55. “Draft—Mid-year Letter” (Fannie), pp. 5–7.

56. *Ibid.*, p. 5.

57. *Ibid.*, p. 6.

58. *Ibid.*, pp. 9–10.

59. “Draft Mid Year Letter” (Freddie), pp. 1, 1–2, 7.

60. *Ibid.*, p. 8.

61. Mudd, interview.

62. Christopher H. Dickerson to James B. Lockhart III, memorandum, “Proposed Appointment of the Federal Housing Finance Agency as Conservator for the Federal Home Loan Mortgage Corporation,” September 6, 2008 (hereafter Freddie conservatorship memorandum); Christopher H. Dickerson to James B. Lockhart III, memorandum, Proposed Appointment of the Federal Housing Finance Agency as Conservator for the Federal National Mortgage Association,” September 6, 2008 (hereafter Fannie conservatorship memorandum).

63. Paulson, interview; Lockhart, interview; Paulson, *On the Brink*, p. 8.

64. Lockhart, testimony before the FCIC, April 9, 2010, transcript, p. 191.

65. Paulson, interview; Paulson, *On the Brink*, p. 10.

66. Paulson, *On the Brink*, p. 10.

67. Lund, interview.

68. Levin, interview.

69. Mudd, interview.

70. FHFA, Fannie conservatorship memorandum, pp. 2, 29.

71. FHFA, Freddie conservatorship memorandum, pp. 3, 29.

72. Syron, interview.

73. Daniel Mudd, testimony before the FCIC, Hearing on Subprime Lending and Securitization and Government-Sponsored Enterprises (GSEs), day 3,” session 1: Fannie Mae, April 9, 2010, transcript, p. 38.

74. Paul Nash, FDIC, letter to FCIC, providing responses to follow-up questions to Sheila Bair’s testimony during the September 2, 2010, hearing, p. 5.

75. Paulson, interview.

76. Neel Kashkari, interview by FCIC, November 2, 2010.

77. Tom Baxter, interview by FCIC, April 30, 2010; Kevin Warsh, interview by FCIC, October 28, 2010.

78. Warsh, interview.

79. Lockhart, testimony before the FCIC, April 9, 2010, transcript, p. 232.

80. Staff of the Federal Reserve System, Division of Banking Supervision and Regulation, memorandum to the Board of Governors, “Stress Scenarios on Bank Exposures to Government Sponsored Enterprise (GSE) Debt,” January 24, 2005, p. 5.

81. Daniel Mudd, written testimony for the FCIC, Hearing on Subprime Lending and Securitization and Government-Sponsored Enterprises (GSEs), day 3, session 1: Fannie Mae, April 9, 2010, p. 3.

82. John Kerr, Scott Smith, Steve Corona (FHFA examination manager), and Alfred Pollard (FHFA general counsel), group interview by FCIC, March 12, 2010.

83. Lockhart, interview.
84. Edward DeMarco, interview by FCIC, March 18, 2010.
85. Mudd, interview.
86. Henry Cisneros, interview by FCIC, October 13, 2010.
87. Mudd, testimony before the FCIC, April 9, 2010, transcript, p. 104.
88. Robert Levin, testimony before the FCIC, Hearing on Subprime Lending and Securitization and Government-Sponsored Enterprises (GSEs), day 3, session 1: Fannie Mae, April 9, 2010, transcript, p. 104.

## Chapter 18

1. Joseph Sommer, counsel, Federal Reserve Bank of New York, email to Patrick M. Parkinson, deputy research director, Board of Governors of the Federal Reserve System, et al., “Re: another option we should present re triparty?” July 13, 2008.

2. James Dimon, interview by FCIC, October 20, 2010.

3. Barry Zubrow, testimony before the FCIC, Hearing on Too Big to Fail: Expectations and Impact of Extraordinary Government Intervention and the Role of Systemic Risk in the Financial Crisis, day 1, session 2: Lehman Brothers, September 1, 2010, p. 212.

4. Richard S. Fuld Jr., testimony before the FCIC, Hearing on Too Big to Fail: Expectations and Impact of Extraordinary Government Intervention and the Role of Systemic Risk in the Financial Crisis, day 1, session 2: Lehman Brothers, September 1, 2010, p. 148. See also Fuld’s written testimony at same hearing, p. 6.

5. Ben Bernanke, testimony before the FCIC, Hearing on Too Big to Fail: Expectations and Impact of Extraordinary Government Intervention and the Role of Systemic Risk in the Financial Crisis, day 2, session 1: The Federal Reserve, September 2, 2010, transcript, pp. 26, 89.

6. Kenneth D. Lewis, interview by FCIC, October 22, 2010.

7. Bernanke, testimony before the FCIC, September 2, 2010, p. 22.

8. Bernanke told the examiner that the Federal Reserve, the SEC, and “markets in general” viewed Lehman as the next most vulnerable investment bank because of its funding model. Anton R. Valukas, Report of Examiner, *In re* Lehman Brothers Holdings Inc., et al., Debtors, Chapter 11 Case No. 08-13555 (JMP), (Bankr. S.D.N.Y.), March 11, 2010, 2:631 (hereafter cited as Valukas); see also 1:5 and n. 16, 2:609 and nn. 2133–34, 4:1417 and n. 5441, 4:1482 and n. 5728, 4:1494, and 5:1663 and n. 6269. Paulson, 2:632. Geithner told the examiner that following Bear Stearns’s near collapse, he considered Lehman to be the “most exposed” investment bank, 2:631; see also 1:5 and n. 16, 2:609, 4:1417 and n. 5441, 4:1482 and n. 5728, 4:1491 and n. 5769, and 5:1663 and n. 6269. Cox reported that after Bear Stearns collapsed, Lehman was the SEC’s “number one focus”; 1:5 and n. 16, and p. 1491 and n. 5769; see also 2:609, 631.

9. Timothy Geithner, quoted in Valukas, 1:8 and n. 30, 4:1496.

10. Donald L. Kohn, email to Bernanke, “Re: Lehman,” June 13, 2008. Valukas, 2:615; 2:609 and n. 2134.

11. Harvey R. Miller, bankruptcy counsel for Lehman Brothers, interview by FCIC, August 5, 2010; Lehman board minutes, September 14, 2008, p. 34.

12. Erik R. Sirri, interview by FCIC, April 1, 2010.

13. Paolo R. Tonucci, interview by FCIC, August 6, 2010.

14. Specifically, Lehman drew \$1.6 billion on March 18; \$2.3 billion on March 19 and 20; \$2.7 billion on March 24; \$2.1 billion on March 25 and 26; and \$2 billion on April 16. Lehman Brothers, “Presentation to the Federal Reserve: Update on Capital, Leverage & Liquidity,” May 28, 2008, p. 15. See also Robert Azerad, vice president, Lehman Brothers, “2008 Q2—Liquidity Position (June 6, 2008),” p. 3. After its bankruptcy, Lehman drew \$28 billion, \$19.7 billion, and \$20.4 billion, on September 15, 16, and 17, until Barclays replaced the Fed in providing financing. Valukas, 4:1399. See also David Weisbrod, senior vice president, Treasury and Securities Services—Risk Management, JPMorgan Chase & Co., email to James Dimon et al., “Re: TriParty Close,” September 15, 2008.

15. Thomas A. Russo, former vice chairman and chief legal officer, Lehman Brothers, email to Richard S. Fuld Jr., forwarding article by John Brinsley (originally sent to Russo by Robert Steel), “Paulson Says Investment Banks Making Progress in Raising Funds,” Bloomberg, June 13, 2008 (quoting Robert Steel), June 13, 2008.

16. Richard S. Fuld Jr., interview by FCIC, April 28, 2010.

17. Valukas, 2:713 and nn. 2764–65, 2:715 and n. 2774. See also Russo, email to Fuld, “Fw: Rumors of hedge fund putting together a group to have another run at Lehman,” March 20, 2008 (forwarding discussions with SEC regarding short sellers).

18. Dan Chaudoin, Bruce Karpati, and Stephanie Shuler, Division of Enforcement, SEC, interview by FCIC, April 6, 2010; Mary L. Schapiro, chairman, SEC, written responses to written questions—specifically, response to question 13—from FCIC, asked after the hearing on January 14, 2010.

19. Jesse Eisinger, “The Debt Shuffle: Wall Street Cheered Lehman’s Earnings, but There Are Questions about Its Balance Sheet,” *Portfolio.com*, March 20, 2008.

20. David Einhorn, Greenlight Capital, “Private Profits and Socialized Risk,” speech at Grant’s Spring Investment Conference, April 8, 2008, p. 9. See also David Einhorn, “Accounting Ingenuity,” speech at Ira W. Sohn Investment Research Conference, May 21, 2008, pp. 3–4.

21. Nell Minow, interview by FCIC, September 13, 2010.

22. Nell Minow, testimony before the House Committee on Oversight and Government Reform, Hearing on Lehman Brothers, 110th Cong., 2nd sess., October 6, 2008.

23. Kirsten J. Harlow, email to Timothy Geithner et al., “On-Site Primary Dealer Update: June 16,” June 16, 2008.

24. William Dudley, email to Timothy Geithner, Donald Kohn, and others, June 17, 2008.

25. Kirsten J. Harlow, email to Kevin D. Coffey, examining officer, FRBNY, et al., “On-Site Primary Dealer Update: June 19,” June 19, 2008.

26. Thomas Fontana, Citigroup, email to Christopher M. Foskett, Citigroup, et al., June 12, 2008.

27. Tim Clark, Federal Reserve, email to Kevin Coffey, Federal Reserve, et al., June 20, 2008.

28. Federal Reserve Bank of New York, “Primary Dealer Monitoring: Liquidity Stress Analysis,” June 25, 2008.

29. Based on chart in Federal Reserve Bank of New York, “Developing Metrics for the Four Largest Securities Firms,” August 2008, p. 9.

30. Federal Reserve Bank of New York, “Primary Dealer Monitoring: Liquidity Stress Analysis,” June 25, 2008.

31. Karl Mocharko, assistant vice president and senior trader, Federated Investors, Inc., email to Gail Shanley, Federated Investors, Inc., et al., “Re: Federated SubCustodial Agreement—JPMC’s comments,” July 10, 2008; Charles Witek, Federated Investors, Inc., email to George V. Van Schaick, Lehman Brothers, et al., “FW: Federated SubCustodial Agreement—JPMC’s comments,” April 23, 2008. Despite the FRBNY’s observation, Federated did not fully terminate its repo relationships with Lehman. In fact, as of September 12, Federated’s repo exposure to Lehman was \$2 billion, as reported in the Commission’s Market Risk Survey of money market mutual funds.

32. Patrick M. Parkinson, email to David Marshall, et al., July 11, 2008; David Marshall, email to Patrick M. Parkinson, July 11, 2008.

33. Valukas, 4:1497–98 (quoting Timothy Geithner); see also Bart McDade, president and chief operating officer, Lehman Brothers, interview by FCIC, April 16, 2010.

34. William Dudley, email to Geithner et al., “Re: Lehman Good Bank/Bad Bank idea discussed last night,” July 15, 2008.

35. Patrick M. Parkinson, email to Steven Shafran, Department of the Treasury, et al., “Fw: Gameplan and Status to Date,” August 19, 2008.

36. Patrick M. Parkinson, email to Steven Shafran, August 11, 2008.

37. Patrick M. Parkinson, email to Arthur Angulo, Theodore Lubke, Til Schuermann, and William Brodows, August 15, 2010.

38. William Brodows, email to Patrick Parkinson, August 15, 2008.

39. *Ibid.*

40. *Ibid.*

41. Parkinson, email to Steven Shafran, August 19, 2008.

42. *Ibid.*

43. Steven Shafran, email to Patrick M. Parkinson, August 28, 2008.

44. Patrick M. Parkinson, email to Theodore Lubke, September 5, 2008.

45. Emil Cornejo, senior vice president, Department of the Treasury, Lehman Brothers, email to Janet Birney, senior vice president, Department of the Treasury, Lehman Brothers, et al., "JP Morgan Agenda forwarded for our review. FYI," September 3, 2008. See Lehman Briefing Memorandum, September 4, 2008; JP Morgan Agenda, September 4, 2008.

46. Meg McConnell, FRBNY, email to Arthur Angulo et al., "Meeting tomorrow at 9:00," September 8, 2008.

47. *Ibid.*

48. Patrick M. Parkinson, email to Steven Shafran, "Re: now I am on a conf call," September 9, 2008.

49. Henry M. Paulson Jr., *On the Brink: Inside the Race to Stop the Collapse of the Global Financial System* (New York: Business Plus, 2010), p. 178; Rita C. Proctor, assistant to the chairman, Board of Governors of the Federal Reserve, email to Donald L. Kohn et al., "This evening's conference call will take place at 5 P.M. instead of 6 P.M.," September 9, 2008.

50. Jim Wilkinson, email to Michele Davis, September 9, 2008.

51. Barry Zubrow, interview by FCIC, August 19, 2010.

52. Paul, Weiss, counsel to Steven Black, letter to FCIC, August 27, 2007, written responses to FCIC questions in email of August 26, 2007, p. 6.

53. John J. Hogan, JPMorgan Chase & Co., email to Steven D. Black, September 9, 2008, 7:07 P.M.; Steven Black, email to John Hogan, September 9, 2008, 8:24 P.M. See also Valukas, 4:1139, 1140 and n. 4204, and 1141.

54. Complaint, *In re Lehman Brothers Holdings, Inc.*, et al., against JPMorgan Chase Bank, N.A., Chapter 11 Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. May 26, 2010), pp. 14–15 (hereafter cited as Lehman Complaint).

55. *Ibid.*

56. Black responses, August 27, 2010, p. 6.

57. Matthew Rutherford, email to Tony Ryan, Department of the Treasury, et al., September 10, 2008.

58. Mark VanDerWeide, assistant general counsel, Board of Governors of the Federal Reserve System, email to Scott G. Alvarez, general counsel, Board of Governors of the Federal Reserve System, "lehman," September 10, 2008.

59. Patricia Mosser, email to William Dudley et al., "thoughts on Lehman," September 10, 2008.

60. See Michael Nelson, counsel and vice president, FRBNY, email to Christine Cumming, first vice president, FRBNY, et al., "revised Liquidation Consortium gameplan + questions," September 10, 2008, (attaching game plan),

61. See Patrick M. Parkinson, email to Donald Kohn et al., "Fw: revised Liquidation Consortium gameplan + questions," September 11, 2008 (attaching game plan).

62. *Ibid.*; Thomas Baxter, interview by FCIC, August 11, 2010.

63. Ken Lewis, interview by FCIC, October 22, 2010.

64. Susan McCabe, Goldman Sachs Group, Inc., email to William Dudley et al., "Hope you have the Radar screens on early this morning," September 11, 2008.

65. Rita C. Proctor, email to Bernanke, "Fw: Financial Markets Conference Call 9/11/08," September 11, 2008 (forwarding to Chairman Bernanke materials for the conference call).

66. Hayley Boesky, vice president, Markets Group, FRBNY, email to Meg McConnell et al., forwarding Louis Bacon, email to Hayley Boesky, "FW: Options for short-circuiting the market," September 11, 2008, 10:46 A.M.

67. Email chain between Jamie McAndrews, Tobias Adrian, Patrick Parkinson and Jeff Stehm, subject: "Fw: Default Management Group 9 Sep 2008.doc," September 11, 2008.

68. Hayley Boesky, email to Debby Perelmuter, senior vice president, FRBNY, et al., "Panic," September 11, 2008.

69. Jane Buyers-Russo, managing director, JP Morgan, email to Paolo R. Tonucci, "Fw: Letter to Lehman," Sept. 11, 2008, (attaching JPMorgan Chase & Co.'s September 11, 2008, Notice to Lehman Brothers Holdings Inc.).

70. Jane Buyers-Russo, email to Bryn Thomas, executive director, Broker Dealer Group, JPMorgan Chase & Co., et al., "Re: Lehman Brothers TriParty Collateral," September 12, 2008.

71. Paolo R. Tonucci, interview by FCIC, August 6, 2010.

72. See Valukas, 4:1158–65, 1162 and n. 4304.

73. Lehman Complaint, pp. 22–23, paragraphs 68, 71.
74. Barry Zubrow, written testimony for the FCIC, Hearing on Too Big to Fail: Expectations and Impact of Extraordinary Government Intervention and the Role of Systemic Risk in the Financial Crisis, day 1, session 2: Lehman Brothers, September 1, 2010, p. 7.
75. Richard S. Fuld, interview by FCIC, August 24, 2010.
76. Lehman Complaint, p. 23, paragraph 70.
77. Jim Wilkinson, email to Abby Aderman, Russell Reynolds Associates, “Re: Paulson Statement on Treasury and FHFA Action to Protect Financial Markets and Taxpayers,” September 12, 2008.
78. Kevin M. Warsh, e-mail to J. Nellie Liang, senior associate director, Division of Research and Statistics, Board of Governors of the Federal Reserve System, September 12, 2008.
79. Valukas, 2:618.
80. Harvey R. Miller, interview by FCIC, August 5, 2010.
81. Tom Baxter, “Speaking notes: Financial Community Meeting,” attached to email from Helen Ayala, NYFRB, to Steven Shafron, Treasury, September 12, 2008.
82. Thomas C. Baxter, interview by FCIC, August 11, 2010.
83. H. Rodgin Cohen, interview by FCIC, August 5, 2010.
84. Parkinson, email to Kohn et al., September 11, 2008.
85. Financial Services Authority of the United Kingdom, “Statement of the Financial Services Authority” before the Lehman bankruptcy examiner, pp. 4–5, paragraph 23.
86. Paulson, *On the Brink*, p. 193.
87. Patrick M. Parkinson, email to Lucinda Brickler, senior vice president, payments policy, FRB NY, “Re: triparty repo thoughts for this weekend,” September 12, 2008.
88. Patrick M. Parkinson, interview by FCIC, August 24, 2010; see also Patrick M. Parkinson, email to Lucinda Brickler et al., “Re: another option we should present re triparty?” July 13, 2008.
89. John Thain, interview by FCIC, September 17, 2010.
90. Christopher Tsuboi, examiner, bank supervision/operational risk, FRB NY, email to Alejandro LaTorre, assistant vice president, Credit, Investment and Payment Risk Group, FRB NY, “memo re: Lehman’s inter-company default scenario,” September 13, 2008.
91. Scott Alvarez, email to Ben Bernanke et al., “Re: Fw: today at 7:00 p.m. w/Chairman Bernanke, Vice Chairman Kohn and Others,” September 13, 2008.
92. Scott Alvarez, email to Mark VanDerWeide, “Re: tri-party,” September 13, 2008.
93. Bart McDade, interview by FCIC, August 9, 2010.
94. Baxter, interview.
95. Paulson, *On the Brink*, p. 207.
96. Baxter, interview; Robert Diamond, interview by FCIC, November 15, 2010.
97. Paulson, *On the Brink*, pp. 212–13.
98. Financial Services Authority of the United Kingdom, “Statement of the Financial Services Authority” before the Lehman bankruptcy examiner, p. 9, paragraph 48.
99. Paulson, *On the Brink*, pp. 209–10. See also Baxter, interview.
100. Baxter, interview.
101. Jim Wilkinson, email to Jes Staley, September 14, 2008, 7:46 A.M.
102. Jim Wilkinson, email to Jes Staley, September 14, 2008, 9:00 A.M.
103. Paulson, *On the Brink*, p. 210.
104. Alistair Darling, quoted in United Kingdom Press Association, “Darling Vetoed Lehman Bros Takeover,” *Belfast Telegraph*, October 9, 2010.
105. H. Rodgin Cohen, interview by FCIC, August 5, 2010.
106. Bart McDade, interview by FCIC, August 9, 2010.
107. Alex Kirk, interview by FCIC, August 16, 2010; McDade, interview, August 9, 2010.
108. Baxter, interview.
109. Thomas C. Baxter, letter to FCIC, October 15, 2010, attaching Exhibit 6, James P. Bergin, email to William Dudley et al., “Bankruptcy,” September 14, 2008. See also Kirk, interview.
110. *Ibid.*, attaching Exhibit 5, Lehman Brothers Holdings Inc., “Minutes of the Board of Directors, September 14, 2008,” p. 2.
111. *Ibid.*, attaching Exhibits 2 and 8.

112. On September 15, 2008, LBI borrowed \$28 billion from PDCF against \$31.7 billion of collateral; on September 16, 2008, LBI borrowed \$19.7 billion against \$23 billion of collateral; and on September 17, 2008, LBI borrowed \$20.4 billion against \$23.3 billion of collateral. See Valukas, 4:1399 and nn. 5374–75.
113. Kirk, interview.
114. Miller, interview.
115. Kirk, interview.
116. Miller, interview. In his interview, Kirk told FCIC staff that he thought there were more than 1 million derivatives contracts.
117. McDade, interview, August 9, 2010.
118. Baxter, interview.
119. Harvey R. Miller, written testimony for the FCIC, Hearing on Too Big to Fail: Expectations and Impact of Extraordinary Government Intervention and the Role of Systemic Risk in the Financial Crisis, day 1, session 2: Lehman Brothers, September 1, 2010, p. 8.
120. Miller, interview.
121. *Ibid.*
122. *Ibid.*
123. Ben S. Bernanke, closed-door session with FCIC, November 17, 2009.
124. *Ibid.*
125. Henry M. Paulson Jr., written testimony for the FCIC, Hearing on the Shadow Banking System, day 2, session 1: Perspective on the Shadow Banking System, May 6, 2010, p. 55.
126. Miller, written testimony for the FCIC, September 1, 2010, p. 14.
127. *Ibid.*, p. 18.
128. *Ibid.*, pp. 6, 12–13, 15, 11, 15.
129. Bernanke, testimony before the FCIC, September 2, 2010, transcript, p. 23.
130. Ben Bernanke, email to Kevin Warsh, member, Board of Governors of the Federal Reserve System, September 14, 2008.
131. Bernanke, testimony before the FCIC, September 2, 2010, p. 22.
132. *Ibid.*, p. 24.
133. Ben Bernanke, “U.S. Financial Markets,” testimony before the Senate Committee on Banking, Housing, and Urban Affairs, 110th Cong., 2nd sess., September 23, 2008.
134. 12 U.S.C. § 343(A), as added by act of July 21, 1932 (47 Stat. 715); and amended by acts of August 23, 1935 (49 Stat. 714), December 19, 1991 (105 Stat. 2386), and July 21, 2010 (124 Stat. 2113).
135. Scott G. Alvarez et al., memorandum, “Authority of the Federal Reserve to provide extensions of credit in connection with a commercial paper funding facility (CPFF),” March 9, 2009, p. 7.
136. Fuld, written testimony for the FCIC, September 1, 2010, pp. 7, 6, 3.
137. Bernanke, closed-door session with FCIC.
138. Ben S. Bernanke, chairman of the Federal Reserve, letter to Phil Angelides, chairman of the FCIC, December 21, 2010.
139. Thain, interview.
140. *Ibid.*
141. *Ibid.*
142. Dimon, interview.
143. Scott G. Alvarez, testimony before the FCIC, Hearing on Too Big to Fail: Expectations and Impact of Extraordinary Government Intervention and the Role of Systemic Risk in the Financial Crisis, day 1, session 1: Wachovia Corporation, September 1, 2010, transcript, p. 95. See also Baxter, letter to FCIC, October 15, 2010, p. 6.

## Chapter 19

1. Federal Reserve Bank of New York, notes about AIG meeting, September 12, 2008.
2. *Ibid.*
3. *Ibid.*
4. “AIG Commercial Paper Outstanding & Maturities—week of Sept 15th,” September 16, 2008, produced by JPMorgan.
5. American International Group, Inc., Form 10-Q for the quarterly period ended June 30, 2008.

6. FRBNY, notes about AIG meeting.
7. Goldman Sachs International, Collateral Invoice (margin call) to AIG Financial Products Corp., July 27, 2007; data on collateral exposures and multisector CDOs supplied by AIG (see Timeline of Goldman Sachs/AIG collateral calls, pp. 50, 392, 404, available at the FCIC website at <http://fcic.gov/hearings/pdfs/2010-0701-AIG-Goldman-supporting-docs.pdf>); FRBNY, notes about AIG meeting.
8. Alejandro LaTorre, email to Christine Cumming, Timothy Geithner, William Dudley, et al., "Update on AIG," September 12, 2008.
9. FRBNY, notes about AIG meeting.
10. Mark Hutchings, interview by FCIC, June 22, 2010.
11. Eric Dinallo, testimony before the FCIC, Hearing on the Role of Derivatives in the Financial Crisis, day 2, session 2: Derivatives: Supervisors and Regulators, July 1, 2010, transcript, pp. 3,16.
12. Michael Moriarty, testimony before the Congressional Oversight Panel, Hearing on American International Group, 111th Cong., 2nd sess., May 26, 2010, p. 4.
13. Dinallo, testimony before the FCIC, July 2, 2010, pp. 16-17.
14. FRBNY, notes about AIG meeting.
15. *Ibid.*
16. "Systemic Impact of AIG Bankruptcy," attachment to FRBNY internal email from Alejandro LaTorre to Timothy Geithner, September 16, 2008.
17. FRBNY, internal memo about August 11, 2008, meeting with the AIG team of the Office of Thrift Supervision.
18. *Ibid.*
19. FRBNY, internal document about AIG, August 14, 2008.
20. *Ibid.*
21. Goldman Sachs, company update on AIG, August 18, 2008.
22. Ira Selig, email to Kevin Coffey, "Goldman Report on AIG," August 18, 2008.
23. FRBNY, internal document about AIG, September 2, 2008.
24. *Ibid.*
25. *Ibid.*; Goldman Sachs, company update on AIG, August 18, 2008.
26. FRBNY, notes about AIG meeting, September 12, 2008.
27. *Ibid.*
28. "AIG Commercial Paper Outstanding & Maturities—week of Sept 15th," September 16, 2008.
29. FRBNY, notes about AIG meeting, September 12, 2008.
30. Hayley Boesky, email to Bill Dudley et al., "AIG panic," September 12, 2008.
31. FRBNY, emails of September 12 and 13, 2008.
32. Thomas Baxter, interview by FCIC, April 30, 2010.
33. Robert Willumstad, interview by FCIC, November 15, 2010.
34. Patricia Mosser, email to Alejandro LaTorre et al., re: AIG/Board call, September 13, 2008, 12:54 P.M.
35. Patricia Mosser, email to Alejandro Latorre et al., September 13, 2008, 7:26 P.M.
36. FRBNY, internal memo about AIG, September 14, 2008.
37. Adam Ashcraft, email to Alejandro LaTorre et al., "AIG and the discount window," September 14, 2008.
38. Alejandro LaTorre, email to Adam Ashcraft et al., September 14, 2008.
39. *Ibid.*
40. J. C. Flowers, interview by FCIC, October 7, 2010.
41. Robert Willumstad, interview by FCIC, November 15, 2010.
42. *Ibid.*
43. Goldman Sachs International, Collateral Invoice to AIG Financial Products Group, September 15, 2008.
44. Data supplied by AIG (Tab 31 of the AIG/Goldman Sachs collateral call timeline).
45. Baxter, interview.
46. See Sarah Dahlgren, FRBNY, interview by FCIC, April 30, 2010.
47. *Ibid.*
48. Alexander J. Psomas, email to NY Bank Sup AIG Monitoring and Analysis, September 15, 2005.

49. Fed Chairman Ben Bernanke, letter to FCIC Chairman Phil Angelides, December 21, 2010.
50. Federal Reserve Board of Governors, press release, September 16, 2008.
51. Congressional Oversight Panel, “The AIG Rescue, Its Impact on Markets, and the Government’s Exit Strategy,” June 10, 2010, p. 98.
52. *Ibid.*, executive summary, pp. 1, 8.
53. Treasury spokesman Andrew Williams, quoted in Hugh Son, “AIG’s Rescue Had ‘Poisonous’ Effect, U.S. Panel Says (Update1),” *Bloomberg*, June 10, 2010.
54. Scott M. Polakoff, “American International Group’s Impact on the Global Economy: Before, during, and after Federal Intervention,” testimony before the House Committee on Financial Services, Subcommittee on Capital Markets, Insurance, and Government Sponsored Enterprises, 111th Cong., 1st sess., March 18, 2009.
55. John Reich, interview by FCIC, May 4, 2010.
56. Michael E. Finn, prepared testimony before the Congressional Oversight Panel, May 26, 2010.
57. C. K. Lee, interview by FCIC, April 28, 2010. See also Memorandum of Understanding between Scott M. Albinson, managing director, OTS, and Danièle Nouy, secrétaire général de la Commission Bancaire, April 11, 2005.
58. OTS, Memo to Commission Bancaire regarding its supervisory role, January 2005.
59. Reich, interview.
60. Joseph Gonzalez, interview by FCIC, May 7, 2010.
61. *Ibid.*
62. OTS, Targeted Review of AIG Financial Products Corp., July 13, 2007.
63. AIG/Goldman Sachs collateral call timeline, p. 50.
64. Brad Waring, interview by FCIC, May 7, 2010.
65. Reich, interview.
66. *Ibid.*

## Chapter 20

1. John J. Mack, written testimony for the FCIC, First Public Hearing of the FCIC, day 1, panel 1: Financial Institution Representatives, January 13, 2010, p. 6.
2. Jamie Dimon, interview by FCIC, October 20, 2010.
3. Timothy Geithner, interview by FCIC, November 17, 2009.
4. Timothy Geithner, quoted by Robert Schmidt, “Geithner Slams Bonuses, Says Banks Would Have Failed (Update2),” *Bloomberg*, December 4, 2009.
5. Ben Bernanke, closed-door session with FCIC, November 17, 2009.
6. Specifically, the Fed broadened the PDCF to match the types of collateral that the two major clearing banks accepted in the tri-party repo system, including non-investment-grade securities and equities; previously, PDCF collateral had been limited to investment-grade debt securities. The Fed similarly broadened the TSLF to include all investment-grade debt securities; previously, TSLF collateral had been limited to Treasury securities, agency securities, and AAA-rated mortgage-backed and asset-backed securities. The Fed also increased both the frequency of TSLF auctions, to weekly instead of every two weeks, and their size. Federal Reserve Board press release, September 14, 2008.
7. On September 30, Goldman Sachs had a \$15 billion balance in TSLF, and a \$16.5 billion balance in PDCF. Federal Reserve Board, “Regulatory Reform: Usage of Federal Reserve Credit and Liquidity Facilities,” PDCF.
8. Lehman initially asserted that there were around 930,000 derivative transactions at the time of bankruptcy. See Debtors’ Motion for an Order pursuant to Sections 105 and 365 of the Bankruptcy Code to Establish Procedures for the Settlement or Assumption and Assignment of Prepetition Derivatives Contracts, Lehman Brothers Holdings Inc., et al, No. 08-13555 (Bankr. S.D.N.Y. Nov. 13, 2008), p. 4. See also Anton R. Valukas, Report of Examiner, *In re Lehman Brothers Holdings Inc.*, et al., Chapter 11 Case No. 08-13555 (JMP), (Bankr. S.D.N.Y.), March 11, 2010, 2:573. By November 13, 2008, a special facility to unwind derivatives trades with Lehman had successfully terminated most of the 930,000 derivative contracts. Nevertheless, in January 2009, Lehman’s counsel reported that 18,000 derivatives contracts had not been terminated. Moreover, there are massive unresolved claims relating to over-the-counter derivatives in the bankruptcy proceeding: as of May 2010, banks had filed more than \$50 billion in claims for losses related to derivatives contracts with Lehman. See Debtors’ Motion for an Order pursuant to

Sections 105 and 365 of the Bankruptcy Code to Establish Procedures for the Settlement or Assumption and Assignment of Prepetition Derivatives Contracts, Lehman Brothers Holdings Inc., et al., No. 08-13555 (Bankr. S.D.N.Y. Nov. 13, 2008) [Docket No. 1498], p. 4; Debtors' Motion for an Order Approving Consensual Assumption and Assignment of Prepetition Derivatives Contracts, Lehman Brothers Holdings Inc., et al., No. 08-13555 (Bankr. S.D.N.Y. Jan. 16, 2009) [Docket No.2561], p. 3.

9. Money market fund holdings of all types of taxable commercial paper decreased from \$671 billion at the end of August 2008 to \$505 billion at the end of September (data provided by ICI/Crane to the FCIC). BNY Mellon, in its role as tri-party clearing bank, reported that Treasury-backed repos rose from \$195 billion (13%) to \$466 billion (27%) of its tri-party business between March 31 and December 31, 2008 (data provided by BNY Mellon to the FCIC).

10. Harvey Miller, interview by FCIC, August 5, 2010.

11. The Reserve Fund, Semi-annual report to shareholders, March 2006.

12. Complaint, SEC v. Reserve Management Company Inc., Resrv Partners Inc., Bruce Bent Sr., Bruce Bent II, and The Reserve Primary Fund (S.D.N.Y. May 5, 2009), p. 12 (para. 35); "Fidelity, BlackRock, Dreyfus, Reserve Make Big Gains Past 12 Months," Crane Data News Archives, September 12, 2008.

13. The Reserve Primary Fund management, interview by FCIC, March 25, 2010.

14. SEC Complaint against Reserve Management Company Inc., pp. 2, 18 (paras. 3, 59), p. 30 (para. 101); The Reserve, "The Primary Fund: Plan of Liquidation and Distribution of Assets," December 3, 2008, p. 2.

15. SEC Complaint, pp. 26–33 (paras. 88–113); The Reserve, "The Primary Fund: Plan of Liquidation," p. 2.

16. SEC Complaint, p. 35 (para. 121). The SEC notes that the Primary Fund likely broke the buck prior to 11:00 A.M. on September 16 because of the redemption requests and the valuation of Lehman's debt; moreover, RMCI announced on November 26, 2008, that owing to an administrative error, its NAV should have been calculated as \$0.99 between 11:00 A.M. and 4:00 P.M. on September 16 (pp. 34–33, paras. 119, 120).

17. Moody's Investors Service articles, "Sponsor Support Key to Money Market Funds," August 9, 2010, p. 4; "Moody's Proposes New Money Market Fund Rating Methodology and Symbols," September 7, 2010.

18. Patrick McCabe and Michael Palumbo, interview by FCIC, September 28, 2010.

19. *Ibid.*

20. Investment Company Institute, Historical Weekly Money Market Data. While nongovernment funds lost \$434 billion during the period between September 10 and October 1, 2008, government funds—investing in Treasuries and GSE debt—increased by \$357 billion during the same period.

21. McCabe and Palumbo, interview.

22. FCIC survey of money market mutual funds. Holdings for the five firms decreased from \$58 billion to \$29 billion from September 12, 2008, to September 19, 2008. See FCIC website for details.

23. Timothy Geithner, testimony before the FCIC, Hearing on the Shadow Banking System, day 2, session 2: Perspective on the Shadow Banking System, May 6, 2010, transcript, p. 135.

24. McCabe and Palumbo, interview.

25. "Treasury Announces Guaranty Program for Money Market Funds," Treasury Department press release, September 19, 2008. President George W. Bush approved the use of existing authorities by Secretary Henry M. Paulson Jr. to make available as necessary the assets of the Exchange Stabilization Fund (ESF) for up to \$50 billion to guarantee payments to support money market mutual funds. The original objective of the ESF, established by the Gold Reserve Act of 1934, was to stabilize the value of the dollar in the depths of the Depression. It authorized the treasury secretary, with the approval of the president, to "deal in gold, foreign exchange, and other instruments of credit and securities" to promote international financial stability.

26. The program was called the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility (AMLF).

27. Neel Kashkari, interview by FCIC, November 2, 2010.

28. John Mack, interview by FCIC, November 2, 2010.

29. New York Federal Reserve, internal email, October 22, 2008, p. 2.

30. David Wong, email to Fed and SEC officials, September 15, 2008.

31. Jonathan Stewart, FRBNY, internal email, September 17, 2008.

32. One year later, the Senior Supervisors Group—a cross-agency task force looking back on the causes of the financial crisis—would write, “Before the crisis [at the investment banks post-Lehman], many broker-dealers considered the prime brokerage business to be either a source of liquidity or a liquidity-neutral business. As a result, the magnitude and unprecedented severity of events in September–October 2008 were largely unanticipated.” Senior Supervisors Group, “Risk Management Lessons from the Global Banking Crisis of 2008,” October 21, 2009, p. 9.

33. Jonathan Wood, Whitebox Advisors, interview by FCIC, August 11, 2010.

34. The FCIC surveyed hedge funds that survived the crisis. Those in the three largest quartiles ranked by size received investor redemption requests averaging 20% of their assets in the fourth quarter of 2008 (the first available redemption date after the Lehman bankruptcy).

35. IFSL Research, “Hedge Funds 2009,” April 2009.

36. David Wong, treasurer of Morgan Stanley, interview by FCIC, October 15, 2010.

37. Mack, interview.

38. Wong, interview.

39. Patrice Maher (Morgan Stanley), email to William Brodows (Federal Reserve BNY) et al., September 28, 2008, with data in an attachment. Hedge fund values are the Prime Brokerage Outflows (NY+International).

40. Wong, interview.

41. Matthew Eichner, internal email, September 16, 2008.

42. Angela Miknius, email to NY Bank Sup, September 18, 2008.

43. Amy G. White, internal NYFBR email, September 19, 2008.

44. Morgan Stanley, “Liquidity and Financing Activity: 08/28/08,” “Liquidity and Financing Activity: 09/18/08,” “Liquidity and Financing Activity: 10/03/08,” reports to the New York Federal Reserve.

45. Morgan Stanley Corporate Treasury, “Meeting with Federal Reserve: September 20, 2008,” attachment to Morgan Stanley email to NYFRB, September 20, 2008, including “Forward Forecast.”

46. Morgan Stanley Corporate Treasury, “Liquidity Landscape: 09/12–09/18/2008,” in attachment to Morgan Stanley email to NYFRB, September 20, 2008; Amy White, internal NYFRB emails, September 16 and 19, 2008.

47. Lloyd Blankfein, testimony before the FCIC, First Public Hearing of the FCIC, day 1, panel 1: Financial Institution Representatives, January 13, 2010, transcript, pp. 34–35.

48. Bernanke, closed-door session.

49. Thomas Baxter, interview by FCIC, April 30, 2010.

50. The switch to bank holding company status required a simple charter change. Both Morgan and Goldman already owned banks that they had chartered as industrial loan companies, a type of bank that is allowed to accept FDIC-insured deposits without having any Fed supervision over the bank’s parent or other affiliated companies.

51. Federal Reserve, “Discount Window Payment System Risk: Getting Started,” last updated November 17, 2009.

52. Mack, interview.

53. Mack, interview.

54. Wong, interview.

55. Amy G. White, internal FRBNY email, September 19, 2008.

56. It should be borne in mind that lack of regulation of this market rendered it extremely opaque. Shortcomings in transparency, lack of reporting requirements, and limited data collection by third parties make it difficult to document and describe the various market trading problems that emerged during the crisis.

57. Michael Masters, testimony before the FCIC, Hearing on the Role of Derivatives in the Financial Crisis, day 1, session 1: Overview of Derivatives, June 30, 2010, transcript, p. 26.

58. Depository Trust and Clearing Corporation data provided to the FCIC.

59. “The Global OTC Derivatives Market at End-June 1998,” Bank of International Settlements press release, December 13, 1998; “OTC derivatives market activity in the second half of 2008,” Bank of International Settlements press release, May 9, 2009, p. 7.

60. “Triennial and Regular OTC Derivatives Market Statistics,” Bank of International Settlements press release, November 16, 2010, p. 7.

61. Moody’s, “Moody’s downgrades WaMu Ratings; outlook negative,” September 11, 2008.

62. “OTS Fact Sheet on Washington Mutual Bank,” OTS 08-046A, September 25, 2008, p. 3.

63. Jamie Dimon, interview by FCIC, October 20, 2010.

64. Sheila Bair, testimony before the FCIC, Hearing on Too Big to Fail: Expectations and Impact of Extraordinary Government Intervention and the Role of Systemic Risk in the Financial Crisis, day 2: session 2: Federal Deposit Insurance Corporation, September 2, 2010, exchange between Bair and Commissioner Douglas Holtz-Eakin, pp. 134, 149.

65. Scott Alvarez, testimony before the FCIC, Hearing on Too Big to Fail: Expectations and Impact of Extraordinary Government Intervention and the Role of Systemic Risk in the Financial Crisis, day 1, Session 1: Wachovia Corporation, September 1, 2010, transcript, p. 84.

66. Kashkari, interview.

67. Greg Feldberg, “Wachovia Case Study,” presentation at LBO Supervision Conference, November 12–13, 2008, Atlanta, Georgia, p. 15. These rules, embodied in section 23A of the Federal Reserve Act, limit the support that a depository institution can provide to related companies in the same corporate structure; they are aimed at protecting FDIC-insured depositors from activities that occur outside of the bank itself. Exemptions have the effect of funding affiliate, nonbank assets within the federal safety net of insured deposits; they create liquidity for the parent company and/or key affiliates (and reduce bank liquidity) during times of market stress.

68. Robert Steel, interview by FCIC, August 18, 2010.

69. Scott Alvarez, written testimony for the FDIC, September 1, 2010, p. 4.

70. Robert Steel, written testimony before the FCIC, Hearing on Too Big to Fail: Expectations and Impact of Extraordinary Government Intervention and the Role of Systemic Risk in the Financial Crisis, day 1, session 1: Wachovia Corporation, September 1, 2010, p. 2.

71. David Wilson, interview by FCIC, August 4, 2010.

72. Sheila Bair, interview by FCIC, August 18, 2010.

73. Richard Westerkamp, Federal Reserve Bank of Richmond, interview by FCIC, August 13, 2010.

74. Wachovia was unable to roll \$1.1 billion of asset-backed commercial paper that Friday; James Wigand and Herbert Held, memo to the FDIC Board of Directors, September 29, 2008, p. 2. On brokered certificates of deposit, see Westerkamp, interview.

75. John Corston, acting deputy director, Division of Supervision and Consumer Protection, FDIC, written testimony before the FCIC, Hearing on Too Big to Fail: Expectations and Impact of Extraordinary Government Intervention and the Role of Systemic Risk in the Financial Crisis, day 1, Session 1: Wachovia Corporation, September 1, 2010, p. 4.

76. Wilson, interview.

77. Rich Westerkamp, email to FCIC, November 2, 2010. Westerkamp said that the estimate of early redemption requests was based on a phone conversation with officials in Wachovia’s treasury department, describing their conversations with investors; the figures were never verified.

78. Bair, interview.

79. Robert Steel, interview by FCIC, August 18, 2010.

80. Bair, interview; Steel, interview; FDIC staff, interview by FCIC re Wachovia, July 16, 2010.

81. Alvarez, written testimony for the FCIC, September 1, 2010, p. 5.

82. Steel, interview.

83. *Ibid.*

84. Wigand and Held, memo to the FDIC board, September 29, 2008, pp. 2, 4–5.

85. Federal Reserve staff, memo to the Board of Governors, subject: “Considerations Regarding Invoking the Systemic Risk Exception for Wachovia Bank, NA,” September 28, 2008, p. 7.

86. John A. Beebe, Market Risk Team Leader, Federal Reserve Bank of Richmond, memo to Jennifer Burns, VP-LCBO, “Wachovia Large Funds Providers,” September 27, 2008, pp. 1–2.

87. Federal Reserve staff, memo to the Board of Governors, subject: “Considerations Regarding Invoking the Systemic Risk Exception for Wachovia Bank, NA,” September 28, 2008, p. 7.

88. Bair, interview; minutes of the telephonic meeting of Federal Deposit Insurance Corporation Board of Directors, September 29, 2008, p. 8.

89. Bair, interview.

90. FDIC memo to the FDIC Board of Directors, p. 8; Corston, written testimony for the FDIC, September 1, 2010, p. 10.

91. Specifically, under Wachovia's proposal, the FDIC would provide credit protection on \$200 billion of loans, while Wachovia would absorb the first \$25 billion in losses and the FDIC would potentially incur losses on the balance of the \$200 billion. To offset that risk, Wachovia proposed that the FDIC receive \$10 billion in preferred stock and warrants on common shares (FDIC memo to the FDIC Board of Directors, p. 8).

92. The FDIC board has five members: the comptroller of the currency, the director of OTS, and three other members appointed by the president. In *Too Big to Fail: The Inside Story of How Wall Street and Washington Fought to Save the Financial System from Crisis—and Themselves* (New York: Viking, 2009), Andrew Ross Sorkin (p. 497) wrote that before the September 29, 2008, FDIC board meeting, New York Federal Reserve Governor Geithner and other officials had a conference call with Bair (Paulson recused himself) during which Geithner urged Bair to help Citigroup acquire Wachovia by guaranteeing some of its potential losses. Geithner argued that allowing the FDIC to take over Wachovia would have the effect of wiping out shareholders and bond holders, which, he was convinced, would only spook the markets. He was still furious with Bair for the way she had abruptly taken over Washington Mutual, which had had a deleterious effect on investor confidence.

93. Federal Deposit Insurance Corporation Board of Directors meeting, September 29, 2008, transcript, pp. 21–22.

94. Minutes of telephonic meeting of the FDIC board, September 29, 2008, p. 8.

95. *Ibid.*; the \$34.6 billion figure is as of September 30, 2008 (FDIC staff, memo to the Board of Directors, subject: "Third Quarter 2008 CFO Report to the Board," November 21, 2008, p. 1).

96. Minutes of telephonic meeting of the FDIC board, September 29, 2008, p. 8.

97. Bair, interview.

98. Steel, written testimony for the FCIC, September 1, 2010, p. 4. On the board's vote and the agreement in principle, see Steel, interview; see also Affidavit of Robert K. Steel, dated October 5, 2008, filed in *Wachovia Corp. v. Citigroup, Inc.*, Case No. 08-cv-085093-SAS (S.D.N.Y.), pp. 3–4 and exhibit A.

99. Fed Chairman Ben Bernanke, letter to FCIC Chairman Phil Angelides, December 21, 2010.

100. Wachtell, Lipton, Rosen & Katz, on behalf of Wells, letter to Division of Corporation Finance, SEC, November 17, 2008, p. 3.

101. Richard Kovacevich, interview by FCIC, August 24, 2010.

102. Bair, interview.

103. Steel, interview.

104. Bair, interview. In his interview, Treasury's Kashkari told the FCIC that he disagreed. He felt that the highest priority was to transfer the risk of banks' troubled assets from the financial system to the government. Citigroup's FDIC-assisted acquisition would have removed potential losses on \$270 billion of assets from the financial system by transferring those potential losses to the FDIC.

105. "Wells Fargo, Wachovia Agree to Merge: Creating Premier Coast-To-Coast Financial Services Franchise without Government Assistance," Wells Fargo press release, October 3, 2008.

106. Rich Delmar, Treasury Office of the Inspector General, interview by FCIC, August 25, 2010; Rich Delmar, memorandum for Inspector General Eric M. Thorson, "Inquiry Regarding IRS Notice 2008-83," September 3, 2009, pp. 3, 5, 11–12.

107. Richard Levy, interview by FCIC, August 19, 2010.

108. "Statement by Secretary Henry M. Paulson, Jr. on Comprehensive Approach to Market Developments," Treasury Department press release, September 19, 2008.

109. Senators Christopher J. Dodd and Richard C. Shelby, remarks before the Senate Committee on Banking, Housing, and Urban Affairs, *Turmoil in U.S. Credit Markets: Recent Actions Regarding Government-Sponsored Entities, Investment Banks, and Other Financial Institutions*, 110th Cong., 2nd sess., September 23, 2008, transcript, pp. 3, 6.

110. Secretary Henry Paulson, testimony before the Senate Banking Committee, *Turmoil in the U.S. Credit Markets*, transcript, p. 37.

111. Fed Chairman Ben Bernanke, "Economic Outlook," testimony before the Joint Economic Committee, 110th Cong., 2nd sess., September 24, 2008, transcript.

112. Fed Chairman Ben Bernanke, testimony before the House Financial Services Committee, *The Future of Financial Services: Exploring Solutions for the Market Crisis*, September 24, 2008, transcript, p. 48.

113. Mel Martinez, interview by FCIC, September 28, 2010.

114. The TARP legislation, drafted as the Emergency Economic Stabilization Act of 2008, was coupled in Public Law 110-343 with several other vote-attracting acts, including the Energy Improvement and Extension Act of 2008, the Tax Extenders and Alternative Minimum Tax Relief Act of 2008, the Paul Wellstone and Pete Domenici Mental Health Parity and Addiction Equity Act of 2008, and the Heartland and Hurricane Ike Disaster Relief Act of 2008. Congress originally said that the deposit insurance cap would revert to \$100,000 at the beginning of 2010, but later extended the deadline through the end of 2013.

115. The quotation is part of the formal title of Public Law 110-343, of which the TARP legislation—officially named the Emergency Economic Stabilization Act of 2008—is a part.

116. “Board Announces Creation of the Commercial Paper Funding Facility (CPFF) to Help Provide Liquidity to Term Funding Markets,” Federal Reserve Board press release, October 7, 2008. The CPFF complemented the Fed’s other commercial paper program, the AMLF, which was created shortly after the Reserve Primary Fund broke the buck. While the AMLF targeted money market mutual funds, the CPFF aimed to create liquidity for qualified commercial paper issuers.

117. Federal Reserve Board, “Commercial Paper Funding Facility (CPFF).”

118. Ken Lewis from Bank of America, Robert Kelly from BNY Mellon, Vikram Pandit from Citigroup, Lloyd Blankfein from Goldman, Jamie Dimon from JP Morgan, John Thain from Merrill, John Mack from Morgan Stanley, Ronald Logue from State Street, and Richard Kovacevich from Wells.

119. Paulson, testimony before the FCIC, May 6, 2010, transcript, p. 70. Former assistant treasury secretary Phillip Swagel argued, “There is no authority in the United States to force a private institution to accept government capital” (“The Financial Crisis: An Inside View,” Brookings Papers on Economic Activity, conference draft, Spring 2009, pp. 33–34).

120. Henry Paulson, *On The Brink: Inside the Race to Stop the Collapse of the Global Financial System* (New York: Business Plus, 2010), p. 365.

121. Dimon, interview.

122. The Temporary Liquidity Guarantee Program consisted of two programs, the Temporary Debt Guarantee Program (TDGP) and the Transaction Account Guarantee Program (TAGP). The TDGP at its highest point in May 2009 guaranteed \$346 billion in outstanding senior debt; see “FDIC Announces Plan to Free Up Bank Liquidity,” FDIC press release, October 14, 2008. The TAGP guaranteed \$834 billion in deposits at the end of 2009.

123. “Factsheet on Capital Purchase Program,” [FinancialStability.gov](http://FinancialStability.gov), updated October 3, 2010.

124. “Remarks by Secretary Henry M. Paulson, Jr. on Financial Rescue Package and Economic Update,” Treasury Department press release, November 12, 2008.

125. Paulson, testimony before the FCIC, May 6, 2010, transcript, p. 70.

126. U.S. Treasury Department Office of Financial Stability, “Troubled Asset Relief Program”; Transactions Report for Period Ending December 31, 2008: Capital Purchase Program; “Factsheet on Capital Purchase Program.”

127. U.S. Treasury Department Office of Financial Stability, “Troubled Asset Relief Program: Transactions Report for Period Ending October 15, 2010: Capital Purchase Program.”

128. Office of the Special Inspector General for the Troubled Asset Relief Program, “Initial Report to the Congress,” February 6, 2009, p. 6.

129. Congressional Oversight Panel, “September Oversight Report: Assessing the TARP on the Eve of Its Expiration,” September 16, 2010, p. 27.

130. Office of Financial Stability, “Troubled Asset Relief Program: Two Year Retrospective,” October 2010, pp. 15, 51; AIG, “What AIG Owes the U.S. Government,” updated September 30, 2010.

131. Congressional Oversight Panel, “September Oversight Report,” p. 27; Office of Financial Stability, “Troubled Asset Relief Program: Two Year Retrospective,” p. 18; “Taxpayers Receive \$10.5 Billion in Proceeds Today from Final Sale of Treasury Department Citigroup Common Stock,” Treasury Department press release, December 10, 2010.

132. Office of the Special Inspector General for the Troubled Asset Relief Program, “Quarterly Report to Congress,” October 26, 2010, table 2.1, p. 46 (obligation figures as of October 3, 2010, and expenditure figures as of September 30, 2010).

133. The money market funding is through the Asset-backed Commercial Paper Money Market Mutual Fund Liquidity Facility (AMLF); FCIC staff calculations.

134. Board of Governors of the Federal Reserve System, “Regulatory Reform: Agency Mortgage-backed Securities (MBS) Purchase Program.”

135. The Fed had created the first Maiden Lane vehicle in March to take \$29 billion in assets off the balance sheet of Bear Stearns, as described in chapter 15. See “AIG RMBS LLC Facility: Terms and Conditions,” December 16, 2008; “AIG Discloses Counterparties to CDS, GIA and Securities Lending Transactions,” AIG press release, March 15, 2009, Attachment D: Payments to AIG Securities Lending Counterparties.

136. Federal Reserve Bank of New York, “Maiden Lane III: Transaction Overview”; Federal Reserve and Treasury Department press release, November 10, 2008; “AIG CDO LLC Facility: Terms and Conditions,” Federal Reserve Bank of New York press release, December 3, 2008; FRBNY, “Maiden Lane Transactions.” \$27.1 billion was paid to 16 counterparties and \$2.5 billion was paid to AIGFP as an adjustment to reflect overcollateralization.

137. Office of the Special Inspector General for the Troubled Asset Relief Program, “Factors Affecting Efforts to Limit Payments to AIG Counterparties,” SIGTARP-10-003, November 17, 2009, pp. 19–20.

138. Blankfein, testimony before the FCIC, January 13, 2010, transcript, pp. 90–93.

139. Data provided to Goldman Sachs to the FCIC.

140. David Viniar, testimony before the FCIC, Hearing on the Role of Derivatives in the Financial Crisis, day 2, session 1: American International Group, Inc. and Goldman Sachs Group, Inc., July 1, 2010, transcript, p. 148.

141. Goldman Sachs, email to FCIC, July 15, 2010.

142. *Ibid.*; and data provided by Goldman Sachs to the FCIC.

143. SIGTARP, “Factors Affecting Efforts to Limit Payments to AIG Counterparties,” pp. 15–16, 18. The report said counterparties insisted on 100% coverage because (1) concessions “would mean giving away value and voluntarily taking a loss, in contravention of their fiduciary duty to their shareholders”; (2) they had a “reasonable expectation” that AIG would not default on further obligations, given the government assistance; (3) costs already incurred to protect against a possible AIG default “would be exacerbated if they were paid less than par value”; and (4) they were “contractually entitled” to receive the par value of the credit default swap contracts.

144. “In other words, the decision to acquire a controlling interest in one of the world’s most complex and most troubled corporations was done with almost no independent consideration of the terms of the transaction or the impact that those terms might have on the future of AIG” (*ibid.*, p. 28).

145. *Ibid.*, summary, p. 1.

146. Congressional Oversight Panel, “June Oversight Report: The AIG Rescue, Its Impact on Markets, and the Government’s Exit Strategy,” June 10, 2010, pp. 10, 8.

147. Suzanne Kapner, “US Congressional Panel Attacks AIG Rescue,” *Financial Times*, June 10, 2010.

148. Baxter, interview.

149. Sarah Dahlgren, interview by FCIC, April 30, 2008.

150. SIGTARP, “Factors Affecting Efforts to Limit Payments to AIG Counterparties,” p. 29.

151. Timothy Geithner, quoted in Jody Shenn, Bob Ivry, and Alan Katz, “AIG 100-Cents Fed Deal Driven by France Belied by French Banks,” *Bloomberg Businessweek*, January 20, 2010.

152. E.g., Baxter, interview; Jim Mahoney, Federal Reserve Bank of New York, interview by FCIC, April 30, 2010; Michael Alix, Federal Reserve Bank of New York, interview by FCIC, April 30, 2010.

153. Dahlgren, interview.

154. Baxter, interview.

155. GAO, “Federal Financial Assistance: Preliminary Observations on Assistance Provided AIG,” GAO-09-4907 (Testimony: Before the Subcommittee on Capital Markets, Insurance, and Government Sponsored Enterprises, House Committee on Financial Services), March 18, 2009, p. 2; Federal Reserve press release, September 16, 2008.

156. AIG, “What AIG Owes the US Government,” updated September 30, 2010.

157. Edward J. Kelly III, interview by FCIC, March 3, 2010.

158. Roger Cole, interview by FCIC, August 2, 2010.

159. Kelly, interview.

160. James R. Wigand and Herbert J. Held, memorandum to the FDIC Board of Directors, regarding recommendation for systemic risk determination for Citigroup, November 23, 2008, p. 5.

161. Kelly, interview.

162. Mark D. Richardson, email to John H. Corston, Jason C. Cave, et al., subject: "RE: CONFIDENTIAL—Citigroup—Deterioration of Stock Price and CDS Spreads," November 20, 2008; Mark D. Richardson, email, to John H. Corston, Jason C. Cave, et al., subject: "11-21-08 Citi Liquidity call notes," November 21, 2008.

163. Wigand and Held, November memo to the FDIC board regarding Citigroup, p. 5.

164. Bernanke, closed-door session.

165. Arthur J. Murton, email to John V. Thomas, Michael H. Krimminger, et al., subject: "RE: Proposed Conduit," November 22, 2008; Michael H. Krimminger, email to Arthur J. Murton, John V. Thomas, et al., subject: "RE: Proposed Conduit," November 22, 2008.

166. Vikram Pandit, testimony before the Congressional Oversight Panel, *Citigroup and the Troubled Asset Relief Program*, 111th Cong., 2nd sess., March 4, 2010, transcript, p. 79.

167. Kelly, interview.

168. GAO, "Federal Deposit Insurance Act: Regulators' Use of Systemic Risk Exception Raises Moral Hazard Concerns and Opportunities Exist to Clarify the Provision," GAO-10-100 (Report to Congressional Committees), April 2010, p. 2.

169. Wigand and Held, memo to the FDIC board regarding Citigroup, pp. 9, 10.

170. Department of the Treasury response to Congressional Oversight Panel, Questions for the Record, p. 3, *Citigroup and the Troubled Asset Relief Program*, March 4, 2010, p. 44.

"Joint Statement by Treasury, Federal Reserve, and the FDIC on Citigroup," joint press release, November 23, 2008.

171. "Joint Statement on Citigroup."

172. In total, Citigroup received almost \$40 billion in capital benefits from the November 2008 government assistance. Half of the capital benefits were from Treasury's \$20 billion TARP investment in Citigroup preferred stock; \$16 billion of the capital benefits were derived from a change in the risk weighting of the ring-fenced assets. In addition, Citigroup issued Treasury and the FDIC \$7 billion in preferred stock as payment for the guarantee on the ring fence; the result, after accounting for the insurance feature of the arrangement, was a \$3.5 billion increase in capital for Citigroup.

173. Kelly, interview.

174. The warrants gave the government the right to buy 254 million shares at \$10.61 a share; at the time, the stock was trading at \$3.76 (Congressional Oversight Panel, "November Oversight Report: Guarantees and Contingent Payments in TARP and Related Programs," November 6, 2009, pp. 18–19).

175. FDIC Board of Directors meeting, closed session, November 23, 2008, transcript, p. 14.

176. *Ibid.*, pp. 27–28.

177. Office of Financial Stability, "Troubled Asset Relief Program: Two Year Retrospective," October 2010, p. 30; "Taxpayers receive \$10.5 billion in proceeds today from final sale of Treasury Department Citigroup common stock," Treasury Department press release, December 10, 2010.

178. "Merrill Lynch Reports Third Quarter 2008 Net Loss from Continuing Operations of \$5.1 Billion," Merrill Lynch press release, October 16, 2008, p. 4; Merrill Lynch, 3Q 2008 Earnings Call transcript, October 16, 2008, p. 2.

179. Federal Reserve System, "Order Approving Bank of America Corporation Acquisition of a Savings Association and an Industrial Loan Company," November 26, 2008, pp. 7, 9. To approve such a proposal, the Bank Holding Company Act requires the Fed to determine that a transaction "can reasonably be expected to produce benefits to the public, such as greater convenience, increased competition, or gains in efficiency, that outweigh possible adverse effects, such as undue concentration of resources, decreased or unfair competition." 12 U.S.C. 1843(j)(2)(A).

180. Timothy J. Mayopoulous, former general counsel of Bank of America, written testimony before the House Oversight Committee, *Bank of America and Merrill Lynch: How Did a Private Deal Turn into a Federal Bailout? Part IV*, 111th Cong., 1st sess., November 17, 2009.

181. Ken Lewis, deposition *In Re: Executive Compensation Investigation: Bank of America–Merrill Lynch*, February 26, 2009, p. 9, available from House Committee on Oversight and Government Reform and the Subcommittee on Domestic Policy, *Bank of America and Merrill Lynch: How Did A Private Deal Turn into a Federal Bailout?* 111th Cong., 1st sess., June 11, 2009.

182. Bank of America, 4Q 2008 Earnings Call transcript, January 16, 2009, p. 16.

183. *Ibid.*, pp. 3, 10, 16.

184. John Thain, interview by FCIC, September 17, 2009.

185. Complaint, SEC v. Bank of America (S.D.N.Y. Jan. 12, 2010); Final Consent Judgment As to Defendant Bank of America (S.D.N.Y. Feb. 4, 2010).

186. Ken Lewis, interview by FCIC, October 22, 2010.

187. Lewis, deposition *In Re: Executive Compensation Investigation: Bank of America—Merrill Lynch*, pp. 34, 38; Henry Paulson, written testimony before the House Committee on Oversight and Government Reform and the Subcommittee on Domestic Policy, *Bank of America and Merrill Lynch: How Did a Private Deal Turn into a Federal Bailout? Part III*, 111th Cong., 1st sess., July 16, 2009, p. 22.

188. Paulson, written testimony before the House Oversight Committee, July 16, 2009, p. 23 (quotation); Ben Bernanke, written testimony before the House Committee on Oversight and Government Reform and the Subcommittee on Domestic Policy, *Bank of America and Merrill Lynch: How Did a Private Deal Turn into a Federal Bailout? Part II*, 111th Cong., 1st sess., June 25, 2009, p. 18.

189. Lewis, interview.

190. Thain, interview

191. Paulson, written testimony before the House Oversight Committee, July 16, 2009, pp. 19, 25.

192. Chairman Ben Bernanke, email to General Counsel Scott Alvarez, “Re: Fw: BAC,” December 23, 2008, available from House Oversight Committee, *Bank of America and Merrill Lynch: How Did a Private Deal Turn into a Federal Bailout? Part II*, June 25, 2009, p. 73; Representative Edolphus Towns, in *ibid.*, p. 2.

193. Lewis, interview.

194. Minutes of a Special Meeting of Board of Directors of Bank of America Corporation, December 22, 2008, available in House Committee on Oversight and Government Reform, June 11, 2009, p. 183.

195. Minutes of a Special Meeting of the Bank of America board, December 30, 2008, available in *ibid.*, p. 188.

196. Lewis, interview.

197. See Department of the Treasury, Office of Financial Stability, “Troubled Assets Relief Program: Transactions Report, for Period Ending November 16, 2010,” November 18, 2010. In addition to drawing on these funds, it was also a “substantial user” of the Fed’s various liquidity programs. The holding company and its subsidiaries had already borrowed \$55 billion through the Term Auction Facility. It had also borrowed \$15 billion under the Fed’s Commercial Paper Funding Facility and \$20 billion under the FDIC’s debt guarantee program. And newly acquired Merrill Lynch had borrowed another \$21 billion from the Fed’s two Bear Stearns-era repo-support programs. Yet despite Bank of America’s recourse to these programs, the regulators worried that it would experience liquidity problems if the fourth-quarter earnings were weak.

198. The amount of FDIC-guaranteed debt that can be issued by each eligible entity, or its cap, is based on the amount of senior unsecured debt outstanding as of September 30, 2008.

199. FRB and OCC staff, memorandum to Rick Cox, FDIC, subject: “Bank of America Corporation (BAC) Funding Vulnerabilities and Implications for Other Financial Market Participants,” January 10, 2009, p. 2.

200. Sheila C. Bair, FDIC Chairman, written testimony before the House Committee on Oversight and Government Reform and the Subcommittee on Domestic Policy, *Bank of America and Merrill Lynch: How Did a Private Deal Turn into a Federal Bailout? Part V*, 110th Cong., 1st sess., December 11, 2009, p. 2.

201. FRB and OCC staff memo to Rick Cox, “Bank of America Corporation (BAC) Funding Vulnerabilities,” pp. 2, 4; Mitchell Glassman, Sandra Thompson, Arthur Murton, and John Thomas, memorandum to the FDIC Board of Directors, subject: Bank of America, etc., January 15, 2009, pp. 8, 9.

202. Bair, written testimony before the House Oversight Committee, December 11, 2009, p. 3.

203. Glassman et al., memo to the FDIC board, January 15, 2009, p. 3. They agreed to this 25/75 split because 25% of the assets for the ring fence were from depository institutions and 75% were not. See closed meeting of the FDIC Board of Directors, January 15, 2009, transcript, p. 18.

204. Closed meeting of the FDIC board, January 15, 2009, transcript, p. 24. According to the FDIC staff, “Liquidity pressure may increase to critical levels following the announcement of fourth quarter 2008 operating results that are significantly worse than market expectations. Market reaction to BAC’s operating results may have systemic consequences given the size of the institution and the volume of counterparty transactions involved. Without a systemic risk determination . . . significant market disruption may ensue as counterparties lose confidence in BAC’s ability to fund ongoing operations. . . . [Economic developments] point to a clear relationship between the financial market turmoil of recent months and impaired economic performance that could be expected to worsen further if BAC and its insured subsidiaries were allowed to failed. Such an event would significantly undermine business and consumer confidence.” Glassman et al., memo to the FDIC board, January 15, 2009, pp. 13–14.

## Chapter 21

1. Brian Moynihan, written testimony for the FCIC, First Public Hearing of the Financial Crisis Inquiry Commission, day 1, session 1: Financial Institution Representatives, January 13, 2010, p. 1.

2. Clarence Williams, written testimony for the FCIC, Hearing on the Impact of the Financial Crisis—Sacramento, session 4: Impact of the Financial Crisis on Sacramento Neighborhoods and Families, September 23, 2010, p. 8; and testimony before the FCIC, transcript, pp. 259–60.

3. Ed Lazear, interview by FCIC, November 10, 2010.

4. Jeannie McDermott, testimony before the FCIC, Hearing on the Impact of the Financial Crisis—Greater Bakersfield, session 6: Forum for Public Comment, September 7, 2010, transcript, pp. 211–13.

5. Marie Vasile, testimony before the FCIC, in *ibid.*, transcript, pp. 244–51.

6. “National Delinquency Survey,” Mortgage Bankers Association, Fourth Quarter 2007, March 2008, p. 4; Third Quarter 2010, November 2010, p. 4.

7. CoreLogic, “U.S. Housing and Mortgage Trends: August 2010,” November 2010, p. 5.

8. Jeremy Aguero, principal analyst, Applied Analysis, written testimony for the FCIC, Hearing on the Impact of the Financial Crisis—State of Nevada, session 1: Economic Analysis of the Impact of the Financial Crisis on Nevada, September 8, 2010, p. 3.

9. Mauricio Soto, “How Is the Financial Crisis Affecting Retirement Savings?” Urban Institute, December 10, 2008, available at [www.urban.org/url.cfm?ID=901206](http://www.urban.org/url.cfm?ID=901206).

10. Steven K. Paulson, “Auditors Say Colorado Pension Plan Recovering,” Associated Press, August 16, 2010.

11. Charles S. Johnson, “Montana Pension Funds Growing but Haven’t Made Up Losses,” *The Billings Gazette*, May 18, 2009.

12. The Conference Board news release, May 27, 2008.

13. The Conference Board news release, December 28, 2010.

14. Gregory D. Bynum, testimony before the FCIC, Hearing on the Impact of the Financial Crisis—Greater Bakersfield, session 3: Residential and Community Real Estate, September 7, 2010, transcript, p. 102.

15. Board of Governors of the Federal Reserve System, October 2010 Senior Loan Officer Opinion Survey on Bank Lending Practices, Net Percentage of Domestic Respondents Tightening Standards on Consumer Loans, Credit Cards, November 8, 2010.

16. American Bankruptcy Institute, “Annual Business and Non-business Filings by Year (1980–2009).”

17. Jeff Agosta, conference call with FCIC, February 25, 2010.

18. American Bankruptcy Institute, “Annual Business and Non-Business Filings by Year (1980–2009).”

19. Board of Governors of the Federal Reserve System, July 2007 Senior Loan Officer Opinion Survey on Bank Lending Practices, August 13, 2007, p. 13.

20. Liz Moyer, “Revolver at the Heads,” *Forbes*, October 7, 2008. Gannett Corporation withdrew \$1.2 billion, FairPoint Communications withdrew \$200 million, and Duke Energy withdrew \$1 billion.

21. Murillo Campello, John R. Graham, and Campbell R. Harvey, “The Real Effects of Financial Constraints: Evidence from a Financial Crisis,” *Journal of Financial Economics* 97 (2010): 476.

22. Board of Governors of the Federal Reserve System, January 2009 Senior Loan Officer Opinion Survey, fourth-quarter 2008, p. 8.
23. Elizabeth Duke, governor, Federal Reserve Board, "Small Business Lending," testimony before the House Committee on Financial Services and Committee on Small Business, February 26, 2010, p. 1.
24. National Federation of Independent Businesses, "NFIB Small Business Economic Trends," December 2010, p. 12.
25. Ben Bernanke, "Restoring the Flow of Credit to Small Business," speaking at the Federal Reserve Meeting Series: "Addressing the Financing Needs of Small Businesses," Washington, DC, July 12, 2010.
26. C. R. "Rusty" Cloutier, past chairman, Independent Community Bankers of America, testimony before the FCIC, First Public Hearing of the FCIC, day 1, panel 3: Financial Crisis Impacts on the Economy, January 13, 2010, transcript, p. 194.
27. Federal Reserve Statistical Release, E.2 Survey of Terms of Business Lending, E.2 Chart Data: "Commercial and Industrial Loan Rates Spreads over Intended Federal Funds Rate, by Loan Size," spread for all sizes.
28. William J. Dennis Jr., "Small Business Credit in a Deep Recession," National Federation of Independent Businesses, February 2010, p. 18.
29. Jerry Jost, interview by FCIC, August 20, 2010.
30. Board of Governors of the Federal Reserve System, Senior Loan Officer Opinion Survey on Bank Lending Practices, April 2010.
31. Board of Governors of the Federal Reserve System, Senior Loan Officer Opinion Survey on Bank Lending Practices, July 2010.
32. Emily Maltby, "Small Biz Loan Failure Rate Hits 12%," CNN Money, February 25, 2009; "SBA Losses Climb 154% in 2008," Coleman Report ([www.colemanpublishing.com/public/343.cfm](http://www.colemanpublishing.com/public/343.cfm)).
33. Michael A. Neal, chairman and CEO, GE Capital, testimony before the FCIC, Hearing on the Shadow Banking System, day 2, session 3: Institutions Participating in the Shadow Banking System, May 6, 2010, transcript, p. 242.
34. GE, 2008 Annual Report, p. 38.
35. Mark S. Barber, testimony before the FCIC, Hearing on the Shadow Banking System, day 2, session 3: Institutions Participating in the Shadow Banking System, May 6, 2010, transcript, p. 263.
36. International Monetary Fund, International Financial Statistics database, World Exports.
37. International Monetary Fund, International Financial Statistics, World Tables: Exports, World Exports.
38. Jane Levere, "Office Deals, 19 Months Apart, Show Market's Move," *New York Times*, August 10, 2010.
39. National Association of Realtors, Commercial Real Estate Quarterly Market Survey, December 2010, pp. 4, 5.
40. Brian Gordon, principal, Applied Analysis, testimony before the FCIC, Hearing on the Impact of the Financial Crisis—State of Nevada, session 3: The Impact of the Financial Crisis on Nevada Real Estate, September 8, 2010, transcript, p. 155.
41. Anton Troianovski, "High Hopes as Builders Bet on Skyscrapers," *Wall Street Journal*, September 29, 2010.
42. *Ibid.*; Gregory Bynum, president, Gregory D. Bynum & Associates, Inc., testimony before the FCIC, Hearing on the Impact of the Financial Crisis—Greater Bakersfield, session 3: Residential and Community Real Estate, September 7, 2010, transcript, pp. 77–80, 77–78.
43. Federal Deposit Insurance Commission, "Failed Bank List," January 2, 2010.
44. February Oversight Report, "Commercial Real Estate Losses and the Risk to Financial Stability," Congressional Oversight Panel, February 10, 2010, pp. 2, 41, 45.
45. TreppWire, "CMBS Delinquency Rate Nears 9%, Up 21 BPs in August after Leveling in July, Rate Now 8.92%" Monthly Delinquency Report, September 2010, p. 1.
46. Allen Kenney, "CRE Mortgage Default Rate to Double by 2010," REIT.com, June 18, 2009. See also "Default Rates Reach 16-Year High," *Globe St.*, February 24, 2010.
47. *Ibid.* Green Street Advisors, "Commercial Property Values Gain More Than 30% from '09 Lows," December 2, 2010, pp. 3, 1.

48. “Moody’s/REAL Commercial Property Price Indices, December 2010,” Moody’s Investors Service Special Report, December 21, 2010; Moody’s Investors Service, “US Commercial Real Estate Prices Rise 1.3% in October,” December 20, 2010.

49. Congressional Oversight Panel, “Commercial Real Estate Losses,” February Oversight Report, February 10, 2010, pp. 2–3.

50. Dr. Kenneth T. Rosen, chairman, Fisher Center for Real Estate and Economics, University of California at Berkeley, slides in testimony before the FCIC, First Public Hearing of the FCIC, day 1, panel 3: Financial Crisis Impacts on the Economy, January 13, 2010.

51. Elizabeth McNichol, Phil Oliff, and Nicholas Johnson, “States Continue to Feel Recession’s Impact,” Center on Budget and Policy Priorities, December 16, 2010.

52. Bruce Wagstaff, Sacramento Countywide Services Agency, testimony before the FCIC, Hearing on the Impact of the Financial Crisis—Sacramento, session 4: The Impact of the Financial Crisis on Sacramento Neighborhoods and Families, September 23, 2010, transcript, p. 234.

53. Sujit CanagaRetna, interview by FCIC, November 18, 2010.

54. McNichol, Oliff, and Johnson, “States Continue to Feel Recession’s Impact.”

55. “NCSL Fiscal Brief: Projected State Revenue Growth in FY 2011 and Beyond,” National Conference of State Legislatures, September 29, 2010, p. 1.

56. *Ibid.*

57. State of California, Legislative Analyst’s Office, “The 2011–12 Budget: California’s Fiscal Outlook.”

58. Kaiser Commission on Medicaid and the Uninsured, “Medicaid Enrollment: December 2009 Data Snapshot,” September 2010, pp. 1, 3.

59. Kaiser Commission on Medicaid and the Uninsured, “Hoping for Economic Recovery, Preparing for Health Reform: A Look at Medicaid Spending, Coverage and Policy Trends,” September 30, 2010, pp. 16, 25.

60. National League of Cities, “Recession’s Effects Intensify in Cities,” October 6, 2010.

61. Christopher W. Hoene and Michael A. Pagano, “City Fiscal Conditions in 2010,” National League of Cities, October 2010, p. 3.

62. *Ibid.*, pp. 7, 2.

63. Alan S. Blinder and Mark Zandi, “How the Great Recession Was Brought to an End,” Moody’s Analytics, July 27, 2010, p. 1.

64. Donald L. Kohn, vice chairman, Federal Reserve Board of Governors, “The Federal Reserve’s Policy Actions during the Financial Crisis and Lessons for the Future,” speech at Carleton University, Ottawa, Canada, May 13, 2010.

65. U.S. Department of the Treasury, Office of Financial Stability, “Troubled Asset Relief Program: Two Year Retrospective,” October 2010, p. 8.

66. Congressional Budget Office, “Report on the Troubled Asset Relief Program,” November 2010.

67. White House Office of Management and Budget, FY2011 Budget Historical Tables, Section 1, Table 1.1—Summary of Receipts, Outlays, and Surpluses or Deficits (–):1789–2015, Total Budget Deficit.

68. FDIC, “Failed Bank List.”

69. “Quarterly Banking Profile: Third Quarter 2010,” *FDIC Quarterly* 4, no. 4 (2010): 4.

70. FDIC, “Quarterly Banking Profile: First Quarter 2009,” *FDIC Quarterly* 3, no. 2 (2009): 1, and “Quarterly Banking Profile: First Quarter 2010,” *FDIC Quarterly* 4, no. 2 (2010); Board of Governors of the Federal Reserve System, Profit and Balance Sheet Developments at U.S. Commercial Banks in 2009.

71. FDIC, Statistics on Depository Institutions, Income and Expense, All Commercial Banks—Assets more than \$1B—National, Standard Report #1 (reports issued on 3/31/2010 and 3/31/2009). Profit is logged as “Net income attributable to bank.”

72. FDIC, Statistics on Depository Institutions, Income and Expense, All Commercial Banks—Assets less than \$100M and Assets \$100M to \$1B; Standard Report #1 (reports issued on 3/31/2010 and 3/31/2009). Profit is logged as “Net income attributable to bank.”

73. “Wall Street Bonuses Rose Sharply in 2009,” New York State Comptroller Thomas P. DiNapoli press release, February 23, 2010.

74. N.Y. State Comptroller Thomas P. DiNapoli, “Economic Trends in New York State,” October 2010.

## Chapter 22

1. FCIC calculations based on estimates from Hope Now and Moodys.com.
2. Mortgage Bankers Association National Delinquency Survey (the source for the rest of the delinquency and foreclosure rates in this chapter).
3. Julia Gordon, Center for Responsible Lending, “HAMP, Servicer Abuses, and Foreclosure Prevention Strategies,” testimony before the Congressional Oversight Panel for the Troubled Asset Relief Program (TARP), COP Hearing on TARP Foreclosure Mitigation Programs, 111th Cong., 2nd sess., October 27, 2010, pp. 5, 30; CRL testimony based on Rod Dubitsky, Larry Yang, Stevan Stevanovic, and Thomas Suehr, “Foreclosure Update: Over 8 Million Foreclosures Expected,” Credit Suisse (December 4, 2008), and Jan Hatzius and Michael A. Marschoun, “Home Prices and Credit Losses: Projections and Policy Options,” Goldman Sachs Global Economics Paper (January 13, 2009), p. 16.
4. “RealtyTrac Year-End Report Shows Record 2.8 Million U.S. Properties with Foreclosure Filings in 2009—An Increase of 21 Percent from 2008 and 120 Percent from 2007,” RealtyTrac, January 14, 2010.
5. “Delinquencies and Loans in Foreclosure Decrease, but Foreclosure Starts Rise in Latest MBA National Delinquency Survey,” MBA press release, November 18, 2010.
6. Mark Fleming, chief economist, CoreLogic, testimony before the FCIC, Hearing on the Impact of the Financial Crisis—Sacramento, session 1: Overview of the Sacramento Housing and Mortgage Markets and the Impact of the Financial Crisis on the Region, September 23, 2010, transcript, p. 14.
7. FCIC staff estimates based on analysis of BlackBox data.
8. Laurie S. Goodman, senior managing director, Amherst Securities Group LP, written testimony before the House Financial Services Committee, *The Private Sector and Government Response to the Mortgage Foreclosure Crisis*, 111th Cong., 1st sess., December 8, 2009, p. 3.
9. The index declined from 200.4 in April 2006 to 136.6 in March 2009, a decline of 31.8%.
10. “New CoreLogic Data Shows Third Consecutive Quarterly Decline in Negative Equity,” CoreLogic Inc., December 13, 2010, p. 1; nationally, third-quarter figures were an improvement from 11.0 million residential properties—23%—in negative equity in the second quarter of 2010.
11. Jim Rokakis, treasurer of Cuyahoga County, Ohio, interview by FCIC, November 8, 2010.
12. Cuyahoga County experienced 13,943 foreclosure filings in 2006, 14,946 in 2007, 13,858 in 2008, and 14,171 in 2009. “Ohio County Foreclosure Filings (1995–2009): Cuyahoga County,” Policy Matters Ohio.
13. Rokakis, interview.
14. The United States Conference of Mayors, “Impact of the Mortgage Foreclosure Crisis on Vacant and Abandoned Properties in Cities: A 77-City Survey,” June 2010, pp. 3–4.
15. Guy Cecala, prepared testimony for the Congressional Oversight Panel for the Troubled Asset Relief Program (TARP), COP Hearing on TARP Foreclosure Mitigation Programs, 111th Cong., 2nd sess., October 27, 2010, p. 2.
16. John Taylor, interview by FCIC, October 27, 2010.
17. Congressional Oversight Panel, “December Oversight Report: A Review of Treasury’s Foreclosure Prevention Programs,” December 14, 2010, pp. 4, 7, 18.
18. HOPE NOW, “Industry Extrapolations and Metrics (October 2010),” December 6, 2010, p. 3.
19. New Jersey HomeKeeper Program, New Jersey Housing and Mortgage Financing Agency, approved September 23, 2010.
20. Kirsten Keefe, presentation to the meeting of the Federal Reserve System’s Consumer Advisory Council, Washington, D.C., March 25, 2010, transcript, p. 34.
21. Diane E. Thompson, testimony to the Senate Committee on Banking, Housing, and Urban Affairs, *Problems in Mortgage Servicing from Modification to Foreclosure*, 111th Cong., 2nd sess., November 16, 2010, p. 3.
22. See, for example, National Consumer Law Center, “Why Servicers Foreclose When They Should Modify and Other Puzzles of Servicer Behavior,” October 2009.

23. Joseph H. Evers, Office of the Comptroller of the Currency, deputy comptroller for large bank supervision, written testimony before the Congressional Oversight Panel for the Troubled Asset Relief Program (TARP), COP Hearing on TARP Foreclosure Mitigation Programs, 111th Cong., 2nd sess., October 27, 2010, pp. 7–10. The OCC reported that mortgage servicers have modified 1,239,896 loans since early 2008. By the end of the second quarter of 2010, more than 26% of the modifications were seriously delinquent; 9% were in the process of foreclosure; and 4% had completed foreclosure. The OCC examined modified loans that were 60 or more days delinquent that were modified during the second quarter of 2009, to determine when after loan modification that serious delinquency recurred. At 12 months after modification, 43% of loans were delinquent by two or more months; at nine months after modification, 41% were in arrears; at six months, 34%; and at three months after a loan change, nearly 19% were delinquent. The OCC noted that more recent modifications have performed better than earlier modifications.

24. Julia Gordon, senior policy counsel, Center for Responsible Lending, written testimony before the Congressional Oversight Panel for the Troubled Asset Relief Program (TARP), COP Hearing on TARP Foreclosure Mitigation Programs, 111th Cong., 2nd sess., October 27, 2010, p. 11.

25. David J. Grais, partner with Grais & Ellsworth LLP, interview by FCIC, November 2, 2010.

26. Calculation by Laurie Goodman, senior managing director, Amherst Securities. See PowerPoint presentation to the Grais and Ellsworth LLP conference “Robosigners and Other Servicing Failures: Protecting the Rights of RMBS Investors,” October 27, 2010 (<http://video.remotecounsel.com/mediasite/Viewer/?peid=12e6411377a744b9a9f2eefd1093871c1d>).

27. Grais, interview.

28. Goodman testimony before the House Financial Services Committee, December 8, 2009.

29. See Deposition of Jeffrey Stephan, GMAC Mortgage LLC v. Ann M. Neu a/k/a Ann Michelle Perez, No. 50 2008 CA040805XXXX MB (Fla. Cir. Ct. Dec. 10, 2009), pp. 7, 10.

30. See, for example, Dwayne Ransom Davis and Melisa Davis v. Countrywide Home Loans, Inc.; Bank of America, N.A.; BAC GP LLC; and BAC Home Loans Servicing, LP, 1:10-cv-01303-JMS-DML (S.D. Ind. October 19, 2010).

31. Congressional Oversight Panel, “November Oversight Report: Examining the Consequences of Mortgage Irregularities for Financial Stability and Foreclosure Mitigation,” November 16, 2010, p. 20.

32. See, e.g., *Mortg. Elec. Registry Sys. v. Johnston*, No. 420-6-09 Rdcv (Rutland Co. Vt. Super. Ct. Oct. 28, 2009), holding that MERS did not have standing to initiate foreclosure because the note and mortgage had been separated.

33. The Honorable F. Dana Winslow, written testimony before the House Committee on the Judiciary, *Foreclosed Justice: Causes and Effects of the Foreclosure Crisis*, 111th Cong., 2nd sess., December 2, 2010, pp. 2, 4.

34. Order, *Objection to Claims of Citibank, N.A.* 4-6-10, (Bankr. E.D. Cal. May 20, 2010), p. 3. The order cites *In re Foreclosure Cases*, 521 F. Supp. 2d 650 (S.D. Oh. 2007); *In re Vargas*, 396 B.R. 511, 520 (Bankr. C.D. Cal. 2008); *Landmark Nat’l Bank v. Kesler*, 216 P.3d 158 (Kan. 2009); *LaSalle Bank v. Lamy*, 824 N.Y.S.2d 769 (N.Y. Sup. Ct. 2006).

35. Winslow, written testimony before the House Committee on the Judiciary, pp. 2–3.

36. See *John T. Kemp v. Countrywide Home Loans, Inc.*, Case No. 08-18700-JHW (D. N.J.), pp. 7–8.

37. Grais, interview.

38. Adam J. Levitin, associate professor of law, Georgetown University Law Center, testimony to Senate Committee on Banking, Housing, and Urban Affairs, *Problems in Mortgage Servicing from Modification to Foreclosure*, 111th Cong., 2nd sess., November 16, 2010, p. 20.

39. Congressional Oversight Panel, “November Oversight Report,” pp. 5, 7.

40. Katherine Porter, professor of law, University of Iowa College of Law, written testimony before the Congressional Oversight Panel for the Troubled Asset Relief Program (TARP), COP Hearing on TARP Foreclosure Mitigation Programs, October 27, 2010, p. 8.

41. Levitin, written testimony before the Senate Committee on Banking, Housing, and Urban Affairs, p. 20.

42. Erika Poethig, written testimony for the House Subcommittee on Housing and Community Opportunity, *Impact of the Foreclosure Crisis on Public and Affordable Housing in the Twin Cities*, 111th Cong., 2nd sess., January 23, 2010, p. 5.

43. National Association for the Education of Homeless Children and Youth (NAEHCY) and First Focus, "A Critical Moment: Child and Youth Homelessness in Our Nation's Schools," July 2010, p. 2. In early 2010, NAEHCY and First Focus conducted a survey of 2,200 school districts. When they were asked the reasons for the increased enrollment of students experiencing homelessness, 62% cited the economic downturn, 40% attributed it to greater school and community awareness of homelessness, and 38% cited problems stemming from the foreclosure crisis.

44. Dr. Heath Morrison, testimony before the FCIC, Hearing on the Impact of the Financial Crisis—State of Nevada, session 4: The Impact of the Financial Crisis on Nevada Public and Community Services, September 8, 2010, transcript, pp. 261–64.

45. Gail Burks, testimony before the FCIC, Hearing on the Impact of the Financial Crisis—State of Nevada, session 3: The Impact of the Financial Crisis on Nevada Real Estate, September 8, 2010, transcript, pp. 230–31.

46. Karen Mann, president and chief appraiser, Mann and Associates Real Estate Appraisers & Consultants, written testimony for the FCIC, Hearing on the Impact of the Financial Crisis—Sacramento, session 2: Mortgage Origination, Mortgage Fraud and Predatory Lending in the Sacramento Region, September 23, 2010, p. 12; oral testimony, p. 66.

47. Dawn Hunt, homeowner in Cape Coral, FL, interview by FCIC, December 20, 2010.

48. Zip code 33991, default, foreclosures and REO, S&P Global Data Solutions RMBS database, July 2010.

49. Hunt, interview.

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