APL-2014-00156
New York County Clerk's Index No. 650980/12

Court of Appeals

of the

State of New York

ACE SECURITIES CORP., Home Equity Loan Trust, Series 2006-SL2, by HSBC Bank USA, National Association, solely in its capacity as Trustee pursuant to a Pooling and Servicing Agreement, dated as of March 1, 2006,

Plaintiff-Appellant,

– against –

DB STRUCTURED PRODUCTS, INC.,

Defendant-Respondent.

COMPENDIUM FOR *AMICUS CURIAE* THE NATIONAL CREDIT UNION ADMINISTRATION BOARD, AS LIQUIDATING AGENT OF U.S. CENTRAL FEDERAL CREDIT UNION, WESTERN CORPORATE FEDERAL CREDIT UNION, MEMBERS UNITED CORPORATE FEDERAL CREDIT UNION AND SOUTHWEST CORPORATE FEDERAL CREDIT UNION, IN SUPPORT OF PLAINTIFF-APPELLANT

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Date Completed: April 2, 2015

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• OFFICIAL GOVERNMENT EDITION •

CONCLUSIONS OF THE FINANCIAL CRISIS INQUIRY COMMISSION

The Financial Crisis Inquiry Commission has been called upon to examine the financial and economic crisis that has gripped our country and explain its causes to the American people. We are keenly aware of the significance of our charge, given the economic damage that America has suffered in the wake of the greatest financial crisis since the Great Depression.

Our task was first to determine what happened and how it happened so that we could understand why it happened. Here we present our conclusions. We encourage the American people to join us in making their own assessments based on the evidence gathered in our inquiry. If we do not learn from history, we are unlikely to fully recover from it. Some on Wall Street and in Washington with a stake in the status quo may be tempted to wipe from memory the events of this crisis, or to suggest that no one could have foreseen or prevented them. This report endeavors to expose the facts, identify responsibility, unravel myths, and help us understand how the crisis could have been avoided. It is an attempt to record history, not to rewrite it, nor allow it to be rewritten.

To help our fellow citizens better understand this crisis and its causes, we also present specific conclusions at the end of chapters in Parts III, IV, and V of this report.

The subject of this report is of no small consequence to this nation. The profound events of 2007 and 2008 were neither bumps in the road nor an accentuated dip in the financial and business cycles we have come to expect in a free market economic system. This was a fundamental disruption—a financial upheaval, if you will—that wreaked havoc in communities and neighborhoods across this country.

As this report goes to print, there are more than 26 million Americans who are out of work, cannot find full-time work, or have given up looking for work. About four million families have lost their homes to foreclosure and another four and a half million have slipped into the foreclosure process or are seriously behind on their mortgage payments. Nearly $11 trillion in household wealth has vanished, with retirement accounts and life savings swept away. Businesses, large and small, have felt

the sting of a deep recession. There is much anger about what has transpired, and justifiably so. Many people who abided by all the rules now find themselves out of work and uncertain about their future prospects. The collateral damage of this crisis has been real people and real communities. The impacts of this crisis are likely to be felt for a generation. And the nation faces no easy path to renewed economic strength.

Like so many Americans, we began our exploration with our own views and some preliminary knowledge about how the world's strongest financial system came to the brink of collapse. Even at the time of our appointment to this independent panel, much had already been written and said about the crisis. Yet all of us have been deeply affected by what we have learned in the course of our inquiry. We have been at various times fascinated, surprised, and even shocked by what we saw, heard, and read. Ours has been a journey of revelation.

Much attention over the past two years has been focused on the decisions by the federal government to provide massive financial assistance to stabilize the financial system and rescue large financial institutions that were deemed too systemically important to fail. Those decisions—and the deep emotions surrounding them—will be debated long into the future. But our mission was to ask and answer this central question: *how did it come to pass that in 2008 our nation was forced to choose between two stark and painful alternatives*—either risk the total collapse of our financial system and economy or inject trillions of taxpayer dollars into the financial system and an array of companies, as millions of Americans still lost their jobs, their savings, and their homes?

In this report, we detail the events of the crisis. But a simple summary, as we see it, is useful at the outset. While the vulnerabilities that created the potential for crisis were years in the making, it was the collapse of the housing bubble—fueled by low interest rates, easy and available credit, scant regulation, and toxic mortgages—that was the spark that ignited a string of events, which led to a full-blown crisis in the fall of 2008. Trillions of dollars in risky mortgages had become embedded throughout the financial system, as mortgage-related securities were packaged, repackaged, and sold to investors around the world. When the bubble burst, hundreds of billions of dollars in losses in mortgages and mortgage-related securities shook markets as well as financial institutions that had significant exposures to those mortgages and had borrowed heavily against them. This happened not just in the United States but around the world. The losses were magnified by derivatives such as synthetic securities.

The crisis reached seismic proportions in September 2008 with the failure of Lehman Brothers and the impending collapse of the insurance giant American International Group (AIG). Panic fanned by a lack of transparency of the balance sheets of major financial institutions, coupled with a tangle of interconnections among institutions perceived to be "too big to fail," caused the credit markets to seize up. Trading ground to a halt. The stock market plummeted. The economy plunged into a deep recession.

The financial system we examined bears little resemblance to that of our parents' generation. The changes in the past three decades alone have been remarkable. The

financial markets have become increasingly globalized. Technology has transformed the efficiency, speed, and complexity of financial instruments and transactions. There is broader access to and lower costs of financing than ever before. And the financial sector itself has become a much more dominant force in our economy.

From 1978 to 2007, the amount of debt held by the financial sector soared from $3 trillion to $36 trillion, more than doubling as a share of gross domestic product. The very nature of many Wall Street firms changed—from relatively staid private partnerships to publicly traded corporations taking greater and more diverse kinds of risks. By 2005, the 10 largest U.S. commercial banks held 55% of the industry's assets, more than double the level held in 1990. On the eve of the crisis in 2006, financial sector profits constituted 27% of all corporate profits in the United States, up from 15% in 1980. Understanding this transformation has been critical to the Commission's analysis.

Now to our major findings and conclusions, which are based on the facts contained in this report: they are offered with the hope that lessons may be learned to help avoid future catastrophe.

• **We conclude this financial crisis was avoidable.** The crisis was the result of human action and inaction, not of Mother Nature or computer models gone haywire. The captains of finance and the public stewards of our financial system ignored warnings and failed to question, understand, and manage evolving risks within a system essential to the well-being of the American public. Theirs was a big miss, not a stumble. While the business cycle cannot be repealed, a crisis of this magnitude need not have occurred. To paraphrase Shakespeare, the fault lies not in the stars, but in us.

Despite the expressed view of many on Wall Street and in Washington that the crisis could not have been foreseen or avoided, there were warning signs. The tragedy was that they were ignored or discounted. There was an explosion in risky subprime lending and securitization, an unsustainable rise in housing prices, widespread reports of egregious and predatory lending practices, dramatic increases in household mortgage debt, and exponential growth in financial firms' trading activities, unregulated derivatives, and short-term "repo" lending markets, among many other red flags. Yet there was pervasive permissiveness; little meaningful action was taken to quell the threats in a timely manner.

The prime example is the Federal Reserve's pivotal failure to stem the flow of toxic mortgages, which it could have done by setting prudent mortgage-lending standards. The Federal Reserve was the one entity empowered to do so and it did not. The record of our examination is replete with evidence of other failures: financial institutions made, bought, and sold mortgage securities they never examined, did not care to examine, or knew to be defective; firms depended on tens of billions of dollars of borrowing that had to be renewed each and every night, secured by subprime mortgage securities; and major firms and investors blindly relied on credit rating agencies as their arbiters of risk. What else could one expect on a highway where there were neither speed limits nor neatly painted lines?

• **We conclude widespread failures in financial regulation and supervision proved devastating to the stability of the nation's financial markets.** The sentries were not at their posts, in no small part due to the widely accepted faith in the self-correcting nature of the markets and the ability of financial institutions to effectively police themselves. More than 30 years of deregulation and reliance on self-regulation by financial institutions, championed by former Federal Reserve chairman Alan Greenspan and others, supported by successive administrations and Congresses, and actively pushed by the powerful financial industry at every turn, had stripped away key safeguards, which could have helped avoid catastrophe. This approach had opened up gaps in oversight of critical areas with trillions of dollars at risk, such as the shadow banking system and over-the-counter derivatives markets. In addition, the government permitted financial firms to pick their preferred regulators in what became a race to the weakest supervisor.

Yet we do not accept the view that regulators lacked the power to protect the financial system. They had ample power in many arenas and they chose not to use it. To give just three examples: the Securities and Exchange Commission could have required more capital and halted risky practices at the big investment banks. It did not. The Federal Reserve Bank of New York and other regulators could have clamped down on Citigroup's excesses in the run-up to the crisis. They did not. Policy makers and regulators could have stopped the runaway mortgage securitization train. They did not. In case after case after case, regulators continued to rate the institutions they oversaw as safe and sound even in the face of mounting troubles, often downgrading them just before their collapse. And where regulators lacked authority, they could have sought it. Too often, they lacked the political will—in a political and ideological environment that constrained it—as well as the fortitude to critically challenge the institutions and the entire system they were entrusted to oversee.

Changes in the regulatory system occurred in many instances as financial markets evolved. But as the report will show, the financial industry itself played a key role in weakening regulatory constraints on institutions, markets, and products. It did not surprise the Commission that an industry of such wealth and power would exert pressure on policy makers and regulators. From 1999 to 2008, the financial sector expended $2.7 billion in reported federal lobbying expenses; individuals and political action committees in the sector made more than $1 billion in campaign contributions. What troubled us was the extent to which the nation was deprived of the necessary strength and independence of the oversight necessary to safeguard financial stability.

• **We conclude dramatic failures of corporate governance and risk management at many systemically important financial institutions were a key cause of this crisis.** There was a view that instincts for self-preservation inside major financial firms would shield them from fatal risk-taking without the need for a steady regulatory hand, which, the firms argued, would stifle innovation. Too many of these institutions acted recklessly, taking on too much risk, with too little capital, and with too much dependence on short-term funding. In many respects, this reflected a funda-

mental change in these institutions, particularly the large investment banks and bank holding companies, which focused their activities increasingly on risky trading activities that produced hefty profits. They took on enormous exposures in acquiring and supporting subprime lenders and creating, packaging, repackaging, and selling trillions of dollars in mortgage-related securities, including synthetic financial products. Like Icarus, they never feared flying ever closer to the sun.

Many of these institutions grew aggressively through poorly executed acquisition and integration strategies that made effective management more challenging. The CEO of Citigroup told the Commission that a $40 billion position in highly rated mortgage securities would "not in any way have excited my attention," and the co-head of Citigroup's investment bank said he spent "a small fraction of 1%" of his time on those securities. In this instance, too big to fail meant too big to manage.

Financial institutions and credit rating agencies embraced mathematical models as reliable predictors of risks, replacing judgment in too many instances. Too often, risk management became risk justification.

Compensation systems—designed in an environment of cheap money, intense competition, and light regulation—too often rewarded the quick deal, the short-term gain—without proper consideration of long-term consequences. Often, those systems encouraged the big bet—where the payoff on the upside could be huge and the downside limited. This was the case up and down the line—from the corporate boardroom to the mortgage broker on the street.

Our examination revealed stunning instances of governance breakdowns and irresponsibility. You will read, among other things, about AIG senior management's ignorance of the terms and risks of the company's $79 billion derivatives exposure to mortgage-related securities; Fannie Mae's quest for bigger market share, profits, and bonuses, which led it to ramp up its exposure to risky loans and securities as the housing market was peaking; and the costly surprise when Merrill Lynch's top management realized that the company held $55 billion in "super-senior" and supposedly "super-safe" mortgage-related securities that resulted in billions of dollars in losses.

• **We conclude a combination of excessive borrowing, risky investments, and lack of transparency put the financial system on a collision course with crisis.** Clearly, this vulnerability was related to failures of corporate governance and regulation, but it is significant enough by itself to warrant our attention here.

In the years leading up to the crisis, too many financial institutions, as well as too many households, borrowed to the hilt, leaving them vulnerable to financial distress or ruin if the value of their investments declined even modestly. For example, as of 2007, the five major investment banks—Bear Stearns, Goldman Sachs, Lehman Brothers, Merrill Lynch, and Morgan Stanley—were operating with extraordinarily thin capital. By one measure, their leverage ratios were as high as 40 to 1, meaning for every $40 in assets, there was only $1 in capital to cover losses. Less than a 3% drop in asset values could wipe out a firm. To make matters worse, much of their borrowing was short-term, in the overnight market—meaning the borrowing had to be renewed each and every day. For example, at the end of 2007, Bear Stearns had $11.8 billion in

equity and $383.6 billion in liabilities and was borrowing as much as $70 billion in the overnight market. It was the equivalent of a small business with $50,000 in equity borrowing $1.6 million, with $296,750 of that due each and every day. One can't really ask "What were they thinking?" when it seems that too many of them were thinking alike.

And the leverage was often hidden—in derivatives positions, in off-balance-sheet entities, and through "window dressing" of financial reports available to the investing public.

The kings of leverage were Fannie Mae and Freddie Mac, the two behemoth government-sponsored enterprises (GSEs). For example, by the end of 2007, Fannie's and Freddie's combined leverage ratio, including loans they owned and guaranteed, stood at 75 to 1.

But financial firms were not alone in the borrowing spree: from 2001 to 2007, national mortgage debt almost doubled, and the amount of mortgage debt per household rose more than 63% from $91,500 to $149,500, even while wages were essentially stagnant. When the housing downturn hit, heavily indebted financial firms and families alike were walloped.

The heavy debt taken on by some financial institutions was exacerbated by the risky assets they were acquiring with that debt. As the mortgage and real estate markets churned out riskier and riskier loans and securities, many financial institutions loaded up on them. By the end of 2007, Lehman had amassed $111 billion in commercial and residential real estate holdings and securities, which was almost twice what it held just two years before, and more than four times its total equity. And again, the risk wasn't being taken on just by the big financial firms, but by families, too. Nearly one in 10 mortgage borrowers in 2005 and 2006 took out "option ARM" loans, which meant they could choose to make payments so low that their mortgage balances rose every month.

Within the financial system, the dangers of this debt were magnified because transparency was not required or desired. Massive, short-term borrowing, combined with obligations unseen by others in the market, heightened the chances the system could rapidly unravel. In the early part of the 20th century, we erected a series of protections—the Federal Reserve as a lender of last resort, federal deposit insurance, ample regulations—to provide a bulwark against the panics that had regularly plagued America's banking system in the 19th century. Yet, over the past 30-plus years, we permitted the growth of a shadow banking system—opaque and laden with short-term debt—that rivaled the size of the traditional banking system. Key components of the market—for example, the multitrillion-dollar repo lending market, off-balance-sheet entities, and the use of over-the-counter derivatives—were hidden from view, without the protections we had constructed to prevent financial meltdowns. We had a 21st-century financial system with 19th-century safeguards.

When the housing and mortgage markets cratered, the lack of transparency, the extraordinary debt loads, the short-term loans, and the risky assets all came home to roost. What resulted was panic. We had reaped what we had sown.

• **We conclude the government was ill prepared for the crisis, and its inconsistent response added to the uncertainty and panic in the financial markets.** As part of our charge, it was appropriate to review government actions taken in response to the developing crisis, not just those policies or actions that preceded it, to determine if any of those responses contributed to or exacerbated the crisis.

As our report shows, key policy makers—the Treasury Department, the Federal Reserve Board, and the Federal Reserve Bank of New York—who were best positioned to watch over our markets were ill prepared for the events of 2007 and 2008. Other agencies were also behind the curve. They were hampered because they did not have a clear grasp of the financial system they were charged with overseeing, particularly as it had evolved in the years leading up to the crisis. This was in no small measure due to the lack of transparency in key markets. They thought risk had been diversified when, in fact, it had been concentrated. Time and again, from the spring of 2007 on, policy makers and regulators were caught off guard as the contagion spread, responding on an ad hoc basis with specific programs to put fingers in the dike. There was no comprehensive and strategic plan for containment, because they lacked a full understanding of the risks and interconnections in the financial markets. Some regulators have conceded this error. We had allowed the system to race ahead of our ability to protect it.

While there was some awareness of, or at least a debate about, the housing bubble, the record reflects that senior public officials did not recognize that a bursting of the bubble could threaten the entire financial system. Throughout the summer of 2007, both Federal Reserve Chairman Ben Bernanke and Treasury Secretary Henry Paulson offered public assurances that the turmoil in the subprime mortgage markets would be contained. When Bear Stearns's hedge funds, which were heavily invested in mortgage-related securities, imploded in June 2007, the Federal Reserve discussed the implications of the collapse. Despite the fact that so many other funds were exposed to the same risks as those hedge funds, the Bear Stearns funds were thought to be "relatively unique." Days before the collapse of Bear Stearns in March 2008, SEC Chairman Christopher Cox expressed "comfort about the capital cushions" at the big investment banks. It was not until August 2008, just weeks before the government takeover of Fannie Mae and Freddie Mac, that the Treasury Department understood the full measure of the dire financial conditions of those two institutions. And just a month before Lehman's collapse, the Federal Reserve Bank of New York was still seeking information on the exposures created by Lehman's more than 900,000 derivatives contracts.

In addition, the government's inconsistent handling of major financial institutions during the crisis—the decision to rescue Bear Stearns and then to place Fannie Mae and Freddie Mac into conservatorship, followed by its decision not to save Lehman Brothers and then to save AIG—increased uncertainty and panic in the market.

In making these observations, we deeply respect and appreciate the efforts made by Secretary Paulson, Chairman Bernanke, and Timothy Geithner, formerly president of the Federal Reserve Bank of New York and now treasury secretary, and so

many others who labored to stabilize our financial system and our economy in the most chaotic and challenging of circumstances.

• **We conclude there was a systemic breakdown in accountability and ethics.** The integrity of our financial markets and the public's trust in those markets are essential to the economic well-being of our nation. The soundness and the sustained prosperity of the financial system and our economy rely on the notions of fair dealing, responsibility, and transparency. In our economy, we expect businesses and individuals to pursue profits, at the same time that they produce products and services of quality and conduct themselves well.

Unfortunately—as has been the case in past speculative booms and busts—we witnessed an erosion of standards of responsibility and ethics that exacerbated the financial crisis. This was not universal, but these breaches stretched from the ground level to the corporate suites. They resulted not only in significant financial consequences but also in damage to the trust of investors, businesses, and the public in the financial system.

For example, our examination found, according to one measure, that the percentage of borrowers who defaulted on their mortgages within just a matter of months after taking a loan nearly doubled from the summer of 2006 to late 2007. This data indicates they likely took out mortgages that they never had the capacity or intention to pay. You will read about mortgage brokers who were paid "yield spread premiums" by lenders to put borrowers into higher-cost loans so they would get bigger fees, often never disclosed to borrowers. The report catalogues the rising incidence of mortgage fraud, which flourished in an environment of collapsing lending standards and lax regulation. The number of suspicious activity reports—reports of possible financial crimes filed by depository banks and their affiliates—related to mortgage fraud grew 20-fold between 1996 and 2005 and then more than doubled again between 2005 and 2009. One study places the losses resulting from fraud on mortgage loans made between 2005 and 2007 at $112 billion.

Lenders made loans that they knew borrowers could not afford and that could cause massive losses to investors in mortgage securities. As early as September 2004, Countrywide executives recognized that many of the loans they were originating could result in "catastrophic consequences." Less than a year later, they noted that certain high-risk loans they were making could result not only in foreclosures but also in "financial and reputational catastrophe" for the firm. But they did not stop.

And the report documents that major financial institutions ineffectively sampled loans they were purchasing to package and sell to investors. They knew a significant percentage of the sampled loans did not meet their own underwriting standards or those of the originators. Nonetheless, they sold those securities to investors. The Commission's review of many prospectuses provided to investors found that this critical information was not disclosed.

THESE CONCLUSIONS must be viewed in the context of human nature and individual and societal responsibility. First, to pin this crisis on mortal flaws like greed and

hubris would be simplistic. It was the failure to account for human weakness that is relevant to this crisis.

Second, we clearly believe the crisis was a result of human mistakes, misjudgments, and misdeeds that resulted in systemic failures for which our nation has paid dearly. As you read this report, you will see that specific firms and individuals acted irresponsibly. Yet a crisis of this magnitude cannot be the work of a few bad actors, and such was not the case here. At the same time, the breadth of this crisis does not mean that "everyone is at fault"; many firms and individuals did not participate in the excesses that spawned disaster.

We do place special responsibility with the public leaders charged with protecting our financial system, those entrusted to run our regulatory agencies, and the chief executives of companies whose failures drove us to crisis. These individuals sought and accepted positions of significant responsibility and obligation. Tone at the top does matter and, in this instance, we were let down. No one said "no."

But as a nation, we must also accept responsibility for what we permitted to occur. Collectively, but certainly not unanimously, we acquiesced to or embraced a system, a set of policies and actions, that gave rise to our present predicament.

* * *

THIS REPORT DESCRIBES THE EVENTS and the system that propelled our nation toward crisis. The complex machinery of our financial markets has many essential gears—some of which played a critical role as the crisis developed and deepened. Here we render our conclusions about specific components of the system that we believe contributed significantly to the financial meltdown.

• **We conclude collapsing mortgage-lending standards and the mortgage securitization pipeline lit and spread the flame of contagion and crisis.** When housing prices fell and mortgage borrowers defaulted, the lights began to dim on Wall Street. This report catalogues the corrosion of mortgage-lending standards and the securitization pipeline that transported toxic mortgages from neighborhoods across America to investors around the globe.

Many mortgage lenders set the bar so low that lenders simply took eager borrowers' qualifications on faith, often with a willful disregard for a borrower's ability to pay. Nearly one-quarter of all mortgages made in the first half of 2005 were interest-only loans. During the same year, 68% of "option ARM" loans originated by Countrywide and Washington Mutual had low- or no-documentation requirements.

These trends were not secret. As irresponsible lending, including predatory and fraudulent practices, became more prevalent, the Federal Reserve and other regulators and authorities heard warnings from many quarters. Yet the Federal Reserve neglected its mission "to ensure the safety and soundness of the nation's banking and financial system and to protect the credit rights of consumers." It failed to build the retaining wall before it was too late. And the Office of the Comptroller of the Currency and the Office of Thrift Supervision, caught up in turf wars, preempted state regulators from reining in abuses.

While many of these mortgages were kept on banks' books, the bigger money came from global investors who clamored to put their cash into newly created mortgage-related securities. It appeared to financial institutions, investors, and regulators alike that risk had been conquered: the investors held highly rated securities they thought were sure to perform; the banks thought they had taken the riskiest loans off their books; and regulators saw firms making profits and borrowing costs reduced. But each step in the mortgage securitization pipeline depended on the next step to keep demand going. From the speculators who flipped houses to the mortgage brokers who scouted the loans, to the lenders who issued the mortgages, to the financial firms that created the mortgage-backed securities, collateralized debt obligations (CDOs), CDOs squared, and synthetic CDOs: no one in this pipeline of toxic mortgages had enough skin in the game. They all believed they could off-load their risks on a moment's notice to the next person in line. They were wrong. When borrowers stopped making mortgage payments, the losses—amplified by derivatives—rushed through the pipeline. As it turned out, these losses were concentrated in a set of systemically important financial institutions.

In the end, the system that created millions of mortgages so efficiently has proven to be difficult to unwind. Its complexity has erected barriers to modifying mortgages so families can stay in their homes and has created further uncertainty about the health of the housing market and financial institutions.

• **We conclude over-the-counter derivatives contributed significantly to this crisis.** The enactment of legislation in 2000 to ban the regulation by both the federal and state governments of over-the-counter (OTC) derivatives was a key turning point in the march toward the financial crisis.

From financial firms to corporations, to farmers, and to investors, derivatives have been used to hedge against, or speculate on, changes in prices, rates, or indices or even on events such as the potential defaults on debts. Yet, without any oversight, OTC derivatives rapidly spiraled out of control and out of sight, growing to $673 trillion in notional amount. This report explains the uncontrolled leverage; lack of transparency, capital, and collateral requirements; speculation; interconnections among firms; and concentrations of risk in this market.

OTC derivatives contributed to the crisis in three significant ways. First, one type of derivative—credit default swaps (CDS)—fueled the mortgage securitization pipeline. CDS were sold to investors to protect against the default or decline in value of mortgage-related securities backed by risky loans. Companies sold protection—to the tune of $79 billion, in AIG's case—to investors in these newfangled mortgage securities, helping to launch and expand the market and, in turn, to further fuel the housing bubble.

Second, CDS were essential to the creation of synthetic CDOs. These synthetic CDOs were merely bets on the performance of real mortgage-related securities. They amplified the losses from the collapse of the housing bubble by allowing multiple bets on the same securities and helped spread them throughout the financial system. Goldman Sachs alone packaged and sold $73 billion in synthetic CDOs from July 1,

2004, to May 31, 2007. Synthetic CDOs created by Goldman referenced more than 3,400 mortgage securities, and 610 of them were referenced at least twice. This is apart from how many times these securities may have been referenced in synthetic CDOs created by other firms.

Finally, when the housing bubble popped and crisis followed, derivatives were in the center of the storm. AIG, which had not been required to put aside capital reserves as a cushion for the protection it was selling, was bailed out when it could not meet its obligations. The government ultimately committed more than $180 billion because of concerns that AIG's collapse would trigger cascading losses throughout the global financial system. In addition, the existence of millions of derivatives contracts of all types between systemically important financial institutions—unseen and unknown in this unregulated market—added to uncertainty and escalated panic, helping to precipitate government assistance to those institutions.

• **We conclude the failures of credit rating agencies were essential cogs in the wheel of financial destruction.** The three credit rating agencies were key enablers of the financial meltdown. The mortgage-related securities at the heart of the crisis could not have been marketed and sold without their seal of approval. Investors relied on them, often blindly. In some cases, they were obligated to use them, or regulatory capital standards were hinged on them. This crisis could not have happened without the rating agencies. Their ratings helped the market soar and their downgrades through 2007 and 2008 wreaked havoc across markets and firms.

In our report, you will read about the breakdowns at Moody's, examined by the Commission as a case study. From 2000 to 2007, Moody's rated nearly 45,000 mortgage-related securities as triple-A. This compares with six private-sector companies in the United States that carried this coveted rating in early 2010. In 2006 alone, Moody's put its triple-A stamp of approval on 30 mortgage-related securities every working day. The results were disastrous: 83% of the mortgage securities rated triple-A that year ultimately were downgraded.

You will also read about the forces at work behind the breakdowns at Moody's, including the flawed computer models, the pressure from financial firms that paid for the ratings, the relentless drive for market share, the lack of resources to do the job despite record profits, and the absence of meaningful public oversight. And you will see that without the active participation of the rating agencies, the market for mortgage-related securities could not have been what it became.

* * *

THERE ARE MANY COMPETING VIEWS as to the causes of this crisis. In this regard, the Commission has endeavored to address key questions posed to us. Here we discuss three: capital availability and excess liquidity, the role of Fannie Mae and Freddie Mac (the GSEs), and government housing policy.

First, as to the matter of excess liquidity: in our report, we outline monetary policies and capital flows during the years leading up to the crisis. Low interest rates, widely available capital, and international investors seeking to put their money in real

estate assets in the United States were prerequisites for the creation of a credit bubble. Those conditions created increased risks, which should have been recognized by market participants, policy makers, and regulators. However, it is the Commission's conclusion that excess liquidity did not need to cause a crisis. It was the failures outlined above—including the failure to effectively rein in excesses in the mortgage and financial markets—that were the principal causes of this crisis. Indeed, the availability of well-priced capital—both foreign and domestic—is an opportunity for economic expansion and growth if encouraged to flow in productive directions.

Second, we examined the role of the GSEs, with Fannie Mae serving as the Commission's case study in this area. These government-sponsored enterprises had a deeply flawed business model as publicly traded corporations with the implicit backing of and subsidies from the federal government and with a public mission. Their $5 trillion mortgage exposure and market position were significant. In 2005 and 2006, they decided to ramp up their purchase and guarantee of risky mortgages, just as the housing market was peaking. They used their political power for decades to ward off effective regulation and oversight—spending $164 million on lobbying from 1999 to 2008. They suffered from many of the same failures of corporate governance and risk management as the Commission discovered in other financial firms. Through the third quarter of 2010, the Treasury Department had provided $151 billion in financial support to keep them afloat.

We conclude that these two entities contributed to the crisis, but were not a primary cause. Importantly, GSE mortgage securities essentially maintained their value throughout the crisis and did not contribute to the significant financial firm losses that were central to the financial crisis.

The GSEs participated in the expansion of subprime and other risky mortgages, but they followed rather than led Wall Street and other lenders in the rush for fool's gold. They purchased the highest rated non-GSE mortgage-backed securities and their participation in this market added helium to the housing balloon, but their purchases never represented a majority of the market. Those purchases represented 10.5% of non-GSE subprime mortgage-backed securities in 2001, with the share rising to 40% in 2004, and falling back to 28% by 2008. They relaxed their underwriting standards to purchase or guarantee riskier loans and related securities in order to meet stock market analysts' and investors' expectations for growth, to regain market share, and to ensure generous compensation for their executives and employees—justifying their activities on the broad and sustained public policy support for homeownership.

The Commission also probed the performance of the loans purchased or guaranteed by Fannie and Freddie. While they generated substantial losses, delinquency rates for GSE loans were substantially lower than loans securitized by other financial firms. For example, data compiled by the Commission for a subset of borrowers with similar credit scores—scores below 660—show that by the end of 2008, GSE mortgages were far less likely to be seriously delinquent than were non-GSE securitized mortgages: 6.2% versus 28.3%.

We also studied at length how the Department of Housing and Urban Development's (HUD's) affordable housing goals for the GSEs affected their investment in

risky mortgages. Based on the evidence and interviews with dozens of individuals involved in this subject area, we determined these goals only contributed marginally to Fannie's and Freddie's participation in those mortgages.

Finally, as to the matter of whether government housing policies were a primary cause of the crisis: for decades, government policy has encouraged homeownership through a set of incentives, assistance programs, and mandates. These policies were put in place and promoted by several administrations and Congresses—indeed, both Presidents Bill Clinton and George W. Bush set aggressive goals to increase homeownership.

In conducting our inquiry, we took a careful look at HUD's affordable housing goals, as noted above, and the Community Reinvestment Act (CRA). The CRA was enacted in 1977 to combat "redlining" by banks—the practice of denying credit to individuals and businesses in certain neighborhoods without regard to their creditworthiness. The CRA requires banks and savings and loans to lend, invest, and provide services to the communities from which they take deposits, consistent with bank safety and soundness.

The Commission concludes the CRA was not a significant factor in subprime lending or the crisis. Many subprime lenders were not subject to the CRA. Research indicates only 6% of high-cost loans—a proxy for subprime loans—had any connection to the law. Loans made by CRA-regulated lenders in the neighborhoods in which they were required to lend were half as likely to default as similar loans made in the same neighborhoods by independent mortgage originators not subject to the law.

Nonetheless, we make the following observation about government housing policies—they failed in this respect: As a nation, we set aggressive homeownership goals with the desire to extend credit to families previously denied access to the financial markets. Yet the government failed to ensure that the philosophy of opportunity was being matched by the practical realities on the ground. Witness again the failure of the Federal Reserve and other regulators to rein in irresponsible lending. Homeownership peaked in the spring of 2004 and then began to decline. From that point on, the talk of opportunity was tragically at odds with the reality of a financial disaster in the making.

* * *

WHEN THIS COMMISSION began its work 18 months ago, some imagined that the events of 2008 and their consequences would be well behind us by the time we issued this report. Yet more than two years after the federal government intervened in an unprecedented manner in our financial markets, our country finds itself still grappling with the aftereffects of the calamity. Our financial system is, in many respects, still unchanged from what existed on the eve of the crisis. Indeed, in the wake of the crisis, the U.S. financial sector is now more concentrated than ever in the hands of a few large, systemically significant institutions.

While we have not been charged with making policy recommendations, the very purpose of our report has been to take stock of what happened so we can plot a new course. In our inquiry, we found dramatic breakdowns of corporate governance,

profound lapses in regulatory oversight, and near fatal flaws in our financial system. We also found that a series of choices and actions led us toward a catastrophe for which we were ill prepared. These are serious matters that must be addressed and resolved to restore faith in our financial markets, to avoid the next crisis, and to rebuild a system of capital that provides the foundation for a new era of broadly shared prosperity.

The greatest tragedy would be to accept the refrain that no one could have seen this coming and thus nothing could have been done. If we accept this notion, it will happen again.

This report should not be viewed as the end of the nation's examination of this crisis. There is still much to learn, much to investigate, and much to fix.

This is our collective responsibility. It falls to us to make different choices if we want different results.

DISCLOSURE AND DUE DILIGENCE: "A QUALITY CONTROL ISSUE IN THE FACTORY"

In addition to the rising fraud and egregious lending practices, lending standards deteriorated in the final years of the bubble. After growing for years, Alt-A lending increased another 5% from 2005 to 2006. In particular, option ARMs grew 7% during that period, interest-only mortgages grew 9%, and no-documentation or low-documentation loans (measured for borrowers with fixed-rate mortgages) grew 14%. Overall, by 2006 no-doc or low-doc loans made up 27% of all mortgages originated. Many of these products would perform only if prices continued to rise and the borrower could refinance at a low rate.[58]

In theory, every participant along the securitization pipeline should have had an interest in the quality of every underlying mortgage. In practice, their interests were often not aligned. Two New York Fed economists have pointed out the "seven deadly frictions" in mortgage securitization—places along the pipeline where one party knew more than the other, creating opportunities to take advantage.[59] For example, the lender who originated the mortgage for sale, earning a commission, knew a great deal about the loan and the borrower but had no long-term stake in whether the mortgage was paid, beyond the lender's own business reputation. The securitizer who packaged mortgages into mortgage-backed securities, similarly, was less likely to retain a stake in those securities.

In theory, the rating agencies were important watchdogs over the securitization process. They described their role as being "an umpire in the market."[60] But they did not review the quality of individual mortgages in a mortgage-backed security, nor did they check to see that the mortgages were what the securitizers said they were.

So the integrity of the market depended on two critical checks. First, firms purchasing and securitizing the mortgages would conduct due diligence reviews of the mortgage pools, either using third-party firms or doing the reviews in-house. Second, following Securities and Exchange Commission rules, parties in the securitization process were expected to disclose what they were selling to investors. Neither of these checks performed as they should have.

Due diligence firms: "Waived in"

As subprime mortgage securitization took off, securitizers undertook due diligence on their own or through third parties on the mortgage pools that originators were selling them. The originator and the securitizer negotiated the extent of the due diligence investigation. While the percentage of the pool examined could be as high as 30%, it was often much lower; according to some observers, as the market grew and originators became more concentrated, they had more bargaining power over the mortgage purchasers, and samples were sometimes as low as 2% to 3%.[61] Some securitizers requested that the due diligence firm analyze a random sample of mortgages from the pool; others asked for a sampling of those most likely to be deficient in some way, in an effort to efficiently detect more of the problem loans.

Clayton Holdings, a Connecticut-based firm, was a major provider of third-party due diligence services. [62] As Clayton Vice President Vicki Beal explained to the FCIC, firms like hers were "not retained by [their] clients to provide an opinion as to whether a loan is a good loan or a bad loan." Rather, they were hired to identify, among other things, whether the loans met the originator's stated underwriting guidelines and, in some measure, to enable clients to negotiate better prices on pools of loans.[63]

The review fell into three general areas: credit, compliance, and valuation. Did the loans meet the underwriting guidelines (generally the originator's standards, sometimes with overlays or additional guidelines provided by the financial institutions purchasing the loans)? Did the loans comply with federal and state laws, notably predatory-lending laws and truth-in-lending requirements? Were the reported property values accurate?[64] And, critically: to the degree that a loan was deficient, did it have any "compensating factors" that offset these deficiencies? For example, if a loan had a higher loan-to-value ratio than guidelines called for, did another characteristic such as the borrower's higher income mitigate that weakness? The due diligence firm would then grade the loan sample and forward the data to its client. Report in hand, the securitizer would negotiate a price for the pool and could "kick out" loans that did not meet the stated guidelines.

Because of the volume of loans examined by Clayton during the housing boom, the firm had a unique inside view of the underwriting standards that originators were actually applying—and that securitizers were willing to accept. Loans were classified into three groups: loans that met guidelines (a Grade 1 Event), those that failed to meet guidelines but were approved because of compensating factors (a Grade 2 Event), and those that failed to meet guidelines and were not approved (a Grade 3 Event). Overall, for the 18 months that ended June 30, 2007, Clayton rated 54% of the 911,039 loans it analyzed as Grade 1, and another 18% as Grade 2—for a total of 72% that met the guidelines outright or with compensating factors. The remaining 28% of the loans were Grade 3.[65] In theory, the banks could have refused to buy a loan pool, or, indeed, they could have used the findings of the due diligence firm to probe the loans' quality more deeply. Over the 18-month period, 39% of the loans that Clayton found to be deficient—Grade 3—were "waived in" by the banks. Thus 11% of the loans sampled by Clayton were accepted even though the company had found a basis for rejecting them (see figure 9.1).

Referring to the data, Keith Johnson, the president of Clayton from May 2006 to May 2009, told the Commission, "That 54% to me says there [was] a quality control issue in the factory" for mortgage-backed securities.[66] Johnson concluded that his clients often waived in loans to preserve their business relationship with the loan originator—a high number of rejections might lead the originator to sell the loans to a competitor. Simply put, it was a sellers' market. "Probably the seller had more power than the Wall Street issuer," Johnson told the FCIC.[67]

The high rate of waivers following rejections may not itself be evidence of something wrong in the process, Beal testified. She said that as originators' lending guidelines were declining, she saw the securitizing firms introduce additional credit

Rejected Loans Waived in by Selected Banks

From January 2006 through June 2007, Clayton rejected 28% of the mortgages it reviewed. Of these, 39% were waived in anyway.

Financial Institution	A ACCEPTED LOANS *(Event 1 & 2)/ Total pool of loans*	B REJECTED LOANS *(Event 3)/ Total pool of loans*	C REJECTED LOANS WAIVED IN BY FINANCIAL INSTITUTIONS	D REJECTED LOANS AFTER WAIVERS *(B–C)*	E FINANCIAL INSTITUTION WAIVER RATE *(C/B)*
Citigroup	58%	42%	13%	29%	31%
Credit Suisse	68	32	11	21	33
Deutsche	65	35	17	17	50
Goldman	77	23	7	16	29
JP Morgan	73	27	14	13	51
Lehman	74	26	10	16	37
Merrill	77	23	7	16	32
UBS	80	20	6	13	33
WaMu	73	27	8	19	29
Total Bank Sample	**72%**	**28%**	**11%**	**17%**	**39%**

NOTES: From Clayton Trending Reports. Numbers may not add due to rounding.
SOURCE: Clayton Holdings

Figure 9.1

guidelines. "As you know, there was stated income, they were telling us look for reasonableness of that income, things like that."[68] With stricter guidelines, one would expect more rejections, and, after the securitizer looks more closely at the rejected loans, possibly more waivers. As Moody's Investors Service explained in a letter to the FCIC, "A high rate of waivers from an institution with extremely tight underwriting standards could result in a pool that is less risky than a pool with no waivers from an institution with extremely loose underwriting standards."[69] Nonetheless, many prospectuses indicated that the loans in the pools either met guidelines outright or had compensating factors, even though Clayton's records show that only a portion of the loans were sampled, and that of those that were sampled, a substantial percentage of Grade 3 Event loans were waived in.

Johnson said he approached the rating agencies in 2006 and 2007 to gauge their interest in the exception-tracking product that Clayton was developing. He said he shared some of their company's results, attempting to convince the agencies that the data would benefit the ratings process. "We went to the rating agencies and said, 'Wouldn't this information be great for you to have as you assign tranche levels of

risk?'" Johnson recalled. The agencies thought the due diligence firm's data were "great," but they did not want the information, Johnson said, because it would presumably produce lower ratings for the securitizations and cost the agency business—even in 2007, as the private securitization market was winding down.[70]

When securitizers did kick loans out of the pools, some originators simply put them into new pools, presumably in hopes that those loans would not be captured in the next pool's sampling. The examiner's report for New Century Financial's bankruptcy describes such a practice.[71] Similarly, Fremont Investment & Loan had a policy of putting loans into subsequent pools until they were kicked out three times, the company's former regulatory compliance and risk manager, Roger Ehrnman, told the FCIC. As Johnson described the practice to the FCIC, this was the "three strikes, you're out rule."[72]

Some mortgage securitizers did their own due diligence, but seemed to devote only limited resources to it. At Morgan Stanley, the head of due diligence was based not in New York but rather in Boca Raton, Florida. He had, at any one time, two to five individuals reporting to him directly—and they were actually employees of a personnel consultant, Equinox.[73] Deutsche Bank and JP Morgan likewise also had only small due diligence teams.[74]

Banks did not necessarily have better processes for monitoring the mortgages that they purchased. At an FCIC hearing on the mortgage business, Richard Bowen, a whistleblower who had been a senior vice president at CitiFinancial Mortgage in charge of a staff of 200-plus professional underwriters, testified that his team conducted quality assurance checks on the loans bought by Citigroup from a network of lenders, including both subprime mortgages that Citigroup intended to hold and prime mortgages that it intended to sell to Fannie Mae and Freddie Mac.

For subprime purchases, Bowen's team would review the physical credit file of the loans they were purchasing. "During 2006 and 2007, I witnessed many changes to the way the credit risk was being evaluated for these pools during the purchase processes," Bowen said. For example, he said, the chief risk officer in Citigroup's Consumer Lending business reversed large numbers of underwriting decisions from "turn down" to "approved."[75]

Another part of Bowen's charge was to supervise the purchase of roughly $50 billion annually in prime loan pools, a high percentage of which were sold to Fannie Mae and Freddie Mac for securitization. The sampling provided to Bowen's staff for quality control was supposed to include at least 5% of the loan pool for a given securitization, but "this corporate mandate was usually ignored." Samples of 2% were more likely, and the loan samples that Bowen's group did examine showed extremely high rates of noncompliance. "At the time that I became involved, which was early to mid-2006, we identified that 40 to 60 percent of the files either had a 'disagree' decision, or they were missing critical documents."[76]

Bowen repeatedly expressed concerns to his direct supervisor and company executives about the quality and underwriting of mortgages that CitiMortgage purchased and then sold to the GSEs. As discussed in a later chapter, the GSEs would later re-

quire Citigroup to buy back $1.5 billion in loans as of November 2010, finding that the loans Citigroup had sold them did not conform to GSE standards.

SEC: "The elephant in the room is that we didn't review the prospectus supplements"

By the time the financial crisis hit, investors held more than $2 trillion of non-GSE mortgage-backed securities and close to $700 billion of CDOs that held mortgage-backed securities.[77] These securities were issued with practically no SEC oversight. And only a minority were subject to the SEC's ongoing public reporting requirements. The SEC's mandate is to protect investors—generally not by reviewing the quality of securities, but simply by ensuring adequate disclosures so that investors can make up their own minds. In the case of initial public offerings of a company's shares, the work has historically involved a lengthy review of the issuer's prospectus and other "offering materials" prior to sale.[78]

However, with the advent of "shelf registration," a method of registering securities on an ongoing basis, the process became much quicker for mortgage-backed securities ranked in the highest grades by the rating agencies. The process allowed issuers to file a base prospectus with the SEC, giving investors notice that the issuer intended to offer securities in the future. The issuer then filed a supplemental prospectus describing each offering's terms. "The elephant in the room is that we didn't review the prospectus supplements," the SEC's deputy director for disclosure in corporation finance, Shelley Parratt, told the FCIC.[79] To improve disclosures pertaining to mortgage-backed securities and other asset-backed securities, the SEC issued Regulation AB in late 2004. The regulation required that every prospectus include "a description of the solicitation, credit-granting or underwriting criteria used to originate or purchase the pool assets, including, to the extent known, any changes in such criteria and the extent to which such policies and criteria are or could be overridden."[80]

With essentially no review or oversight, how good were disclosures about mortgage-backed securities? Prospectuses usually included disclaimers to the effect that not all mortgages would comply with the lending policies of the originator: "On a case-by-case basis [the originator] may determine that, based upon compensating factors, a prospective mortgage not strictly qualifying under the underwriting risk category or other guidelines described below warrants an underwriting exception."[81] The disclosure typically had a sentence stating that "a substantial number" or perhaps "a substantial portion of the Mortgage Loans will represent these exceptions."[82] Citigroup's Bowen criticized the extent of information provided on loan pools: "There was no disclosure made to the investors with regard to the quality of the files they were purchasing."[83]

Such disclosures were insufficient for investors to know what criteria the mortgages they were buying actually did meet. Only a small portion—as little as 2% to 3%—of the loans in any deal were sampled, and evidence from Clayton shows that a significant number did not meet stated guidelines or have compensating factors.[84] On

MACROECONOMIC EFFECTS OF RISK RETENTION REQUIREMENTS

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FINANCIAL STABILITY OVERSIGHT COUNCIL

Completed pursuant to Section 946 of the Dodd-Frank Wall Street Reform and Consumer Protection Act

January 2011

CONTENTS

I. EXECUTIVE SUMMARY

Section 941[1] of the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act" or the "Act")[2] imposes credit risk retention ("risk retention") requirements, under which securitizers, and, in certain circumstances, originators[3] of asset-backed securities ("ABS") must retain not less than 5 percent of the credit risk for any asset unless the asset is a Qualified Residential Mortgage or the originator of the asset meets underwriting standards that the Agencies[4] will jointly prescribe.

Under Section 946 of the Dodd-Frank Act, the Chairman of the Financial Stability Oversight Council (the "Council") is required to conduct a study on the macroeconomic effects of the risk retention requirements under Subtitle D of Title IX of the Dodd-Frank Act, with emphasis placed on potential beneficial effects with respect to stabilizing the real estate market, and issue a report to Congress no later than 180 days after the date of enactment of the Dodd-Frank Act.[5]

This study makes the following conclusions:

- Securitization is an important source of credit formation to the economy, but certain risks of securitization contributed to the financial crisis and macroeconomic instability;
- Risk retention, if properly structured, can address some of these inherent risks by requiring an originator or securitizer to have ongoing exposure to the credit risk of the underlying assets; and
- There are macroeconomic implications of securitization and risk retention; to the extent that risk retention can incent better lending decisions, it may help to mitigate some of the pro-cyclical effects securitization may have on the economy.

This study also offers several principles and recommendations that should inform the design of a risk retention framework so as to strengthen the securitization process and facilitate economic

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[1] Section 941 of the Dodd-Frank Act adds a new section 15G to the Securities Exchange Act of 1934, as amended (the "Exchange Act"), which is codified at 15 U.S.C. § 78o-11.

[2] Pub. L. No. 111-203, 124 Stat. 1376 (2010).

[3] Section 941 of the Dodd-Frank Act defines (i) a securitizer as "(A) an issuer of an asset-backed security; or (B) a person who organizes and initiates an asset-backed securities transaction by selling or transferring assets, either directly or indirectly, including through an affiliate, to the issuer," 15 U.S.C. § 78o-11(a)(3), and (ii) an originator as a person who "(A) through the extension of credit or otherwise, creates a financial asset that collateralizes an asset-backed security; and (B) sells that asset directly or indirectly to a securitizer," 15 U.S.C. § 78o-11(a)(4).

[4] The Federal Deposit Insurance Corporation ("FDIC"), the Office of the Comptroller of the Currency ("OCC"), the Board of Governors of the Federal Reserve System (the "Board"), and the Securities and Exchange Commission ("SEC"), must jointly prescribe rules on risk retention under Section 941 no later than 270 days following the date of enactment. Exchange Act, Section 15G(b). The statute also requires the Federal Housing Finance Agency ("FHFA") and the Department of Housing and Urban Development ("HUD"), along with the foregoing Agencies to jointly prescribe rules on risk retention with respect residential mortgages and defining the Qualified Residential Mortgage. This study refers to the FDIC, the OCC, the Board, the SEC, the FHFA, and HUD collectively as the "Agencies."

[5] The Chairman of the Council is responsible for the content of this report. In preparing this report, the Chairman consulted with the Agencies.

growth by allowing market participants to price credit risk more accurately and allocate capital more efficiently.

* * * * *

Over the past forty years, asset-backed securitization has become an increasingly important source of credit formation for the economy. Securitization offers many benefits, including increased liquidity, expanded credit availability, and reduced cost of credit. Without proper safeguards, however, securitization can introduce significant risks to financial markets and to the economy. The securitization process involves multiple parties with varying incentives and information, thereby breaking down the traditional direct relationship between borrower and lender. The party setting underwriting standards and making lending decisions (the originator) and the party making structuring decisions (the securitizer) are often exposed to minimal or no credit risk. By contrast, the party that is most exposed to credit risk (the investor) often has less influence over underwriting standards and may have less information about the borrower. As a result, originators and securitizers that do not retain risk can, at least in the short run, maximize their own returns by lowering loan underwriting standards in ways that investors may have difficulty detecting. The originate-to-distribute model, as it was conducted, exacerbated this weakness by compensating originators and securitizers based on volume, rather than on quality.

The academic literature provides evidence that mortgage-backed securitization contributed to a decline in underwriting standards during the mid-2000s, facilitating an over-supply of excessively risky mortgages. There is also evidence that the expansion of mortgage supply through securitization helped accelerate price increases in the housing market to unsustainable levels and, therefore, contributed to the ensuing decline in housing prices and the economy.

To address the problems in the financial system that contributed to the financial crisis, Congress enacted the Dodd-Frank Act in July 2010. The Dodd-Frank Act's reforms to the securitization market include greater transparency for investors, measures to mitigate conflicts of interest at credit ratings agencies, and the credit risk retention requirements in Section 941.

This study discusses the potential design of a risk retention framework. Such a framework should seek to meet the following objectives: (i) align incentives without changing the basic structure and objectives of securitization transactions; (ii) provide for greater certainty and confidence among market participants; (iii) promote efficiency of capital allocation; (iv) preserve flexibility as markets and circumstances evolve; and (v) allow a broad range of participants to continue to engage in lending activities, while doing so in a safe and sound manner. A risk retention framework can be structured in a number of ways to meet these objectives. The form of risk retention, allocation of risk retention to various participants in the securitization chain, amount of risk retention, allowances for risk management, and exemptions from risk retention are all important variables in the design of any such framework.

Although a risk retention framework can help align incentives and improve underwriting standards, the macroeconomic implications of risk retention are complex. A risk retention

framework can incent better lending decisions and consequently help strengthen the quality of assets underlying a securitization. It may also help mitigate some of the pro-cyclical effects that asset-backed securitization can have on the economy. However, if overly restrictive, risk retention could constrain the formation of credit, which could adversely impact economic growth. The challenge is to design a risk retention framework that maximizes benefits while minimizing its costs.

As the recent financial crisis demonstrates, securitization, without appropriate reforms, can cause significant harm to the economy. Risk retention can help align the interests of the participants in the securitization chain, reduce the risks inherent in securitization, and promote the stable formation of credit and efficient allocation of capital in the United States.

II. THE STATUTORY MANDATE

In addition to the general mandate to study the macroeconomic effects of risk retention, Section 946 calls for the study to include an analysis of the macroeconomic effects of risk retention on real estate asset price bubbles. The statute also calls for consideration of the feasibility of minimizing bubbles by proactively adjusting risk retention requirements and minimum underwriting standards; whether such adjustments should be formulaic or discretionary; and, how such adjustments should be coordinated with monetary policy. Specifically, Section 946 requires:

> *(1) an analysis of the effects of risk retention on real estate asset price bubbles, including a retrospective estimate of what fraction of real estate losses may have been averted had such requirements been in force in recent years;*
>
> *(2) an analysis of the feasibility of minimizing real estate price bubbles by proactively adjusting the percentage of risk retention that must be borne by creditors and securitizers of real estate debt, as a function of regional or national market conditions;*
>
> *(3) a comparable analysis for proactively adjusting mortgage origination requirements;*
>
> *(4) an assessment of whether such proactive adjustments should be made by an independent regulator, or in a formulaic and transparent manner;*
>
> *(5) an assessment of whether such adjustments should take place independently or in concert with monetary policy; and*
>
> *(6) recommendations for implementation and enabling legislation.*

Several points should be noted about the scope of this study.

First, the study discusses the pro-cyclicality of credit with respect to asset-backed securitizations and the potential for risk retention requirements to minimize this pro-cyclicality. The study does not provide a specific quantitative assessment of the fraction of real estate losses that might have been averted, because the risk retention rules under Section 941 have not yet been issued, and thus cannot be retrospectively considered. Moreover, sufficient data are not available to make such an estimate possible. Instead, the study provides a broad assessment of the macroeconomic impact of risk retention on real estate bubbles and economic cyclicality.

Second, the academic literature on risk retention with respect to asset-backed securitization is limited. Moreover, available information is insufficiently robust to allow for a quantitative comparable analysis for proactively adjusting mortgage origination requirements, an assessment of formulaic adjustments to such requirements, or a quantitative evaluation as to whether any adjustments should be made independently or in concert with monetary policy. However, the study reviews benefits and drawbacks to adjusting risk retention regulation over time.

Third, the study's evaluation of the macroeconomic implications of risk retention is confined to the existing literature and available data. Future studies could include more original research and make more specific quantitative assessments with respect to the aforementioned questions.

The analysis presented in this study should serve to inform the rule writing process currently underway by the Agencies. It may also help to create a risk retention framework that will allow markets to allocate capital efficiently to American businesses, consumers and homeowners in a sustainable fashion, facilitate economic growth and promote financial stability.

III. SECURITIZATION AND ITS MACROECONOMIC EFFECTS

DEVELOPMENT OF THE SECURITIZATION MARKET

Securitization is the process through which a security is created that gives investors a right to the cash flows generated by (and frequently, a security interest in) a pool of loans or other financial assets. Typically, securitizations are created with the intent to sell part or all of the securities to third-party investors.

Since the first securitization of residential mortgages in 1970,[6] the asset-backed securitization market has become an important mechanism for credit formation. Prior to the advent of securitization, funding through the capital markets for many borrowers was more limited. By providing access to the capital markets, securitization has improved the availability and affordability of credit to a diverse group of businesses, consumers, and homeowners in the United States.

Much of the initial securitization issuance was backed by residential mortgages, which had guarantees from the Government National Mortgage Association ("Ginnie Mae") or the Government Sponsored Enterprises ("GSEs").[7] Early securitizations typically employed a "pass-through" structure, whereby principal and interest collected on the assets are "passed through" on a *pro rata* basis to the security holders.[8]

Over time, asset-backed securitization market participants expanded into other asset classes and began to create more complex structures. The sophistication of securitization structures has allowed products to be tailored to meet a variety of demands, such as investor risk and duration appetites as well as differences in asset classes. Tranches of securitizations (e.g., through senior-subordinated structures) can be used to create investments with different cash flow or loss absorption characteristics.

Starting in the mid-1980s, these concepts were applied to the securitization of non-residential mortgage assets, including commercial mortgages, credit cards, auto loans and leases, student loans, business loans, equipment loans and leases, and dealer floorplans.[9]

In addition, securitizers also developed resecuritizations, in which a securitizer uses the cash flows of previously securitized assets as the base for a new securitization. Resecuritizations

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[6] The Government National Mortgage Association ("GNMA" or "Ginnie Mae") issued the first mortgage-backed security in 1970.

[7] For purposes of this study, the term Government Sponsored Enterprises ("GSEs") refers to Federal National Mortgage Association ("FNMA" or "Fannie Mae") and the Federal Home Loan Mortgage Corporation ("FHLMC" or "Freddie Mac").

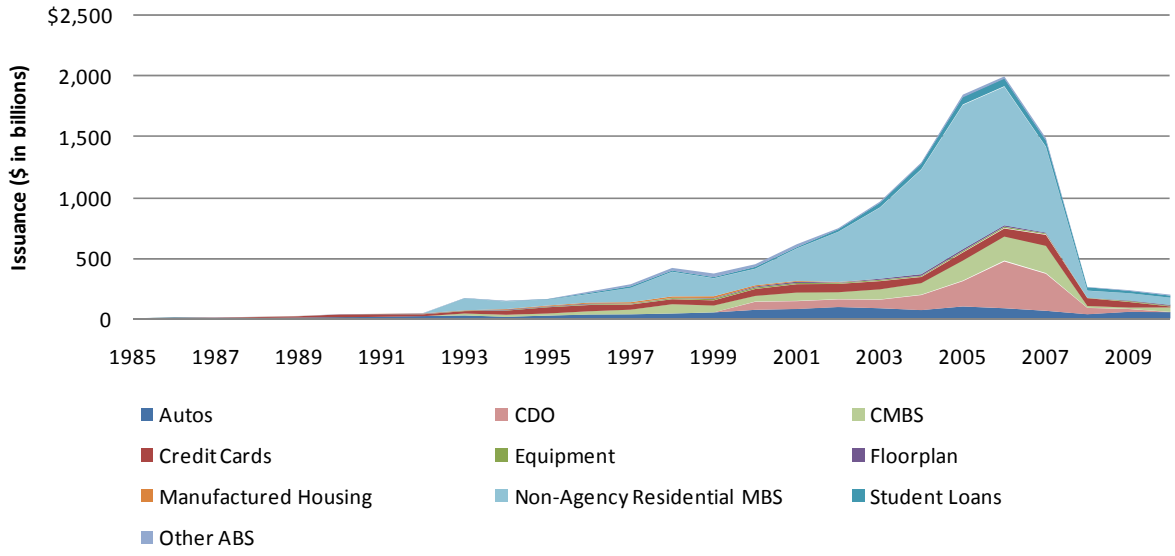
[8] The original securitization market consisted of "agency" securities of pooled residential mortgages, with the payments of interest and principal guaranteed by Ginnie Mae, Fannie Mae or Freddie Mac.

[9] Board of Governors of the Federal Reserve System, *Report to the Congress on Risk Retention* (October 2010).

allowed securitizers to finance higher risk assets that might be otherwise difficult to sell, or to benefit from the higher rating attributed to a portion of the structure.[10]

As a result of this increase in demand and financial innovations, total securitization issuance increased over time in all asset classes, particularly in those backed by residential assets (*see* Figure 1). This chart shows that although commercial asset-backed securitization issuance (such as autos and credit cards) increased from the mid-1990's through the run-up to the financial crisis, it did not increase to the same extent as residential mortgage asset-backed issuance, particularly for lower credit quality instruments such as subprime and Alt-A residential mortgage securitizations.

Figure 1: Total Asset-Backed Securitization Issuance by Year[11]



The asset-backed securitization market became an important source for credit intermediation in part because it offers investors a number of benefits that improved efficiency and contributed to a lower cost of credit. Investors in asset-backed securities can efficiently diversify the credit risks to which they are exposed because the securitized loan pools are diverse with respect to a number of characteristics, including by borrower, property, and geography. Asset-backed securities thus provide an additional source of credit for businesses, consumers, and homeowners beyond the traditional banking sector. Further, asset-backed securitization can legally isolate the

[10] Certain structures, commonly referred to as CDOs, or CDO^2 (Collateralized Debt Obligations Squared) if a securitizer created a structured asset from another CDO, further increased the complexity and elongated the chain between originator and investor.

[11] Source: Inside MBS & ABS, "Mortgage and Asset Securitizations Issuance" (January 7, 2011), Copyright Inside Mortgage Finance Publications (for Non-Residential MBS issuance data) and J.P. Morgan Securities LLC (for all other asset class issuance data). Data does not include GSE mortgage issuance. The category "Other ABS" includes stranded asset, RV, boat, consumer, EETC, and small business loans.

underlying financial assets from the originator and securitizer. Legal isolation provides investors with enhanced protections in the event of a bankruptcy of one or more of these parties and also reduces the need to perform due diligence on the credit risk of the originator or securitizer.[12] In addition, the structuring of securitized interests (e.g., through senior-subordinated structures) can create investments with particular credit and interest rate risk profiles that can match investors' risk appetites.

Securitization also allows financial institutions to manage their credit, funding, and liquidity risk more actively, and to increase lending activity because securitization allows them to sell the assets and their risks to third parties. Therefore, their exposure to interest rate and liquidity risks is reduced because securitization allows financial institutions to limit such risks by more appropriately matching the duration of their assets and liabilities (often referred to as "term funding"). Moreover, asset-backed securitization allows non-bank lenders to originate at competitive prices without deposit funding, thereby reducing barriers to entry and increasing lending competition.

Alongside the benefits, the securitization process has certain fundamental weaknesses. By separating the borrower and lender, securitization can create informational and incentive asymmetries. If incentives are not well-aligned, then information asymmetries may lead one party to maximize its return at the expense of other parties, particularly borrowers and investors. For instance, academic literature has identified at least seven important types of frictions in the residential mortgage securitization chain, which can cause agency and adverse selection problems in a securitization transaction.[13]

One important informational friction highlighted during the recent financial crisis has aspects of a "lemons" problem that exists between the issuer and investor.[14] An originator has more information about the ability of a borrower to repay than an investor, because the originator is the party making the loan. Because the investor is several steps removed from the borrower, the investor may receive less robust loan performance information. Additionally, the large number of assets and the disclosures provided to investors may not include sufficient information on the quality of the underlying financial assets for investors to undertake full due diligence on each asset that backs the security.

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[12] Typically, the U.S. securitization market relies on separate legal entities – or special purpose vehicles ("SPVs") – which is legally separated from the sponsoring entity. This provides securitization investors protection in circumstances where the sponsoring or originating entity enters insolvency proceedings.

[13] *See* A. Ashcraft and T. Schuermann, "Understanding the Securitization of Subprime Mortgage Credit," *Foundations and Trends in Finance*, vol. 2, no. 3 (2008) for a discussion of information asymmetries in the case of subprime mortgages.

[14] M. Jensen and W. Meckling, "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure," *Journal of Financial Economics*, vol. 3, no. 4 (1976); G. Gorton and G. Pennacchi, "Banks and Loan Sales: Marketing Nonmarketable Assets," *Journal of Monetary Economics*, vol. 35, no.3 (1995).

SECURITIZATION'S ROLE IN THE FINANCIAL CRISIS

Although securitization provides many benefits to lenders and borrowers, it also played a significant role in the recent financial crisis. The financial crisis brought to the surface certain inherent problems in the securitization process, including misaligned incentives of participants and informational asymmetries. These problems may have exacerbated the pro-cyclicality of lending, resulting in unsustainable increases in asset prices.

The issuance of asset-backed securities expanded significantly in the lead-up to the financial crisis, particularly for residential and commercial mortgages. This growth accommodated investor demand for highly rated asset-backed securities, which over time became increasingly complex. Additional demand for the junior tranches of the highly rated residential mortgage-backed securities ("RMBS") and commercial mortgage-backed securities ("CMBS") began to grow as such tranches were increasingly distributed as components of other structured products such as collateralized debt obligations ("CDOs").[15]

To satisfy the growing investor demand for loans, particularly mortgages, to serve as collateral for structured products, originators and securitizers increasingly relied upon an originate-to-distribute model in which originators sold their loans to securitizers, who then sold securities backed by these loans to investors. This model helped facilitate a rapid increase in origination and securitization of subprime and Alt-A loans beginning in the early 2000s, as a large and increasing portion of such loans were being securitized and sold to investors, rather than held as whole loans on the balance sheets of originators. For example, between 2001 and 2006, the ratio of securitized issuance to origination increased from 46 percent to 81 percent and the market share of subprime and Alt-A originations increased from 11 percent to 40 percent (*See* Figure 2 below).

[15] M. Adelson and D. Jacob, "The Sub-prime Problem: Causes and Lessons," unpublished mimeo (2008) discusses of the role of CDOs in the crisis. Others argue that "ratings arbitrage" was an important motivation for mortgage securitization in this period. J. Coval, Jurek. J, and E. Stafford, "The Economics of Structured Finance," *Journal of Economic Perspectives*, vol. 23, no.1 (2009) and M. Brennan, Hein, J. and S. Poon, "Tranching and Rating," unpublished mimeo (2009).

Figure 2: Origination and Issuance of Agency and Non-Agency Mortgage Loans[16]

($ in billions)

	Subprime / Alt-A			Prime Jumbo			Conforming		
Year	Origination	Issuance	Ratio	Origination	Issuance	Ratio	Origination	Issuance	Ratio
2001	$215	$98	46%	$445	$142	32%	$1,265	$915	72%
2002	267	176	66%	571	172	30%	1,706	1,270	74%
2003	395	269	68%	650	238	37%	2,460	1,912	78%
2004	715	521	73%	515	233	45%	1,210	892	74%
2005	1,005	797	79%	570	281	49%	1,092	879	81%
2006	1,000	814	81%	480	219	46%	990	817	83%
2007	466	433	93%	347	178	51%	1,162	1,062	91%
2008	64	2	3%	97	7	7%	920	900	98%
2009	10	0	0%	92	0	0%	1,185	1,107	93%

In the originate-to-distribute model, originators receive significant compensation upfront without retaining a material ongoing economic interest in the performance of the loan. This reduces the economic incentive of originators and securitizers to evaluate the credit quality of the underlying loans carefully. Some research indicates that securitization was associated with lower quality loans in the financial crisis. For instance, one study found that subprime borrowers with credit scores just above a threshold commonly used by securitizers to determine which loans to purchase defaulted at significantly higher rates than those with credit scores below the threshold.[17] By lowering underwriting standards, securitization may have increased the amount of credit extended, resulting in riskier and unsustainable loans that otherwise may not have been originated.

As the originate-to-distribute model became more pervasive, underwriting criteria weakened more broadly. This deterioration was particularly prevalent with respect to the verification of the borrower's income, assets, and employment for residential real estate loans, and in the measurement of net operating income for commercial real estate loans. Originators began to use non-traditional loan products (e.g., negative amortization loans, interest-only periods, and teaser rates) that were designed to reduce the initial monthly loan payment. Additionally, predatory lending became a problem as financial products became too complex or inappropriate for certain borrowers.

In theory, aggressive underwriting should have been held in check by market discipline. However, recent experience suggests that there was an over-dependence on credit ratings by investors as well as other weaknesses in risk management practices. There were incentive problems with respect to credit rating agencies ("CRAs") in the issuer-pay model.[18] Further, the

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[16] Source: *2010 Mortgage Market Statistical Annual* published by Inside Mortgage Finance Publications, Inc. www.imfpubs.com. Copyright 2010. Conforming data includes conventional conforming mortgages and Fannie/Freddie MBS excluding pools with average loan age over 3 months.

[17] B. Keys, T. Mukherjee, A. Seru, and V. Vig, "Did Securitization Lead to Lax Screening? Evidence from Subprime Loans," *Quarterly Journal of Economics*, vol. 125, no.1 (2010).

[18] P. Bolton, X. Freixas, and J. Shapiro, "The Credit Ratings Game," NBER Working Paper No. 14712 (2008); J. Fons, "White Paper on Rating Competition and Structured Finance," unpublished mimeo (2008); J. Fons, "White Paper on Rating Competition and Structured Finance,"

turmoil has raised questions about the effectiveness of CRAs' assessment of risks in the rating of complex financial products.[19] Among the factors that may have contributed to poor ratings performance of structured finance products are an underestimation of the severity of a housing market downturn and model risk aggravated by limited historical data.[20]

In conjunction with the many other drivers that led to the bubble in home prices, the increased use of securitization may have contributed to home price appreciation by increasing the supply of mortgage credit. The expansion of subprime mortgage credit was closely correlated with an increase in securitization of subprime mortgages, and there is some evidence that the increased supply in subprime mortgage credit was in part responsible for greater home price appreciation.[21] Further, subprime mortgage products were often structured under the assumption that home prices would continue to rise. Accordingly, increases in home prices may have reinforced expectations for future appreciation, which may have fueled more lending. Increases in loan volume, in turn, may have precipitated further increases in home prices.[22]

To the extent that securitization contributed to a bubble in home prices, it also contributed to a larger drop in home prices once the bubble burst. The decline in home values tightened the supply of credit because the value of collateral declined, thus raising the cost of credit for borrowers who use housing as collateral.[23]

In addition to residential lending, securitization may have also contributed to the contraction in credit seen in other asset classes, including non-real estate asset classes. As the market became aware of the risks associated with the subprime market, there were doubts about the value of securities backed by subprime mortgages. Research has indicated that many large financial institutions were using subprime asset-backed securities to collateralize short-term borrowings. As the value of the collateral was called into question, it became harder for the banks to maintain access to their short-term liquidity.[24] This in turn may have caused the market to doubt the solvency of these institutions, which resulted in a further contraction in liquidity.

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unpublished mimeo (2008); V. Skreta, and L. Veldkamp, "Rating Shopping and Asset Complexity: A Theory of Ratings Inflation," *Journal of Monetary Economics*, vol. 56, no.5 (2008).

[19] While there is limited direct evidence on this point in the academic literature, recent work by Ashcraft, Vickery, and Goldsmith (2010) documents evidence that credit rating agencies reduced risk-adjusted subordination levels for non-agency RMBS deals during the recent MBS boom.

[20] The Committee on the Global Financial System ("CGFS"), Publication No. 32, "Role of Ratings in Structured Finance: What went wrong and what can be done to address the shortcomings?"

[21] A. Mian and A. Sufi, "The Consequences of Mortgage Credit Expansion: Evidence from the U.S. Mortgage Default Crisis," *Quarterly Journal of Economics*, vol. 124, no. 4 (2009).

[22] R. Shiller, *Irrational Exuberance* (Princeton, NJ: Princeton University Press, 2000).

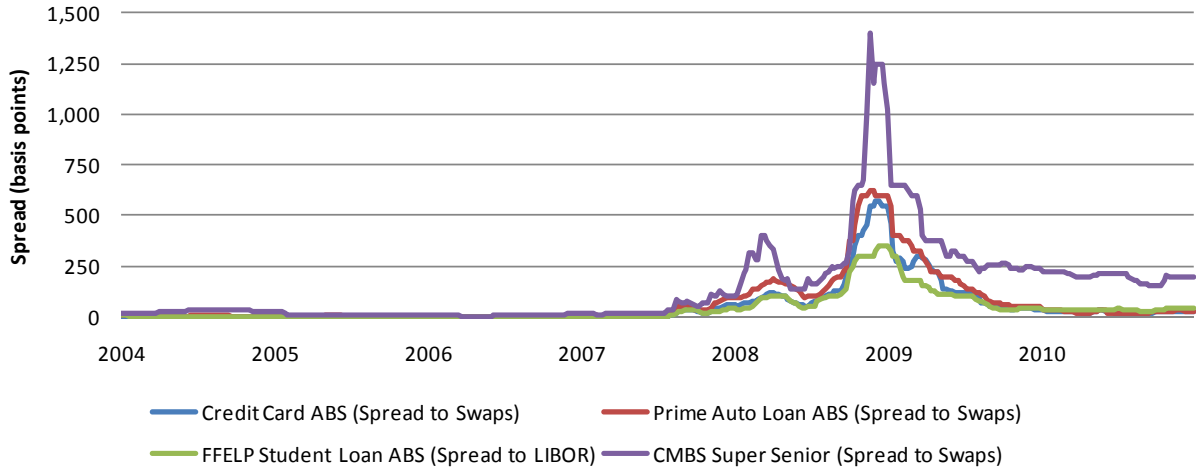
[23] N. Kiyotaki and J. Moore, "Credit Cycles," *Journal of Political Economy*, vol. 105, no. 2 (1997); B. Bernanke and M. Gertler, "Agency Costs, Net Worth, and Business Fluctuations," *American Economic Review*, vol. 79, no. 1 (1989).

[24] G. Gorton and A. Metrick, "Securitized Banking and the Run on Repo," working paper (2010).

These disruptions to individual financial institutions had a material impact on financial markets and macroeconomic conditions. Once a financial institution fails, there can be significant spillovers beyond the firm because the failure can spark contagion, in part due to declines in market liquidity.[25] For example, some evidence suggests that financial institutions that relied more heavily on short-term funding (such as borrowings collateralized by subprime asset-backed securities) reduced lending to the corporate sector to a greater extent during the crisis.[26]

During the financial crisis, the prices of asset-backed securities, such as those backed by auto loans, credit cards, student loans, loans to businesses, and loans secured by heavy equipment all fell dramatically and simultaneously.[27] For example, credit spreads on credit card, student loan, CMBS, and auto asset-backed securities widened during the financial crisis (*see* Figure 3). Further, the private new origination market slowed significantly or – for certain asset classes – stopped altogether. Credit spreads for some asset classes traded at levels over 300 times higher than their historical average, making new issuance uneconomical and constraining funding for credit in these markets to businesses, consumers and homeowners.

Figure 3: Illustrative ABS and MBS Spreads 2004 – 2010[28]



Asset-backed securities may have been particularly susceptible to sharp price declines, because the complexity of the securitization structure made these assets difficult for market participants to evaluate quickly. Additionally, perceptions regarding misaligned incentives in the securitization market caused market participants to become increasingly pessimistic about the

[25] D. Diamond and R. Rajan, "Liquidity Shortages and Banking Crises," *Journal of Finance*, vol. 60, no. 2 (2005).

[26] V. Ivashina and D. Scharfstein, "Bank Lending During the Financial Crisis of 2008," *Journal of Financial Economics*, vol. 97, no. 3 (2010).

[27] Board of Governors of the Federal Reserve System, *Report to the Congress on Risk Retention* (October 2010).

[28] Source: J.P. Morgan Securities LLC.

quality of the underlying collateral. At the outset, market participants did not have clarity about where the risks were greatest and which counterparties were most significantly exposed. The crisis was exacerbated by the fact that many of the investors in these instruments had not anticipated potential losses and had failed to manage their risk exposure appropriately.

The financial crisis was not the first time that markets for securitized products experienced significant disruptions. For example, significant losses in the franchise loan securitization market from 1996 to 1998 and the manufactured housing loan securitization market from 1994 to 1996 demonstrate that complex financial products and unchecked lending practices can lead to unsustainable credit formation.

As the crisis intensified, losses occurred throughout the securitization chain. Where originators held loans that had not yet been securitized and securitizers held loans or securities that had not yet been sold, these entities took losses. However, the primary losses were experienced by investors who held the asset-backed securities. The investor base in such securities was diverse, including pension funds, insurance companies, mutual funds, domestic and foreign banks, and hedge funds.

Taken as a whole, these problems illustrate that markets are unable, in certain circumstances, to align the incentives of parties in the securitization chain adequately. Moreover markets may not fully internalize the risks securitization can pose to financial and economic stability. Such weaknesses demonstrate the need for regulatory reforms.

IV. RISK RETENTION AND THE DODD-FRANK ACT

REGULATORY REFORMS TO SECURITIZATION

To prevent future crises and support greater stability in financial markets, Congress passed comprehensive financial reform legislation in July 2010.

The Dodd-Frank Act provides market participants and regulators with tools to address the underlying problems of securitization witnessed in the recent financial crisis. Many of these reforms rely on investors to enforce market discipline, but also recognize that regulatory oversight is necessary. These reforms include:

- Risk retention requirements;
- Credit rating agency reform and conflicts of interest;
- Improved transparency and issuer due diligence;
- Consumer protection; and
- Improved monitoring of systemic risks throughout the financial system.

For further details, *see* Appendix A.

In addition to the Dodd-Frank Act, there are other reform efforts underway. These reforms include accounting changes under Accounting Standards Codification ("ASC") Topic 860, *Transfers and Servicing* (commonly called FAS 166) and ASC Topic 810, *Consolidations* (commonly called FAS 167), and modifications to regulatory capital requirements under the Basel Accord. The accounting changes influence whether a securitizer must consolidate a securitization onto its balance sheet, which can affect the decision whether to securitize a pool of loans. The Basel Committee on Banking Supervision ("BCBS") has put forward a new framework, which seeks to improve the capital and liquidity position of banks. Included in these provisions are a number of measures that seek to ensure that sufficient capital is held against securitization exposures (*see* Appendix B).

The challenges in the asset-backed securitization market are not unique to the United States, and other countries are also implementing regulatory changes to address these challenges. For example, the European Parliament has recently adopted a set of reforms known as Article 122a

of the Capital Requirements Directive.[29] These rules require credit risk retention of 5 percent, which is similar to the baseline set forth in Section 941 of the Dodd-Frank Act.

RISK RETENTION AND ITS MACROECONOMIC EFFECTS

Credit risk retention (herein referred to as "risk retention") refers to the meaningful exposure to the credit risk of a securitization's underlying assets that cannot be removed, sold, or hedged for a specified period of time. This definition of risk retention does not include representations and warranties (i.e., the risk that the loans were not underwritten pursuant to stated policies and procedures). It also does not include interest rate risk, foreign exchange rate risk, or other types of market and macroeconomic risk that a securitizer might retain.

Risk retention requirements may reduce risks to financial stability arising from incentive and informational asymmetries between the investor and earlier securitization chain participants. They may also improve loan quality because participants might better internalize the costs of poor underwriting, as they must now hold a portion of the underlying risk. By aligning the incentive structure to reflect the incentives of traditional portfolio lending more closely, risk retention may help ensure that securitizers and originators are making prudent loans that are priced appropriately, as securitizers of these assets will want to be compensated for the risks they now must hold.

In principle, traditional bank lending alleviates problems typically associated with asymmetric information, because lenders have the proper incentives to screen and monitor borrowers.[30] However, these incentives depend on lenders retaining the risk associated with the loans they make.[31] By removing the credit risk, securitization may reduce an originator's incentives to properly underwrite and evaluate borrowers.

Consistent with those arguments, academic literature suggests that securities that have some form of risk retention may provide better incentives than securities without risk retention. A solution to a "lemons" problem is risk-sensitive compensation, often achieved by requiring the originator to have a stake in the outcome. During the run-up to the financial crisis, many investors did not take adequate account of these informational asymmetries, and therefore a "lemons" problem existed. It was only after asset performance began deteriorating that this problem became apparent.

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[29] Article 122a of the Capital Requirements Directive consists of two directives: (i) Directive 2006/48/EC of the European Parliament and of the Council of 14 June 2006 relating to the taking up and pursuit of the business of credit institutions (recast), known as the Banking Consolidation Directive ("BCD"); and (ii) Directive 2006/49/EC of the European Parliament and of the Council of 14 June 2006 on the capital adequacy of investment firms and credit institutions (recast), known as the Capital Adequacy Directive. Article 122a is part of the BCD.

[30] D. Diamond, "Financial Intermediation and Delegated Monitoring," *Review of Economic Studies*, vol. 51 (1984).

[31] G. Gorton and G. Pennacchi, "Banks and Loan Sales: Marketing Non-Marketable Assets," *Journal of Monetary Economics*, vol. 35, no. 3 (1995).

The academic literature on loan syndications has documented that retained share is used to reduce the importance of information asymmetries between lead managers and other syndicate members.[32] In particular, it indicates that retained share may have a larger impact on loan price for risky and opaque firms, where these frictions are likely to be important, and the ability to hedge retained share has an adverse impact on the supply of credit to these types of firms.[33] There is evidence that when the originator and the securitizer of Alt-A mortgage-backed securities were affiliated, the resulting securities were less likely to experience losses. This resulted, in part, because the originator was less likely to sell poorly underwritten assets to its own affiliate for securitization.[34]

To the extent that risk retention helps avoid deterioration in underwriting standards, it may help prevent a recurrence of the sort of credit expansion that led to the home price bubble in the recent financial crisis.

[32] A. Sufi, "Information Asymmetry and Financing Arrangements: Evidence from Syndicated Loans," *Journal of Finance*, vol. 62, no. 2 (2007).

[33] In particular, there is evidence that the onset of credit default swap ("CDS") trading, which permits the lead manager to hedge its exposure without knowledge of other members, has had an adverse impact on the supply of credit to opaque and risky corporate borrowers. *See* A. Ashcraft and J. Santos, "Has the CDS market lowered the cost of corporate debt?" *Journal of Monetary Economics*, no.56, no.4 (2009).

[34] C. Demiroglu and C. James, "Works of Friction? Originator-Sponsor Affiliation and Losses on Mortgage-Backed Securities," University of Florida working paper (2009).

V. ESTABLISHING A FRAMEWORK FOR RISK RETENTION

PRINCIPLES

As the Agencies promulgate regulations for risk retention as required by Section 941, they should seek to develop a framework that will balance the benefits of risk retention against its potential costs — incentivizing originators and securitizers to be conscious of the risk in the underlying assets that they are originating or distributing, while not unduly raising the cost of credit. Any framework should serve to mitigate the misalignment of incentives, asymmetric information, and macroeconomic risks associated with securitization, and simultaneously promote a robust securitization market that can continue to provide credit to businesses, consumers and homeowners in the United States. Because such regulations will apply to a variety of assets and securitization structures, there are multiple approaches that the Agencies can consider in executing the statutory requirements. Such a framework should seek to achieve the following:

- ***Align incentives***. Asset-backed securitization developed because it provides specific risk transfer benefits and loweres the cost of credit, in addition to being a source of term funding. By reducing risk and better aligning incentives, risk retention can improve loan quality and underwriting standards, but preserve the benefits of risk and capital transfer.

- ***Provide greater certainty and confidence among market participants***. A risk retention framework that provides clear rules can help market participants accurately price risk.

- ***Promote efficiency of capital allocation***. Risk retention can promote more efficient allocation of capital across the economy because it can help prevent excess credit flows at excessively low interest rates that do not accurately reflect the risks of assets.

- ***Preserve flexibility as markets and circumstances evolve***. The framework can take into account the changing nature of markets and future innovations.

- ***Allow a broad range of participants to continue to engage in lending activities, while doing so in a safe and sound manner***. Implementation that takes into account unique aspects of smaller originators and securitizers can preserve a robust and competitive securitization market.

While risk retention offers many potential benefits, it is one of many reforms. It cannot address all problems in the securitization chain, and will work in conjunction with other reforms. Moreover, risk retention may be more suitable in some circumstances than others, depending on the specific nature of the underlying financial assets.

CONSTRUCTING A ROBUST RISK RETENTION FRAMEWORK

There are a number of factors to consider when evaluating how to implement a risk retention framework. The spectrum of options includes the following:

- ***Form of risk retention***. There are several different forms of risk retention that one could consider in developing a framework. While there are many variations, the general forms include: a vertical slice (a *pro rata* piece of every tranche), a horizontal slice (a first loss interest in the securitization structure), or an equivalent exposure of the securitized pool (retaining a random selection of assets from the pool).

- ***Allocation of risk retention***. The point along the securitization chain where risk retention is held also affects the outcome of the risk retention requirements. Section 941 places the primary responsibility for retaining risk on the securitizer, but the originator, and in some cases other participants, could be permitted to hold this exposure. Whether the exposure is held or shared among different entities can also drive different incentives.

- ***Amount of risk retention***. A framework could employ a static amount of risk retention, whereby the amount of exposure does not vary across asset classes, asset quality or economic cycle. Alternatively, the framework could allow for variations. Thus, the amount of risk retention could be a function of time and / or a function of asset characteristics.

- ***Hedging, prevention of arbitrage, and allowance for risk management***. Specific hedging of the risk retention required by Section 941 is prohibited by the Dodd-Frank Act, and any framework should seek to minimize arbitrage opportunities. However, it is also important for financial institutions to manage their other risks for safety and soundness purposes. Therefore, the framework should seek to prohibit the transfer or hedging of the specific credit risk required to be retained, but allow firms to manage other risks, such as interest rate, foreign exchange, and macroeconomic risks.

- ***Exemptions from risk retention.*** A risk retention framework could include the ability to exempt higher quality assets meeting rigorous underwriting standards. In addition to the required exemptions for the QRM and other asset classes, the framework could exempt securitizers from holding the credit risk of higher quality assets that meet additional product, underwriting, and other standards that tend to decrease credit risk.

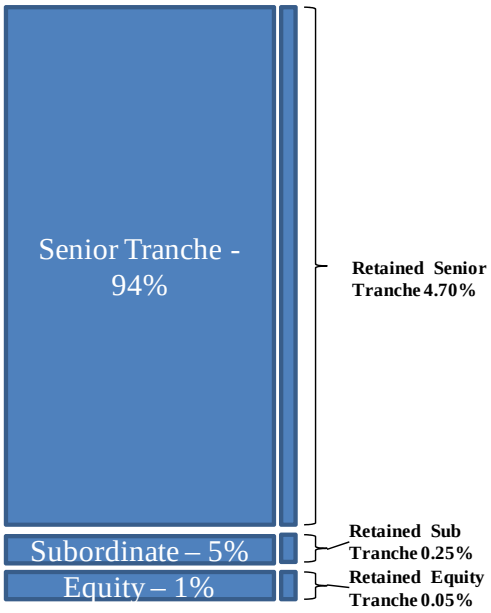
The choices that the Agencies make in establishing and implementing a framework must balance macroeconomic risks with the availability and cost of credit, as discussed later in this study.

FORM

In constructing a framework for risk retention requirements, a securitizer could be required to employ a particular form of risk retention or allowed to choose from a list of permitted choices. The primary choices could include: (i) vertical risk-retention: retention of a *pro rata* economic interest in the credit risk of the securitization; (ii) horizontal risk-retention: retention of a first loss interest in the securitization; and (iii) representative sample: retention of a subset of assets that are selected randomly from the original pool intended to be securitized that has credit risk characteristics similar to those of the securitized assets.

VERTICAL *(PRO RATA)* RISK RETENTION

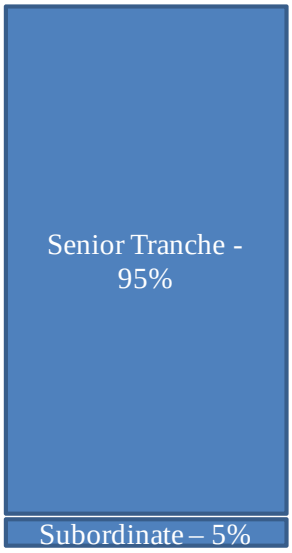
Vertical risk retention requires the retention of a *pro rata* economic interest in the credit risk of the securitization, equivalent to retaining a *pro rata* portion of each tranche. For example, a five percent risk retention for a three-tranche securitization comprised of a 94 percent (or $94) senior tranche, a 5 percent (or $5) subordinate tranche and a 1 percent (or $1) equity tranche would be equal to a total of $5, comprised of retention of $4.70 of the senior tranche (5 percent of $94), $0.25 of the subordinate tranche (5 percent of $5), and $0.05 of the equity tranche (5 percent of $1). As shown in this example, vertical risk retention allocates the risk of loss through the entire securitization.



HORIZONTAL (FIRST LOSS) RISK RETENTION

Horizontal risk retention involves the retention of the first loss credit risk. This typically involves the allocation of all losses on the securitized assets until the par value of the first

loss position is reduced to zero. Horizontal risk retention is graphically depicted below in simplified form:



In the above example, a securitizer with a 5 percent horizontal risk retention requirement would hold this horizontal piece as a subordinated tranche or tranches. By placing the securitizer in the first loss position, any losses in excess of those projected (and implicitly priced) at origination will first affect the subordinate tranche holder, until the losses exceed the subordination provided by the horizontal risk retention.

EQUIVALENT EXPOSURE

A potential third form of risk retention involves the securitizer retaining on its balance sheet a representative sample of all the assets that are transferred to the issuing entity. To do so, the securitizer would need to select a random sample of assets that comprises a percentage of the unpaid principal balance of entire pool from the pre-defined pool of assets designated for potential securitization.

To ensure that the loans retained have a similar credit risk to those securitized, a number of protections would likely have to be put in place.

ALLOCATION

The point in the securitization chain where risk retention is held can affect incentive alignment differently. In traditional lending, the originator of credit typically holds a loan on its balance sheet, thereby retaining all, or a significant share, of the risks associated with the loan. The risk retention requirements discussed above could be imposed on various

participants in the securitization chain to adjust incentives.[35] Understanding the role and incentives of each major participant in the securitization chain can drive different choices in implementation of risk retention.

SECURITIZER

Section 941 defines a securitizer as "(A) an issuer of an asset-backed security; or (B) a person who organizes and initiates an asset-backed securities transaction by selling or transferring assets, either directly or indirectly, including through an affiliate, to the issuer." The securitizer oversees the creation and sale of the securities backed by loans purchased from originators. This process has several components, which may sometimes be divided among separate firms, although this study generally treats them as if carried out by a single entity.

The securitizer performs the legal and economic functions required for a securitization, including reviewing loan documents and origination standards, handling any required registration of offer and the sale of asset-backed securities with the SEC if a public offering is initiated. The securitizer or underwriter engages one or more credit rating agencies to analyze the transaction and assign ratings to securities that reflect the securities' likelihood of default and expected loss given default. Finally, the securitizer hires an investment bank as an underwriter to market the securities. For many ABS transactions, the underwriter and the securitizer are affiliated entities.

Because the securitizer is a primary decision point for assets being securitized, application of risk retention requirements to the securitizer can be an effective way of creating an incentive for the monitoring of the credit quality of the assets it securitizes (regardless of the identity of the originator).

ORIGINATOR

Section 941 defines an originator as a person who "(A) through the extension of credit or otherwise, creates a financial asset that collateralizes an asset-backed security; and (B) sells that asset directly or indirectly to a securitizer." An originator makes the initial decision about whether, and on what terms, to extend credit to a business, consumer or homeowner and often provides initial short-term funding. Originators include banks, thrifts, subsidiaries of bank or thrift holding companies, independent finance companies, and finance companies affiliated with vehicle, equipment, or other types of manufactures.

[35] Further, Section 941 requires that the rules shall provide for "the allocation of risk retention obligations between a securitizer and an originator in the case of a securitizer that purchases assets from an originator, as the Federal banking agencies and the Commission jointly determine appropriate." 15 U.S.C. § 78o-11(c)(1)(G)(iv). In doing so, the percentage of risk retention required to be held by the securitizer must be reduced by the percentage retained by the originator. 15 U.S.C. § 78o-11(d)(1).

The originator may securitize the loans directly or sell them to an aggregator that may buy loans from many different originators. Aggregators are intermediaries between originators and securitizers, and loans may pass through several such parties' hands before being securitized.

Ultimately, having an originator retain an economic interest in the securitization can improve its incentives to originate high quality assets. To the extent the originator has ongoing responsibilities, risk retention can better align incentives with the investor.

THIRD-PARTIES

CMBS TRANSACTIONS

Section 941 prescribes that for securities backed by commercial mortgages, the Agencies may adopt rules regarding the "retention of the first-loss position by a third-party purchaser that specifically negotiates for the purchase of such first loss position, holds adequate financial resources to back losses, provides due diligence on all individual assets in the pool before the issuance of the asset-backed securities, and meets the same standards for risk retention as the Federal banking agencies and the Commission require of the securitizer."

Section 941 thus explicitly contemplates that the Agencies could determine that a first-loss exposure by a third-party purchaser, under certain conditions, could satisfy the risk retention requirements. In CMBS, the most junior tranche (commonly referred to as the "B piece") is usually purchased by a commercial real estate specialist that focuses on understanding and managing the credit risk associated with this junior tranche. In many cases, these buyers are the "special servicers," or servicers tasked to manage loans that become troubled during the life of the transaction. These parties usually conduct due diligence on individual loans and / or properties while the securitization is being assembled, and may have more information than other investors about the quality of the underlying pool of assets.

THIRD-PARTY CREDIT GUARANTORS

A risk retention framework could consider allowing a third party guarantor to satisfy risk retention requirements by taking part or all of the credit risk. The residential mortgage securitization market evolved to allow a number of third parties to provide external credit support, either to the underlying loans or the securities. Of particular note are Fannie Mae, Freddie Mac, the Federal Housing Administration (and other

government agencies), private mortgage insurance ("PMI") providers, and bond insurers.

AMOUNT

There are several choices in how to structure the amount of risk that should be retained for a particular securitization. This amount could be applied uniformly across all securitizations and across time. Alternatively, the amount could vary based on the quality and characteristics of the particular assets securitized and on the economic environment that exists at the time of securitization. Section 941 provides the Agencies with exemptive authority to make adjustments as they deem appropriate within guidelines provided by the statute.

There may be benefits in adjusting the amount of risk retention for different quality assets, as adjustments can more appropriately align risk retention with expected loss. For example, a 5 percent risk retention requirement may not be necessary for high quality assets. In other cases, 5 percent may not be sufficient to incent better underwriting standards for pools with higher expected loss. Some have suggested adjusting risk retention based on various metrics that reflect the expected performance of the underlying assets. Risk retention might also be adjusted over time in conjunction with economic cycles, a possibility that is addressed in more detail in Section VI.

On the other hand, a standardized rule applied uniformly may allow for greater transparency, measurability, and certainty of implementation. However, some metrics that adjust to reflect expected performance may not apply appropriately to all asset classes, and may be difficult to measure with confidence *ex ante*.

Therefore, when designing a risk retention framework, the benefits of better incenting actions by uniquely tailoring the amount of risk retention to the characteristics of an asset pool should be carefully balanced with the increased complexity and potential for regulators to set levels effectively.

HEDGING, PREVENTION OF ARBITRAGE, AND RISK MANAGEMENT

To improve effectiveness, risk retention should result in meaningful and continued exposure to the credit risk of the securitization. Therefore, without proper restrictions, the use of hedging and other arbitrage practices could ultimately undermine the goals of the Dodd-Frank Act risk retention requirements. On the other hand, the financial system benefits by allowing financial institutions to maintain robust risk management practices. Almost all financial institutions employ a risk department that oversees other risk taking parts of the firm to minimize the probability that external shocks and internal risk positions would cause

large losses due to unexpected market changes. Some of these institutions are also overseen by prudential regulators, who also have an interest in ensuring that financial institutions maintain safe and sound risk management practices.

Therefore, balancing the prohibition of hedging with the goal of allowing firms to manage their overall risk exposure will be important in aligning incentives and maintaining a safe and sound financial system. A risk retention framework, which itself is meant to reduce risks to financial stability, should not unduly prevent other types of risk mitigation.

EXEMPTIONS THROUGH UNDERWRITING STANDARDS

While risk retention is the focus of Section 941, it also requires, for certain asset classes, partial or total exemptions of asset-backed securities where the underlying loans meet strong underwriting policies and standards. In this regard, exemptions could take into account a borrower's history of debt repayment, the borrower's current and anticipated capacity to make debt payments, and the quality and value of the collateral securing repayment. Such exemptions, in combination with risk retention requirements, may further incent strong underwriting practices.

The Qualified Residential Mortgage ("QRM") as defined in Section 941 provides an exemption for residential mortgage loans that have underwriting and product features that historical loan performance data indicate result in a low risk of default.[36] Section 941 also requires that the standards for a QRM be no broader than the standards established for "Qualified Mortgages" as defined under Section 129C of the Truth in Lending Act.[37] Agencies are also required under Section 941 to prescribe underwriting standards for three non-residential asset classes: auto loans, commercial loans, and commercial mortgages. For loans originated under these standards, risk retention must be less than 5 percent. Implementation of exemptions based on underwriting standards could include:

- ***Explicit quantitative standards whereby clearly defined standards are set***. Under such a framework specific, standards and values could be established in which no loan could exceed in order to qualify under the exemption. For example, regulators could set a specific total debt-to-income ratio or loan-to-value ratio without exceptions.

- ***An automated underwriting model that allows for compensating factors*.** Under such a framework, a borrower's credit history could be offset with an increased down payment and lower loan-to-value ratio. Therefore, an automated underwriting model would not set

[36] 15 U.S.C. § 78o-11(e)(4).

[37] 15 U.S.C. § 78o-11(e)(4)(c).

a numerical value for any standard, but instead could provide a range of values with corresponding formulas that allow for different combinations of standards.

Both approaches have benefits and drawbacks. The first framework allows for simplicity, but may result in certain loans of creditworthy borrowers otherwise failing to qualify for an exemption. However, those borrowers may be able to obtain loans subject to the risk retention framework. The second framework, while potentially better able to account for creditworthiness due to offsetting factors, is much more complex and would place a material burden on regulators to create a full set of standards across many asset classes appropriately.

VI. ADJUSTING RISK RETENTION REQUIREMENTS

CALIBRATING RISK RETENTION REQUIREMENTS

Implementing risk retention requirements in the securitization process could potentially mitigate some of the destabilizing effects that securitization has on the credit cycle and, more generally, macroeconomic conditions.

To the extent risk retention can help avoid deterioration in underwriting standards, it may safeguard against a recurrence of the excessive expansion of credit that led to the home price bubble in the recent crisis. In addition to improving the incentive structure in securitization, risk retention could diminish the amount of credit available by tying up cash that would otherwise be used to make additional loans – an effect that could further mitigate some of the pro-cyclicality in credit supply that has been attributed to securitization.

There is limited literature on the macroeconomic effects of risk retention to date, but available academic literature suggests that securitizations that have some form of risk retention may perform better, because risk retention helps to align incentives between originators and investors.[38] The relative performance of various types of asset-backed securities during the financial crisis also provides some evidence of the effectiveness of risk retention requirements in this regard.

Risk retention requirements may help mitigate pro-cyclicality in credit formation and real estate values, contributing to the stability of the financial system, the real estate sector, and the economy. Setting the risk retention requirements at a level that maximizes these benefits while minimizing costs is important. Risk retention requirements that are too weak can impose substantial costs, as can requirements that are too stringent. An excessive requirement could unduly limit credit availability and economic output to the point that these costs could outweigh the benefits of improved stability. A weak requirement, however, could reduce long-run growth by increasing risks to financial stability.

An increase in credit costs could constrain credit supply, but this may not be, in and of itself, a negative consequence of risk retention. Interest rates on securitized mortgages in the period leading up to the crisis did not reflect the real risks of unsustainable lending to private parties, the financial system, and the economy. Low private costs for credit were not sustainable because they did not internalize all of the social costs of credit expansion to the entire system. To the extent that risk retention helps the market determine prices that reflect true private and public

[38] See D. Diamond, "Financial Intermediation and Delegated Monitoring," *Review of Economic Studies*, vol. 51 (1984). In particular, retaining the risk associated with the loans that banks make provides such incentives. By spreading or removing the risk, securitization may reduce the bank's incentives to screen borrowers. See G. Gorton and G. Pennacchi, "Banks and Loan Sales: Marketing Non-Marketable Assets," *Journal of Monetary Economics*, vol. 35, no. 3 (1995).

costs of securitization, an increase in credit costs to sustainable levels would contribute to growth by promoting more efficient resource allocation.

CONSIDERATIONS REGARDING STATIC AND PROACTIVE ADJUSTMENT OF RISK RETENTION

Section 946 requires consideration of whether risk retention requirements and mortgage origination requirements should be static or dynamic. In practice, a static framework would only be adjusted infrequently in response to structural changes in credit markets. In contrast, a dynamic framework would be adjusted more frequently in a counter-cyclical manner. Each approach has costs and benefits that should be considered.

Static regulations have the benefit of being transparent and providing certainty to market participants, but may not be responsive to changing market conditions. This may allow market participants to make longer-term plans for savings and investment. The existing literature notes that fixed rules may provide for greater predictability.[39] Static regulations are less complex for regulators. On the other hand, if regulators set risk retention requirements at an inappropriate level, or design them in an inappropriate manner, the costs in terms of lost long-term output could outweigh the benefits of the regulations. Additionally, fixed rules may not allow for judgment to be applied as economic conditions change.[40] If regulators are not responsive to innovation and changes in financial conditions, the regulations could become less applicable and the benefits of risk retention may decline.

By contrast, dynamic regulation could either be automatic, utilizing pre-determined formulas, or set by regulators on a discretionary basis. Some academic literature suggests that changing conditions should be monitored by regulators over time, implying that there may be benefits to changing regulation to address emerging risks to the system.[41] In the case of automatic regulation, the required amount of risk retention could be tied to the business cycle or financial market indicators in a formulaic manner. Regulations could be written to contain a counter-cyclical formula linking risk retention or underwriting standards to, for example, home prices. In this example, required risk retention could increase automatically as the economy grows and home prices rise, in order to constrain unsustainable increases in credit supply that could potentially fuel emerging bubbles. Alternatively, as the economy slows and home prices fall, the level of retention could fall automatically to encourage credit flows and to avoid recessions.

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[39] See Bank of England, "The Role of Macroprudential Policy: A Discussion Paper," (November 2009). M. Dewatripont and J. Tirole, *The Prudential Regulation of Banks* (Cambridge, MA: MIT Press, 1994).

[40] See Bank of England, "The Role of Macroprudential Policy: A Discussion Paper," (November 2009).

[41] See T. Adrian and H. Shin, "The Shadow Banking System: Implications for Financial Regulation," Banque de France, Financial Stability Review, No. 13 (September 2009).

Such dynamic regulation could address potential cyclicality in credit formation. However, determining the precise formula by which retention would be tied to the business cycle could pose significant challenges to policymakers, as the understanding of formulaic linkages between risk retention, credit supply and macroeconomic conditions may not be sufficiently robust to do so at high levels of confidence. Additionally, such relationships may change over time, potentially reducing the benefits of dynamic regulation conducted using pre-determined quantitative inputs, absent ongoing regulatory intervention.

Another type of dynamic regulation would allow regulators to adjust the regulations on a more discretionary basis. This would allow regulators to change underwriting standards or risk retention requirements in response to economic and financial developments, including financial innovation. However, requiring regulators to make changes to regulations in response to the business cycle may pose challenges, both in theory and practice, as it requires regulators to make determinations regarding the impact such changes may have on the business cycle, and to make such changes quickly. Additionally, the existing literature also notes that allowance for regulatory discretion can lead to a bias towards forbearance.[42] Some suggest that regulatory independence may be an important factor in ensuring that unpopular rules can be implemented when necessary.[43]

Accordingly, the Agencies should act prudently in setting out the rules associated with risk retention requirements and associated exemptions. Following the implementation of the risk retention rules, regulators should take into account the changing nature of markets and future innovations and whether such rules should be adjusted accordingly.

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[42] See Bank of England, "The Role of Macroprudential Policy: A Discussion Paper," (November 2009). M. Dewatripont and J. Tirole, *The Prudential Regulation of Banks* (Cambridge, MA: MIT Press, 1994).

[43] See M. Brunnermeier, A. Crocket, C. Goodhert, A. Persaud, and H. Shin, "The Fundamental Principles of Financial Regulation," Geneva Report on the World Economy 11 (June 2009).

VII. CONCLUSION

Securitization is an important source of credit formation for the economy, allowing market participants to draw efficiently upon a wide variety of sources of capital and investment, both to lower costs and diversify risk. As discussed above, some of the benefits of securitization include reducing the cost of credit for borrowers and improving mechanisms for financial institutions to manage interest rate risk. However, absent safeguards, there are inherent risks in the securitization process that can detract from these benefits. These risks have historically included misaligned incentives among participants in the securitization process, a lack of disclosure and transparency, and investor overreliance on CRAs. The Dodd-Frank Act mandates many reforms to address these issues, including risk retention requirements.

Risk retention serves as an important tool that, if properly structured, has the potential to address misaligned incentives and the deterioration in underwriting standards — two critical problems that had a significant impact on businesses, consumers, and homeowners in the United States. It is important to note that while risk retention can help mitigate some of these inherent risks, it does not solve all of the problems in the securitization process and may not be appropriate in all cases. Therefore, risk retention must be considered in conjunction with other reforms in the Dodd-Frank Act as well as other reforms occurring both domestically and internationally.

The academic literature indicates that there may be a connection between asset-backed securitization and an exacerbation of pro-cyclical lending. Misaligned incentives and a deterioration in underwriting standards may have implications on the broader economy if they lead to excess lending in periods of growth and a greater contraction of credit during periods of stress. Some academic literature suggests that securitization may have contributed to an expansion of credit in the run-up to the financial crisis, which in turn facilitated increases in housing prices and worsened the ensuing contraction in credit when the housing bubble burst.

Based on the available literature, there is evidence that risk retention could minimize the pro-cyclical macroeconomic effects of securitization by aligning incentives and improving underwriting standards. On the other hand, if risk retention requirements are too stringent, they could constrain lending, and consequently, the formation of credit.

Accordingly, it is important to design a risk retention framework that maximizes the benefits of asset-backed securitization as a source of credit formation and minimizes the inherent risks of an originate-to-distribute model. Such a framework should allow for efficient allocation of capital, where market participants accurately price credit risk. As observed in the most recent crisis, market participants did not always internalize the true cost of the credit extended. To the extent that risk retention and other reforms can help address efficient capital allocation, they can serve to facilitate stable economic growth.

APPENDIX

APPENDIX A: OTHER RELEVANT SECTIONS OF THE DODD-FRANK ACT

RATING AGENCIES - TITLE IX, SUBTITLE C

Subtitle C of the Dodd-Frank Act must be properly regulated and have a strong set of incentives to accurately rate securities in order to perform their role and provide meaningful and reliable ratings. The Dodd-Frank Act contains a number of provisions that are intended to improve the quality and transparency of credit ratings, address conflicts of interest, reduce reliance on credit ratings, and require additional studies on future changes to the structure of credit rating agencies.

Specifically, Subtitle C removes statutory references to credit ratings from certain statutes and requires each Federal agency to review its regulations for references to credit ratings and replace these references with a standard of creditworthiness. The SEC must also conduct a study on (i) the independence of credit rating agencies and how this independence affects the ratings they issue; (ii) the feasibility and desirability of standardizing credit rating terminology; and (iii) the feasibility of establishing a public or private utility or self regulatory agency for assigning credit rating agencies to issuers to determine the ratings of structured finance products. The Comptroller General ("GAO") must conduct a study on alternative means for compensating credit rating agencies in order to create incentives for more accurate credit ratings. The GAO must also conduct a study on the feasibility and merits of creating an independent professional organization that would establish independent standards for governing the rating analyst profession.

DISCLOSURE - TITLE IX, SUBTITLE D, SECTION 942 AND 945

Section 942 and 945 addresses disclosure and information transparency. Section 942 mandates that the SEC adopt regulations requiring issuers of an ABS to disclose information regarding assets backing each tranche or class of the security and to set standards for the format of the data provided. Section 945 mandates that the SEC issue rules that the registration statement filed by issuers of ABS includes a review by the issuer of the assets underlying the ABS and disclose the nature of the review.

REPRESENTATIONS AND WARRANTIES - TITLE IX, SUBTITLE D, SECTION 943

Section 943 mandates that the SEC prescribe regulations regarding disclosure of representations and warranties in the ABS market, whereby each rating agency must include in their report a description of the representations, warranties, and enforcement mechanisms available to investors and state how these differ from similarly issued securities. The SEC must also require securitizers to disclose fulfilled and unfulfilled repurchase requests across all trusts aggregated by the securitizers.

UNDERWRITING PROCESS AND CONSUMER PROTECTION – TITLE XIV, SECTION 1412

Section 1412 requires the Federal Reserve Board (and the Consumer Finance Protection Bureau once transferred) in consultation with the Department of Housing and Urban Development, Department of Veterans Affairs, Department of Agriculture, and Rural Housing Service, defines standards for a Qualified Mortgage (QM), which reflects a borrower's ability to repay, ensuring that responsible and affordable mortgage credit remains available to homeowners. While the section lists criteria, it leaves ultimate discretion to the rule writer. Suggested criteria include: restrictions on payment structures where the principle balance increases over time, fully amortizing fixed rate loans, taking into account fees, taxes, and assessments, placing limits on fees, and qualification for adjustable rate mortgages based on the maximum rate a borrower might pay during the first five years, among others.

APPENDIX B: OTHER RELEVANT REGULATORY INITIATIVES

BASEL ACCORD REFORMS

Following the financial crisis, on December 16, 2010 the BCBS announced stricter capital regulatory requirements for banks, which are commonly known as Basel III. Previously, in July 2009 the BCBS strengthened supervisory standards and increased regulatory capital requirements for complex securitizations. The BCBS adopted several revisions to the regulatory framework known as Basel II to address some of the main issues that arose during the crisis. Basel III is intended to improve the banking sector's ability to absorb shocks arising from financial and economic stress. Basel III must be individually adopted by the regulators of each participating nation and is to be phased in beginning January 1, 2013. These standards include requirements for banks to have: (i) heightened risk weight for some lower-rated and unrated securitization exposures; (ii) more conservative collateral haircuts for securitization collateral with respect to

counterparty exposure; and (iii) additional specific risk haircuts for securitization exposures when calculating the capital requirement related to market risk.

STATEMENTS OF FINANCIAL ACCOUNTING STANDARDS NOS. 166 AND 167[44]

In June 2009, the Financial Accounting Standards Board ("FASB") issued Financial Accounting Statements 166 and 167, which change the way entities account for securitizations and special-purpose entities to better align financial accounting disclosure practices with the actual risks of asset-backed securitization. These statements were effective for companies' first fiscal year that began after November 15, 2009 and January 1, 2010 for companies reporting on a calendar year basis. The statements require banks to consolidate on their balance sheets certain securitized assets as well as other financial assets that were previously disclosed as off-balance sheet assets if certain standards of control are met.[45] While these consolidation standards primarily respond to the risks associated with off-balance sheet securitization and the need for better disclosure, they also have implications for earnings and regulatory capital of on-balance sheet securitized assets. In some cases, the cost of reserving capital against the consolidated securitization assets may reduce the attractiveness of using securitization structures and incentivize investors to use other means to fund loan origination.

While it is unclear what impact that mandatory risk retention will have on consolidation analysis, it is clear that accounting treatment for securitization structures will differ based on characteristics of that structure and the distribution of economic interest among investors and entities affiliated with the transaction.[46] While risk retention's potential impact on the accounting treatment of securitization may vary, the requirements associated with consolidation have material consequences on earnings and capital allocation for affected entities.

INTERNATIONAL COMPARISONS - ARTICLE 122A

Article 122a is an amendment to the European Capital Requirements Directive that was adopted by the European Parliament in May 2009. The amendment, among other things, introduces a new originator retention requirement and significantly strengthens investor due diligence obligations, with capital sanctions in the event of non-compliance. In

[44] See Accounting Standards Codification (ASC) Topic 860, *Transfers and Servicing* (commonly called FAS 166) and ASC Topic 810, *Consolidations* (commonly called FAS 167).

[45] See Board of Governors of the Federal Reserve System, *Report to the Congress on Risk Retention* (October 2010) for a fulsome analysis of the consolidation of off-balance sheet assets.

[46] See the Board of Governors of the Federal Reserve System, *Report to the Congress on Risk Retention* (October 2010) discusses trends that currently exist for accounting for the securitization of different asset types.

December 2010, the Committee of European Bank Supervisors (CEBS) issued final guidelines with respect to the application of Article 122a.

Article 122a's provisions will apply to new securitizations issued after December 31, 2010 and after December 31, 2014 for existing securitizations where underlying exposures are subject to addition or substitution after that date (i.e., master trusts and some CDO structures). Article 122a applies to any EU credit institution that invests in or holds securitization positions in either its banking book or trading book. Additionally, for an issuer to sell tranches of structured finance securities to European credit institutions, it will be necessary for non-European institutions to comply with Article 122a. For example, if an EU or US auto ABS issuer wants to sell auto loan ABS tranches to a European credit institution, it will need to comply with the EU retention requirements and also provide sufficient information for EU investor due diligence.

Article 122a provides a range of options to the market with regards to the form of risk retention, including: (i) vertical retention of risk not less than 5 percent of the nominal value of each of the tranches sold or transferred to the investors; (ii) retention of risk not less than 5 percent of the nominal value of the securitized exposure in case of revolving securitizations; (iii) equivalent exposure though retention of risk of randomly selected exposures equal to not less than 5 percent of the nominal amount of the securitized exposures, where there would otherwise have been securitized in the securitization provided that the number of potentially securitized exposures is not less than 100 at origination; and (iv) horizontal retention of risk of the first loss tranche and if necessary other tranches having the same or more severe risk profile and not maturing any earlier than those transferred or sold to investors, so that the retention equals no less than 5 percent of the nominal value of the securitized exposures.

Article 122a provides an important example of risk retention strategies currently being pursued by regulatory bodies outside of the United States.

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF KANSAS

NATIONAL CREDIT UNION ADMINISTRATION BOARD, as Liquidating Agent of U.S. Central Federal Credit Union, Plaintiff, v. RBS SECURITIES, INC., f/k/a GREENWICH CAPITAL MARKETS, INC., RBS ACCEPTANCE, INC., f/k/a GREENWICH CAPITAL ACCEPTANCE, INC., FINANCIAL ASSET SECURITIES CORP., FREMONT MORTGAGE SECURITIES CORP., RESIDENTIAL FUNDING MORTGAGE SECURITIES II, INC., INDYMAC MBS, INC., NOVASTAR MORTGAGE FUNDING CORP., NOMURA HOME EQUITY LOAN, INC., LARES ASSET SECURITIZATION, INC, and WACHOVIA MORTGAGE LOAN TRUST, LLC, Defendants.	)	Case No. 11-cv-2340-JWL-JPO JURY TRIAL DEMANDED

SECOND AMENDED COMPLAINT

VII. THE ORIGINATORS SYSTEMATICALLY DISREGARDED THE UNDERWRITING GUIDELINES STATED IN THE OFFERING DOCUMENTS

57. The performance and value of RMBS are largely contingent upon borrowers repaying their mortgages. The loan underwriting guidelines ensure that the borrower has the means to repay the mortgage and that the RMBS is secured by sufficient collateral in the event of reasonably anticipated defaults on underlying mortgage loans.

58. With respect to RMBS collateralized by loans written by originators who systematically disregarded their stated underwriting standards, the following pattern is present:

a. a surge in borrower delinquencies and defaults on the mortgages in the pools (*see infra* Section I.A and Table 5);

b. actual losses to the underlying mortgage pools within the first 12 months after the offerings exceeded expected losses (*see infra* Section VII.B and Figure 2); and

c. a high percentage of the underlying mortgage loans were originated for distribution, as explained below (*see infra* Table 6 and accompanying allegations).

59. These factors support a finding that the Originators failed to originate the mortgages in accordance with the underwriting standards stated in the Offering Documents.

60. This conclusion is further corroborated by reports that the Originators who contributed mortgage loans to the RMBS at issue in this Complaint abandoned the underwriting standards described in the RMBS Offering Documents (*see infra* Section VII.D).

G. The Surge in Mortgage Delinquency and Defaults Shortly After the Offerings and the High OTD Practices of the Originators Demonstrates Systematic Disregard of Underwriting Standards

61. Residential mortgages are generally considered delinquent if no payment has been received for more than 30 days after the payment is due. Residential mortgages where no payment has been received for more than 90 days (or three payment cycles) are generally considered to be in default.

62. The surge in delinquencies and defaults following the offerings evidences the systematic flaws in the Originators' underwriting process (*see infra* Table 5).

63. The Offering Documents reported zero or near zero delinquencies and defaults at the time of the offerings (*see infra* Table 5).

64. The pools of mortgages collateralizing the RMBS experienced delinquency and default rates as high as 7.23% within the first three months, up to 17.55% at six months, and reaching 35.42% at one year (s*ee infra* Table 5).

65. As of July 2012, nearly half (40%) of the mortgage collateral across all of the RMBS that U.S. Central purchased was in delinquency, bankruptcy, foreclosure, or was real estate owned ("REO"), which means that a bank or lending institution owns the property after a failed sale at a foreclosure auction (*see infra* Table 5).

66. Table 5 (*infra*) reflects the delinquency, foreclosure, bankruptcy, and REO rates on the RMBS as to which claims are asserted in this Complaint. The data presented in the last five columns are from the trustee reports (dates and page references as indicated in the parentheticals). The shadowed rows reflect the group of mortgages in the pool underlying the specific tranches purchased by U.S. Central; however, some trustee reports include only the aggregate data. For RMBS with multiple groups, aggregate information on all the groups is included because the tranches are cross-collateralized.

Table 5

CUSIP	OFFERINGS	RATE AT CUT-OFF DATE FOR OFFERING	1 MO.	3 MOS.	6 MOS.	12 MOS.	RECENT
	FFMLT 2006-FF16 Aggregate (P.S. dated November 16, 2006)	Zero (S-16)	.29% (Dec., p.10)	4.77% (Feb., p.10)	8.46% (May, p.10)	22.65% (Nov., p.11)	55.47% (July 2012, p.12)
320275AF7	FFMLT 2006-FF16 Group 1 *Class M-1 in Group 1 and 2 (S-86)	Zero (S-16)	.05% (Dec., p.11)	3.00% (Feb., p.11)	5.31% (May, p.11)	17.32% (Nov., p.12)	51.07% (July 2012, p.17)
320275AD2 320275AE0 320275AF7	FFMLT 2006-FF16 Group 2 *Class II-A3 and II-A4 in Group 2 (S-6) *Class M-1 in Group 1 and 2 (S-86)	Zero (S-16)	.41% (Dec., p.12)	5.63% (Feb., p.12)	10.02% (May, p.12)	25.29% (Nov., p.13)	58.05% (July 2012, p.23)
	FHLT 2006-3 Aggregate (P.S. dated September 29, 2006)	Except with respect to one Initial Mortgage Loan, none of the Initial Mortgage Loans are 30-59 days delinquent (S-16)	.24% (Oct., p.11)	3.95% (Dec., p.12)	11.55% (Mar., p.12)	27.44% (Sept., p.12)	55.67% (July 2012, p.11)
35729MAF4	FHLT 2006-3 Group 1 *Class M1 in Groups 1 and 2 (S-92)	Except with respect to one Initial Mortgage Loan, none of the Initial Mortgage Loans are 30-59 days delinquent (S-16)	.05% (Oct., p.12)	2.63% (Dec., p.13)	8.73% (Mar., p.13)	22.02% (Sept., p.13)	52.83% (July 2012, p.16)
35729MAF4	FHLT 2006-3 Group 2 *Class M1 in Groups 1 and 2 (S-92)	Except with respect to one Initial Mortgage Loan, none of the Initial Mortgage Loans are 30-59 days delinquent (S-16)	.37% (Oct., p.13)	4.89% (Dec., p.14)	13.55% (Mar., p.14)	31.12% (Sept., p.14)	58.07% (July 2012, p.22)
	FHLT 2006-D Aggregate (P.S. dated November 1, 2006)	Zero (19)	.79% (Dec., p.10)	5.21% (Feb., p.10)	12.45% (May, p.10)	26.17% (Nov., p.10)	43.74% (July 2012, p.9)
35729VAF4	FHLT 2006-D Group 1 *Class M1 in all Loan Groups (3)	Zero (19)	1% (Dec., p.12)	4.42% (Feb., p.12)	10.19% (May, p.12)	24.12% (Nov., p.12)	46.58% (July 2012, p.10)
35729VAE7 35729VAF4	FHLT 2006-D Group 2 *The Class 2-A-4 in Group 2 (3) *Class M1 in all Loan Groups (3)	Zero (19)	.52% (Dec., p.12)	1.59% (Feb., p.12)	4.03% (May, p.12)	9.84% (Nov., p.12)	31.52% (July 2012, p.10)

CUSIP	OFFERINGS	RATE AT CUT-OFF DATE FOR OFFERING	1 MO.	3 MOS.	6 MOS.	12 MOS.	RECENT
35729VAF4	FHLT 2006-D Group 3 *Class M1 in all Loan Group (3)	Zero (19)	.78% (Dec., p.13)	7.23% (Feb., p.13)	17.55% (May, p.13)	35.42% (Nov., p.13)	51.65% (July 2012, p.11)
35729VAF4	FHLT 2006-D Group 4 *Class M1 in all Loan Groups (3)	Zero (19)	.51% (Dec., p.13)	4.86% (Feb., p.13)	11.47% (May, p.13)	19.17% (Nov., p.13)	31.52% (July 2012, p.11)
	HVMLT 2006-10 Aggregate (P.S. dated November 10, 2006)	.15% of the mortgage loans were 30-59 days delinquent (S-27)	.14% (Nov., p.10)	.67% (Jan., p.10)	1.12% (Apr., p.10)	5.47% (Apr., p.10)	20.07% (July 2012, p.10)
	HVMLT 2006-10 Group 1	.15% of the mortgage loans were 30-59 days delinquent (S-27)	.07% (Nov., p.11)	.55% (Jan., p.11)	.56% (Apr., p.11)	5.38% (Apr., p.11)	30.09% (July 2012, p.11)
41162CAD3 41162CAE1	HVMLT 2006-10 Group 2 *Class 2A-1B and 2A-1C in Group 2 (S-6)	.15% of the mortgage loans were 30-59 days delinquent (S-27)	.19% (Nov., p.11)	.74% (Jan., p.11)	1.44% (Apr., p.11)	5.52% (Apr., p.11)	25.39% (July 2012, p.11)
41162GAA0	HVMLT 2006-11 (P.S. dated November 10, 2006)	Zero (S-20)	.38% (Nov., p.9)	1.46% (Jan., p.9)	2.44% (Apr., p.9)	9.07% (Apr., p.9)	48.79% (July 2012, p.9)
	HVMLT 2006-12 Aggregate (P.S. dated December 11, 2006)	Zero (S-28)	0% (Dec., p.11)	.57% (Feb., p.11)	1.41% (May, p.10)	7.37% (Nov., p.10)	55.11% (July 2012, p.10)
	HVMLT 2006-12 Group 1	Zero (S-28)	0.00% (Dec., p.12)	.46% (Feb., p.13)	1.01% (May, p.11)	6.88% (Nov., p.11)	53.79% (July 2012, p.11)
41162DAE9 41162DAH2	HVMLT 2006-12 Group 2 *Class 2A-1B, 2A-2B and 2A-2C in Group 2 (S-7)	Zero (S-28)	0% (Dec., p.12)	.61% (Feb., p.13)	1.53% (May, p.11)	7.55% (Nov., p.11)	55.59% (July 2012, p.11)
	HVMLT 2006-14 Aggregate (December 20, 2006)	Zero (S-26)	.17% (Jan., p.11)	.78% (Mar., p.10)	1.97% (June, p.10)	8.61% (Dec., p.10)	35.85% (July 2012, p.10)

CUSIP	OFFERINGS	RATE AT CUT-OFF DATE FOR OFFERING	1 MO.	3 MOS.	6 MOS.	12 MOS.	RECENT
	HVMLT 2006-14 Group 1	Zero (S-26)	.20% (Jan., p.13)	.39% (Mar., p.12)	.74% (June, p.12)	6.45% (Dec., p.12)	33.93% (July 2012, p.11)
41162NAE7	HVMLT 2006-14 Group 2 *Class 2A-1B, 2A-1C and 2A-2C in Group 2 (S-7)	Zero (S-26)	.16% (Jan., p.13)	.90% (Mar., p.12)	2.36% (June, p.12)	9.29% (Dec., p.12)	36.46% (July 2012, p.12)
41162BAB9	HVMLT 2006-SB1 (P.S. dated October 30, 2006)	Zero (S-22)	0% (Nov., p.11)	.39% (Jan., p.10)	1.11% (Apr., p.10)	4.87% (Oct., p.10)	25.54% (July 2012, p.10)
43710RAG6	RFMS2 2007-HSA2 (P.S. dated April 25, 2007)	Zero (S-35)	.41% (May, p.3)	3.85% (July, p.3)	8.69% (Oct., p.3)	13.48% (Apr., p.3)	13.03% (Oct. 2009, p.3)
	INDX 2006-AR6 Aggregate (P.S. dated April 27, 2006)	Zero (S-32)	2.16% (May, p.10)	2.20% (July, p.10)	2.89% (Oct., p.10)	5.39% (Apr., p.10)	37.84% (July 2012, p.10)
	INDX 2006-AR6 Group 1	Zero (S-32)	1.81% (May, p.11)	2.21% (July, p.11)	2.76% (Oct., p.11)	5.03% (Apr., p.11)	35.37% (July 2012, p.15)
456612AC4	INDX 2006-AR6 Group 2 *Class 2-A-1A in Group 2 (S-9)	Zero (S-32)	2.46% (May, p.12)	2.19% (July, p.12)	3.01% (Oct., p.12)	5.69% (Apr., p.12)	40.03% (July 2012, p.21)
	INDX 2006-AR35 Aggregate (P.S. dated November 29, 2006)	Zero (S-36)	2.42% (Dec., p.10)	3.76% (Feb., p.10)	6.42% (May, p.10)	16.16% (Nov., p.10)	33.92% (July 2012, p.10)
	INDX 2006-AR35 Group 1	Zero (S-36)	1.67% (Dec., p.11)	2.99% (Feb., p.11)	6.16% (May, p.11)	15.58% (Nov., p.11)	35.59% (July 2012, p.15)
45667SAA5	INDX 2006-AR35 Group 2 *Classes 2-A-1A, 2-A-3A and 2-A-3B in Group 2 (S-11)	Zero (S-36)	2.89% (Dec., p.12)	4.25% (Feb., p.12)	6.58% (May, p.12)	16.54% (Nov., p.12)	32.81% (July 2012, p.21)

CUSIP	OFFERINGS	RATE AT CUT-OFF DATE FOR OFFERING	1 MO.	3 MOS.	6 MOS.	12 MOS.	RECENT
550279BC6	LUM 2006-2 (P.S. dated February 14, 2006)	Zero (S-25)	1.44% (Mar., p.9)	1.40% (May, p.9)	1.88% (Aug., p.9)	5.75% (Feb., p.9)	56.89% (July 2012, p.9)
	LUM 2007-1 Aggregate (P.S. dated January 24, 2007)	Zero (S-24)	1.24% (Feb., p.11)	2.56% (Apr., p.11)	4.82% (July, p.11)	11.32% (Jan., p.11)	40.56% (July 2012, p.11)
55028CAA3	LUM 2007-1 Group 1 *Classes I-A-1 and I-A-2 in Group 1 (S-7)	Zero (S-24)	1.14% (Feb., p.13)	2.54% (Apr., p.13)	4.32% (July, p.13)	9.95% (Jan., p.13)	34.45% (July 2012, p.12)
	NHELI 2007-1 Aggregate (P.S. dated January 29, 2007)	Zero (S-57)	.16% (Feb., p.13)	5.05% (Apr., p.13)	11.90% (July, p.13)	24.01% (Jan., p.13)	48.12% (July 2012, p.13)
65537KAY6	NHELI 2007-1 Group 1 *Class I-A-4 in Group 1 (S-i)	Zero (S-57)	.11% (Feb., p.14)	2.21% (Apr., p.15)	8.49% (July, p.15)	18.80% (Jan., p.15)	47.43% (July 2012, p.14)
	NHEL 2006-5 Aggregate (P.S. dated September 22, 2006)	.95% of the mortgage loans were 30 or more days delinquent (S-23)	2.31% (Oct., p.14)	4.90% (Dec., p.14)	10.38% (Mar., p.14)	22.59% (Sept., p.14)	41.75% (July 2012, p.15)
66988YAF9 66988YAG7	NHEL 2006-5 Group 1 *Classes M-1 and M-2 are in Groups 1 and 2 (S-98)	.95% of the mortgage loans were 30 or more days delinquent (S-23)	1.75% (Oct., p.15)	3.58% (Dec., p.15)	6.93% (Mar., p.15)	17.98% (Sept., p.15)	38.19% (July 2012, p.20)
66988YAE2 66988YAF9 66988YAG7	NHEL 2006-5 Group 2 *Classes A-2D in Group 2 (S-1) *Classes M-1 and M-2 are in Groups 1 and 2 (S-98)	.95% of the mortgage loans were 30 or more days delinquent (S-23)	3.19% (Oct., p.16)	6.95% (Dec., p.16)	15.75% (Mar., p.16)	29.64% (Sept., p.16)	48.58% (July 2012, p.25)
83612MAF4	SVHE 2006-WF2 (P.S. dated December 12, 2006)	Zero (S-14)	2.17% (Jan., p.10)	1.57% (Mar., p.10)	6.00% (June, p.10)	19.52% (Dec., p.10)	39.19% (July 2012, p.11)
	SVHE 2007-OPT1 Aggregate (P.S. dated May 4, 2007)	Zero (S-17)	.28% (May, p.9)	2.03% (July, p.9)	10.17% (Oct., p.9)	24.28% (Apr., p.9)	39.43% (July 2012, p.9)

CUSIP	OFFERINGS	RATE AT CUT-OFF DATE FOR OFFERING	1 MO.	3 MOS.	6 MOS.	12 MOS.	RECENT
	SVHE 2007-OPT1 Group 1 Fixed	Zero (S-17)	.43% (May, p.10)	1.14% (July, p.10)	5.48% (Oct., p.10)	14.28% (Apr., p.10)	30.60% (July 2012, p.10)
	SVHE 2007-OPT1 Group 1 ARM	Zero (S-17)	.23% (May, p.10)	1.70% (July, p.10)	9.63% (Oct., p.10)	24.80% (Apr., p.10)	41.66% (July 2012, p.10)
83612TAD4	SVHE 2007-OPT1 Group 2 Fixed *Class II-A-3 in Group 2 (S-6)	Zero (S-17)	.55% (May, p.11)	3.08% (July, p.11)	9.56% (Oct., p.11)	19.30% (Apr., p.11)	34.36% (July 2012, p.11)
83612TAD4	SVHE 2007-OPT1 Group 2 ARM *Class II-A-3 in Group 2 (S-6)	Zero (S-17)	.18% (May, p.11)	2.47% (July, p.11)	13.00% (Oct., p.11)	29.55% (Apr., p.11)	43.22% (July 2012, p.11)
	HVMLT 2006-6 Aggregate (P.S. dated June 27, 2006)	.85% of the mortgage loans were 30 days or more delinquent (S-25)	1.20% (July, p.11)	2.79% (Sept., p.12)	3.27% (Dec., p.11)	7.05% (June, p.11)	29.79% (July 2012, p.11)
	HVMLT 2006-6 Group 1	.85% of the mortgage loans were 30 days or more delinquent (S-25)	.28% (July, p.13)	.68% (Sept., p.14)	2.28% (Dec., p.13)	3.59% (June, p.12)	21.19% (July 2012, p.12)
41161UAD4	HVMLT 2006-6 Group 2 *Class 2A-1B in Group 2 (S-9)	.85% of the mortgage loans were 30 days or more delinquent (S-25)	1.20% (July, p.13)	1.03% (Sept., p.14)	1.82% (Dec., p.13)	4.93% (June, p.12)	28.77% (July 2012, p.12)
41161UAF9	HVMLT 2006-6 Group 3 *Class 3A-1B in Group 3 (S-9)	.85% of the mortgage loans were 30 days or more delinquent (S-25)	1.24% (July, p.14)	4.31% (Sept., p.15)	4.01% (Dec., p.14)	10.43% (June, p.13)	31.22% (July 2012, p.13)
	HVMLT 2006-6 Group 4	.85% of the mortgage loans were 30 days or more delinquent (S-25)	2.12% (July, p.14)	4.01% (Sept., p.15)	3.11% (Dec., p.14)	7.14% (June, p.13)	39.81% (July 2012, p.13)
	HVMLT 2006-6 Group 5	.85% of the mortgage loans were 30 days or more delinquent (S-25)	0% (July, p.15)	0.00% (Sept., p.16)	5.03% (Dec., p.15)	2.59% (June, p.14)	16.20% (July 2012, p.14)

CUSIP	OFFERINGS	RATE AT CUT-OFF DATE FOR OFFERING	1 MO.	3 MOS.	6 MOS.	12 MOS.	RECENT
80556AAD9	SAST 2006-3 (P.S. dated October 5, 2006)	1.50% of the mortgage loans were 30 or more days delinquent (S-48)	0% (Oct., p.10)	3.14% (Dec., p.10)	9.44% (Mar., p.10)	21.62% (Sept., p.10)	31.47% (July 2012, p.11)
92978GAB5	WMLT 2006-ALT1 (P.S. dated December 19, 2006)	Zero (S-32)	.94% (Jan., p.14)	2.13% (Mar., p.14)	4.14% (June, p.14)	10.84% (Dec., p.14)	27.80% (July 2012, p.13)

67. This early spike in delinquencies and defaults, which occurred almost immediately after these RMBS were purchased by U.S. Central, was later discovered to be indicative of the Originators' systematic disregard of their stated underwriting guidelines.

68. The phenomenon of borrower default shortly after origination of the loans is known as "Early Payment Default." Early Payment Default evidences borrower misrepresentations and other misinformation in the origination process, resulting from the systematic failure of the Originators to apply the underwriting guidelines described in the Offering Documents.

69. A November 2008 Federal Reserve Board study attributed the rise in defaults, in part, to "[d]eteriorating lending standards," and posits that "the surge in early payment defaults suggests that underwriting . . . deteriorated on dimensions that were less readily apparent to investors." Christopher J. Mayer *et al.*, *The Rise in Mortgage Defaults* at 15-16 (Fed. Reserve Bd. Fin. & Econ. Discussion Series, Paper No. 2008-59).

70. In January 2011, the Financial Stability Oversight Council ("FSOC"), chaired by United States Treasury Secretary Timothy Geithner, issued a report analyzing the effects of risk retention requirements in mortgage lending on the broader economy. *See* FIN. STABILITY OVERSIGHT COUNCIL, MACROECONOMIC EFFECTS OF RISK RETENTION REQUIREMENTS (2011) ("FSOC Risk Retention Report"). The FSOC Risk Retention Report focused on stabilizing the mortgage lending industry through larger risk retention requirements in the industry that can "incent

better lending decisions" and "help to mitigate some of the pro-cyclical effects securitization may have on the economy." *Id.* at 2.

71. The FSOC Risk Retention Report observed that the securitization process often incentivizes poor underwriting by shifting the risk of default from the originators to the investors, while obscuring critical information concerning the actual nature of the risk. The report stated:

> The securitization process involves multiple parties with varying incentives and information, thereby breaking down the traditional direct relationship between borrower and lender. The party setting underwriting standards and making lending decisions (the originator) and the party making structuring decisions (the securitizer) are often exposed to minimal or no credit risk. By contrast, the party that is most exposed to credit risk (the investor) often has less influence over underwriting standards and may have less information about the borrower. As a result, originators and securitizers that do not retain risk can, at least in the short run, maximize their own returns by lowering loan underwriting standards in ways that investors may have difficulty detecting. The originate-to-distribute model, as it was conducted, exacerbated this weakness by compensating originators and securitizers based on volume, rather than on quality.

Id. at 3.

72. Indeed, originators that wrote a high percentage of their loans for distribution were more likely to disregard underwriting standards, resulting in poorly performing mortgages, in contrast to originators that originated and then held most of their loans.

73. High OTD originators profited from mortgage origination fees without bearing the risks of borrower default or insufficient collateral in the event of a default. Divorced from these risks, high OTD originators were incentivized to push loan quantity over quality.

74. Table 6 (*infra*) shows the percentage of loans originated for distribution relative to all the loans made by the Originators for the years 2005, 2006 and 2007, for those Originators in this Complaint with high OTD percentages. The data was obtained from the Home Mortgage Disclosure Act database.

Table 6

Originator	OTD % 2005	OTD% 2006	OTD % 2007
Accredited Home Lenders, Inc.	100	100	100
American Home Mortgage Corp.	91.9	62.4	
American Home Mortgage Investment Corp.	100	100	100
Countrywide Home Loans, Inc.	98.5	96.5	98.4
Downey Savings and Loan Association, F.A.	49.5	42.4	49.7
First Franklin Financial Corporation			98.7
First National Bank of Nevada	88.0	79.8	89.4
Fremont Investment & Loan	91.2	85.2	93.9
Homecomings Financial Network, Inc.	97.4	97.9	99.9
IndyMac Bank, F.S.B.	81.1	87.7	82.8
NovaStar Mortgage, Inc.	89.3	80.0	98.5
Option One Mortgage Corporation	92.2	72.7	58.2
Paul Financial, LLC	85.2	83.4	99.1
Residential Mortgage Capital	99.9	100	100
Saxon Funding Management, Inc.	94.8	91	98.4
Secured Bankers Mortgage Company	99.7	100	100
Wachovia Mortgage Corp.	82.6	74.1	69.6
Wells Fargo Bank, N.A.	73.5	67.1	61.6

H. The Surge in Actual Versus Expected Cumulative Losses is Evidence of the Originators' Systematic Disregard of Underwriting Standards

75. The actual defaults in the mortgage pools underlying the RMBS U.S. Central purchased exceeded expected defaults so quickly and by so wide a margin that a significant portion of the mortgages could not have been underwritten as represented in the Offering Documents.

76. Every month, the RMBS trustee reports the number and outstanding balance of all loans in the mortgage pools that have defaulted. The running total of this cumulative default balance is referred to as the "gross loss."

77. When defaulted loans are foreclosed upon, the proceeds from the foreclosures are distributed to the investors and any shortfall on the defaulted loan balances is realized as a loss. The running total of this cumulative realized loss (defaulted loan balance minus recovery in foreclosure) is referred to as the "net loss."

78. "Actual loss" is the economic loss the mortgage pool experiences in fact. So "actual gross loss" is the actual cumulative sum of the balance of the loans in default for a particular security. Likewise, "actual net loss" is the actual cumulative realized loss on defaulted loans after foreclosure.

79. At the time a security is rated, the rating agency calculates an amount of "expected loss" using a model based on historical performance of similar securities. So "expected gross loss" is the expected cumulative sum of the balance of the loans in default for a particular security. Likewise, "expected net loss" is the expected cumulative realized loss on defaulted loans after foreclosure. The amount of expected net loss drives the credit ratings assigned to the various tranches of RMBS.

80. Each credit rating has a "rating factor," which can be expressed in multiples of the amount of credit enhancement over expected net loss (in equation form: CE/ENL = RF). Thus, the rating factor expresses how many times the expected net loss is covered by credit enhancement. A triple-A rated security would have a rating factor of "5," so would require credit enhancement of five times the amount of the expected net loss. A "double-A rating" would have a rating factor of "4," and thus would require credit enhancement equaling four times the expected net loss. A "single-A" rating would have a rating factor of "3" and would require credit enhancement of three times expected net loss. A "Baa" rating would require credit enhancement of 2—1.5 times expected net loss, and a "Ba" rating or lower requires some amount of credit enhancement less than 1.5 times expected net loss.

81. Accordingly, by working backwards from this equation, one can infer expected net loss in an already-issued offering. For example, assume there is a $100 million offering backed by $100 million of assets, with a triple-A rated senior tranche with a principal balance of $75 million. This means the non-senior tranches, in aggregate, have a principal balance of $25 million. The $25 million amount of the non-senior tranches in this hypothetical offering serves as the credit enhancement for the senior tranche. Therefore, on our hypothetical $100 million offering, the expected net loss would be $5 million, which is the amount of the credit enhancement on the triple-A rated senior tranche—$25 million—divided by the rating factor for triple-A rated securities—5. The following equation illustrates: $25,000,000/5 = $5,000,000.

82. Expected gross loss can be then mathematically derived by applying an "expected recovery rate" to the expected net loss (EGL = ENL/(1 – ERR).

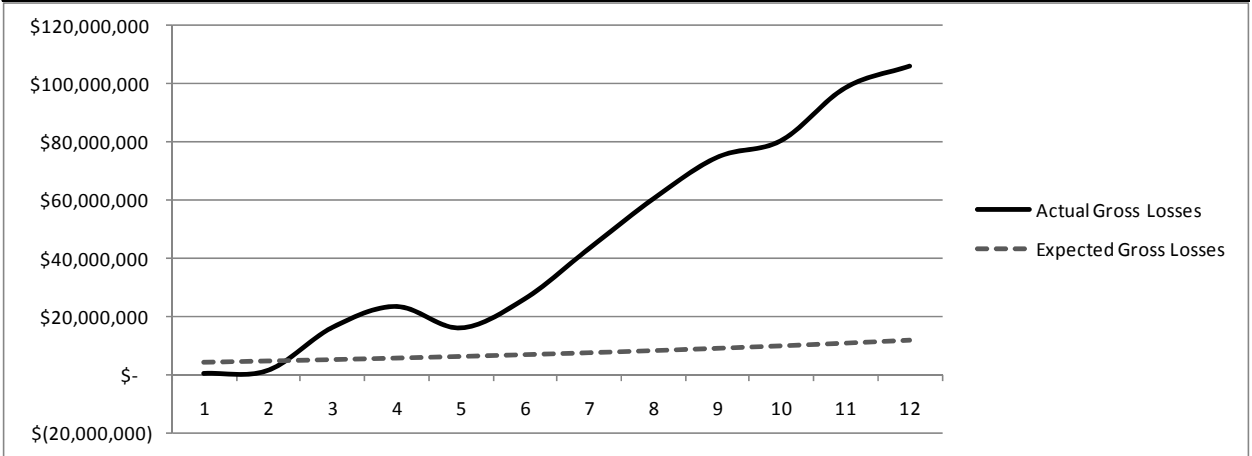
83. A comparison of actual gross losses to expected gross losses for a particular security can be made graphically by plotting the actual versus expected loss data on a line graph. Figure 2 (*infra*) is a series of such line graphs. Figure 2 illustrates the actual gross loss (again, actual defaults) the pools backing the RMBS purchased by U.S. Central experienced in the first 12 months after issuance compared to the expected gross loss (again, expected defaults) for those pools during the same time period.

84. The actual gross loss data in Figure 2 (*infra*) was obtained from ABSNET, a resource for asset-backed securities related data. The expected gross losses were calculated by "grossing up" the rating-implied expected net losses using an expected recovery rate of 85%.

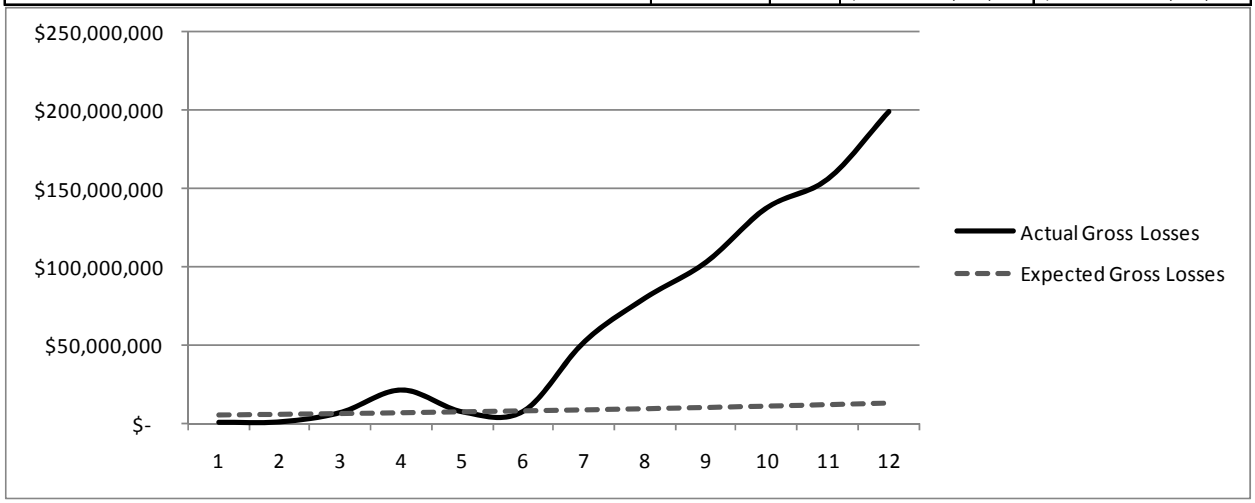
85. As the graphs show, the actual gross losses (the solid lines) far exceeded the expected gross losses (the dotted lines) for the period analyzed. That means that the actual balance of defaulted loans in the first 12 months following issuance far exceeded the expected balance of defaulted loans based on historical performance.

Figure 2

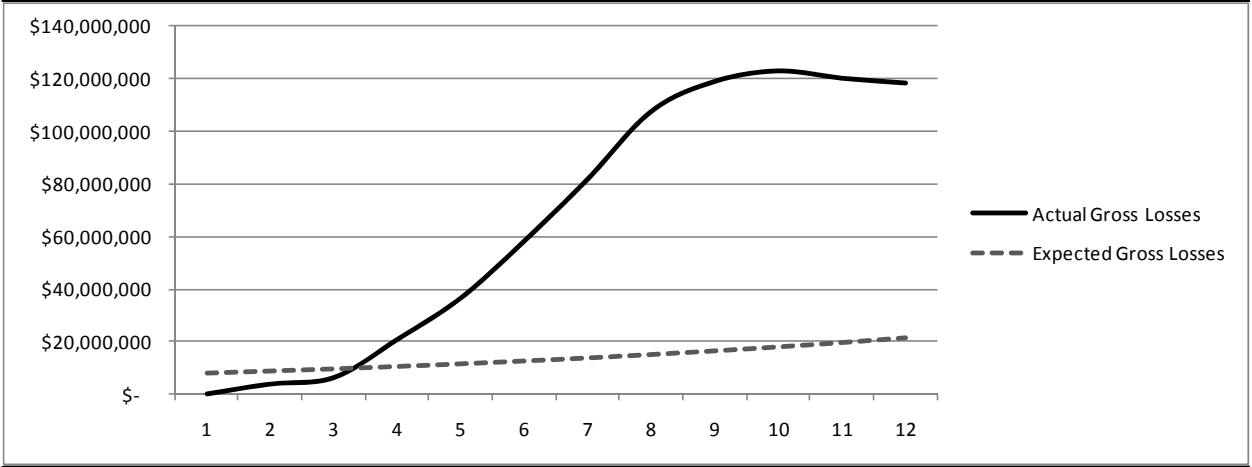
Deal Name	ABSNet Deal	Month	Actual Gross Losses	Expected Gross Losses
First Franklin Mortgage Loan Trust 2006-FF16	39691	1	$ 206,255	$ 4,440,319
First Franklin Mortgage Loan Trust 2006-FF16	39691	2	$ 1,252,743	$ 4,849,938
First Franklin Mortgage Loan Trust 2006-FF16	39691	3	$ 15,965,380	$ 5,296,486
First Franklin Mortgage Loan Trust 2006-FF16	39691	4	$ 23,231,116	$ 5,783,127
First Franklin Mortgage Loan Trust 2006-FF16	39691	5	$ 15,835,378	$ 6,313,263
First Franklin Mortgage Loan Trust 2006-FF16	39691	6	$ 25,826,890	$ 6,890,551
First Franklin Mortgage Loan Trust 2006-FF16	39691	7	$ 43,056,593	$ 7,518,909
First Franklin Mortgage Loan Trust 2006-FF16	39691	8	$ 60,149,130	$ 8,202,528
First Franklin Mortgage Loan Trust 2006-FF16	39691	9	$ 74,530,001	$ 8,945,883
First Franklin Mortgage Loan Trust 2006-FF16	39691	10	$ 80,282,322	$ 9,753,736
First Franklin Mortgage Loan Trust 2006-FF16	39691	11	$ 98,458,456	$ 10,631,148
First Franklin Mortgage Loan Trust 2006-FF16	39691	12	$ 105,876,663	$ 11,583,471



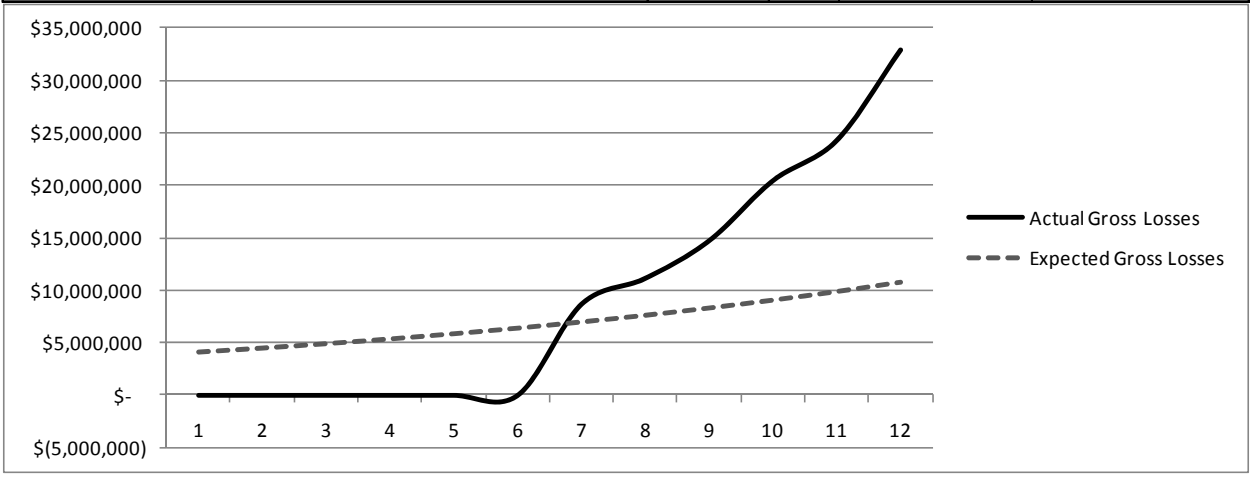
Deal Name	ABSNet Deal	Month	Actual Gross Losses	Expected Gross Losses
Fremont Home Loan Trust 2006-3	39106	1	$ 1,256,271	$ 5,262,057
Fremont Home Loan Trust 2006-3	39106	2	$ 1,494,777	$ 5,747,482
Fremont Home Loan Trust 2006-3	39106	3	$ 7,526,884	$ 6,276,670
Fremont Home Loan Trust 2006-3	39106	4	$ 21,888,740	$ 6,853,369
Fremont Home Loan Trust 2006-3	39106	5	$ 7,900,943	$ 7,481,614
Fremont Home Loan Trust 2006-3	39106	6	$ 8,313,463	$ 8,165,737
Fremont Home Loan Trust 2006-3	39106	7	$ 52,621,537	$ 8,910,380
Fremont Home Loan Trust 2006-3	39106	8	$ 80,617,461	$ 9,720,512
Fremont Home Loan Trust 2006-3	39106	9	$ 103,490,110	$ 10,601,434
Fremont Home Loan Trust 2006-3	39106	10	$ 138,270,512	$ 11,558,791
Fremont Home Loan Trust 2006-3	39106	11	$ 156,624,286	$ 12,598,579
Fremont Home Loan Trust 2006-3	39106	12	$ 199,612,422	$ 13,727,142



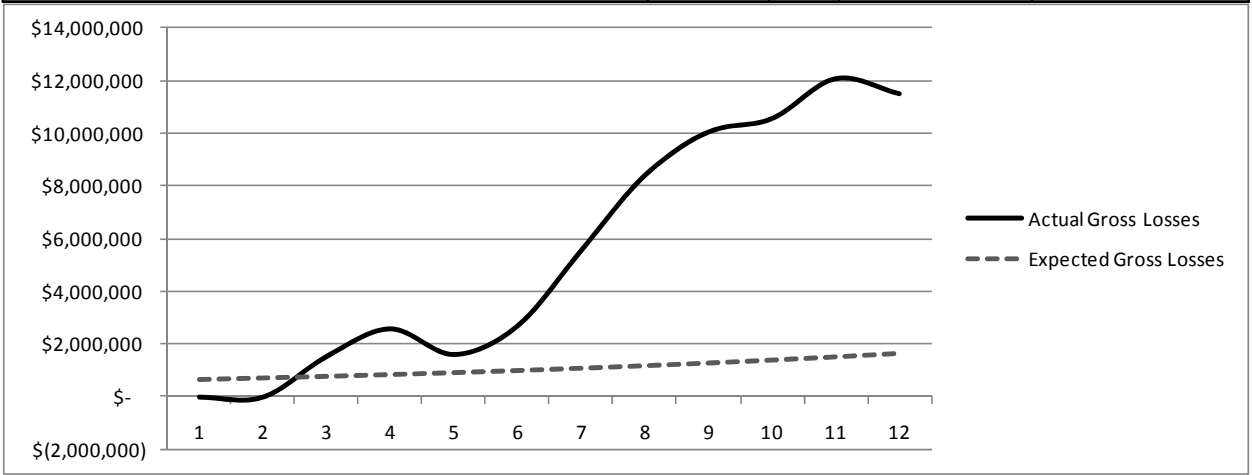
Deal Name	ABSNet Deal	Month	Actual Gross Losses	Expected Gross Losses
Fremont Home Loan Trust 2006-D	39741	1	$ -	$ 8,287,486
Fremont Home Loan Trust 2006-D	39741	2	$ 3,753,135	$ 9,052,007
Fremont Home Loan Trust 2006-D	39741	3	$ 6,212,973	$ 9,885,452
Fremont Home Loan Trust 2006-D	39741	4	$ 20,765,954	$ 10,793,726
Fremont Home Loan Trust 2006-D	39741	5	$ 36,520,130	$ 11,783,182
Fremont Home Loan Trust 2006-D	39741	6	$ 58,203,553	$ 12,860,642
Fremont Home Loan Trust 2006-D	39741	7	$ 81,810,437	$ 14,033,419
Fremont Home Loan Trust 2006-D	39741	8	$ 107,497,063	$ 15,309,337
Fremont Home Loan Trust 2006-D	39741	9	$ 118,828,404	$ 16,696,747
Fremont Home Loan Trust 2006-D	39741	10	$ 122,788,975	$ 18,204,539
Fremont Home Loan Trust 2006-D	39741	11	$ 120,044,997	$ 19,842,154
Fremont Home Loan Trust 2006-D	39741	12	$ 118,165,126	$ 21,619,586



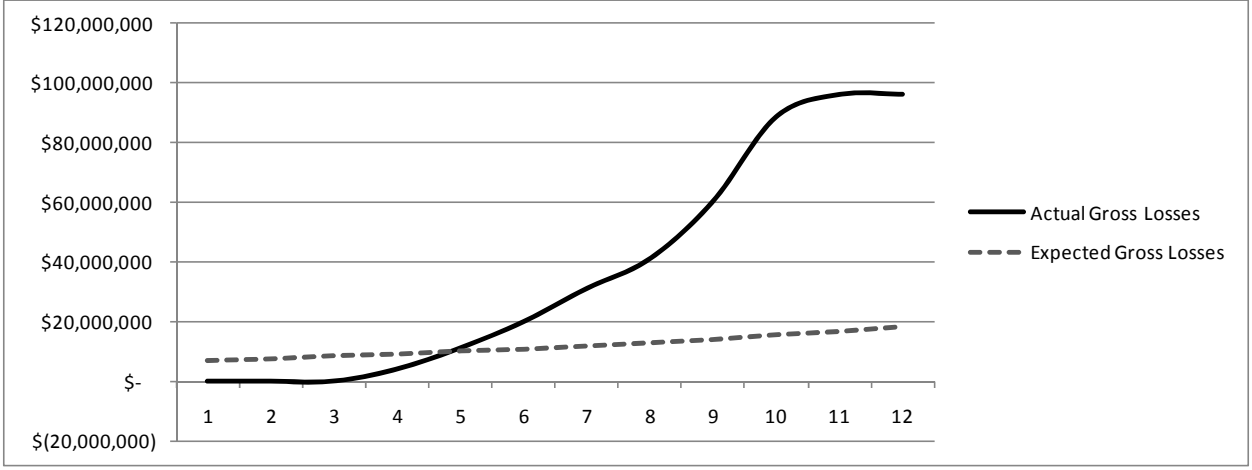
Deal Name	ABSNet Deal I	Month	Actual Gross Losses	Expected Gross Losses
HarborView Mortgage Loan Trust 2006-10	39466	1	$ -	$ 4,146,641
HarborView Mortgage Loan Trust 2006-10	39466	2	$ -	$ 4,529,169
HarborView Mortgage Loan Trust 2006-10	39466	3	$ -	$ 4,946,182
HarborView Mortgage Loan Trust 2006-10	39466	4	$ -	$ 5,400,637
HarborView Mortgage Loan Trust 2006-10	39466	5	$ -	$ 5,895,711
HarborView Mortgage Loan Trust 2006-10	39466	6	$ -	$ 6,434,818
HarborView Mortgage Loan Trust 2006-10	39466	7	$ 8,680,070	$ 7,021,616
HarborView Mortgage Loan Trust 2006-10	39466	8	$ 11,141,881	$ 7,660,021
HarborView Mortgage Loan Trust 2006-10	39466	9	$ 14,725,771	$ 8,354,211
HarborView Mortgage Loan Trust 2006-10	39466	10	$ 20,454,135	$ 9,108,634
HarborView Mortgage Loan Trust 2006-10	39466	11	$ 24,280,421	$ 9,928,015
HarborView Mortgage Loan Trust 2006-10	39466	12	$ 32,908,115	$ 10,817,352



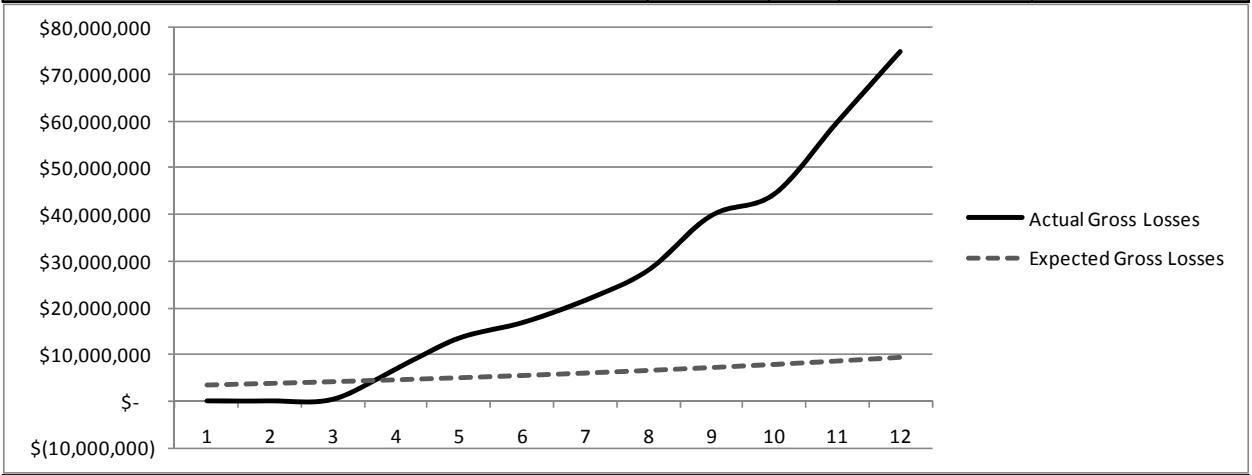
Deal Name	ABSNet Deal I	Month	Actual Gross Losses	Expected Gross Losses
HarborView Mortgage Loan Trust 2006-11	39604	1	$ -	$ 620,128
HarborView Mortgage Loan Trust 2006-11	39604	2	$ -	$ 677,335
HarborView Mortgage Loan Trust 2006-11	39604	3	$ 1,541,596	$ 739,700
HarborView Mortgage Loan Trust 2006-11	39604	4	$ 2,586,325	$ 807,663
HarborView Mortgage Loan Trust 2006-11	39604	5	$ 1,614,729	$ 881,701
HarborView Mortgage Loan Trust 2006-11	39604	6	$ 2,697,387	$ 962,324
HarborView Mortgage Loan Trust 2006-11	39604	7	$ 5,548,956	$ 1,050,080
HarborView Mortgage Loan Trust 2006-11	39604	8	$ 8,395,221	$ 1,145,553
HarborView Mortgage Loan Trust 2006-11	39604	9	$ 10,039,321	$ 1,249,369
HarborView Mortgage Loan Trust 2006-11	39604	10	$ 10,546,521	$ 1,362,193
HarborView Mortgage Loan Trust 2006-11	39604	11	$ 12,059,557	$ 1,484,731
HarborView Mortgage Loan Trust 2006-11	39604	12	$ 11,489,433	$ 1,617,731



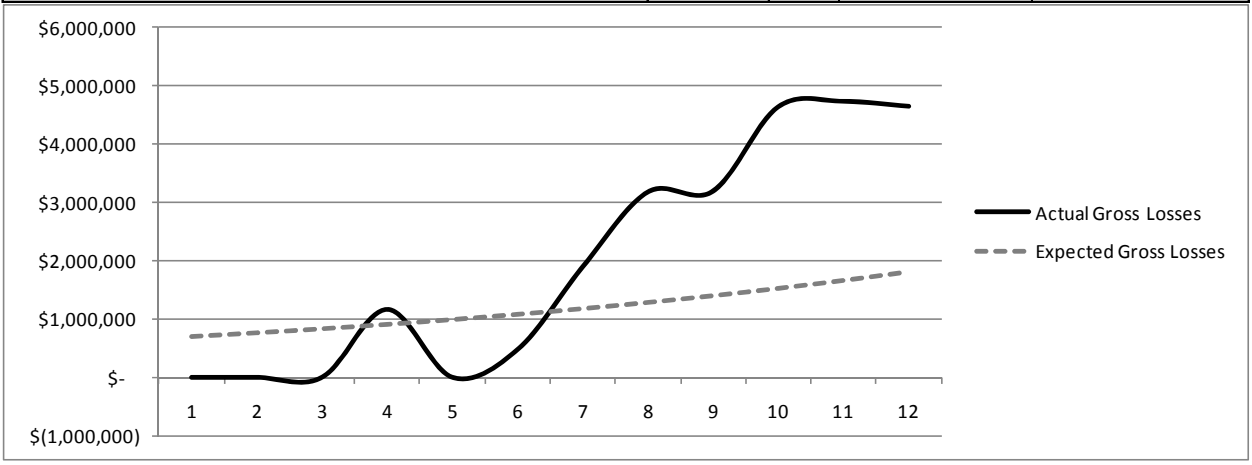
Deal Name	ABSNet Deal I	Month	Actual Gross Losses	Expected Gross Losses
HarborView Mortgage Loan Trust 2006-12	39654	1	$ -	$ 6,998,409
HarborView Mortgage Loan Trust 2006-12	39654	2	$ -	$ 7,644,013
HarborView Mortgage Loan Trust 2006-12	39654	3	$ -	$ 8,347,820
HarborView Mortgage Loan Trust 2006-12	39654	4	$ 4,084,060	$ 9,114,816
HarborView Mortgage Loan Trust 2006-12	39654	5	$ 11,094,460	$ 9,950,367
HarborView Mortgage Loan Trust 2006-12	39654	6	$ 19,896,280	$ 10,860,234
HarborView Mortgage Loan Trust 2006-12	39654	7	$ 31,022,567	$ 11,850,591
HarborView Mortgage Loan Trust 2006-12	39654	8	$ 40,963,688	$ 12,928,047
HarborView Mortgage Loan Trust 2006-12	39654	9	$ 60,192,493	$ 14,099,652
HarborView Mortgage Loan Trust 2006-12	39654	10	$ 88,526,405	$ 15,372,914
HarborView Mortgage Loan Trust 2006-12	39654	11	$ 96,055,571	$ 16,755,807
HarborView Mortgage Loan Trust 2006-12	39654	12	$ 96,131,151	$ 18,256,769



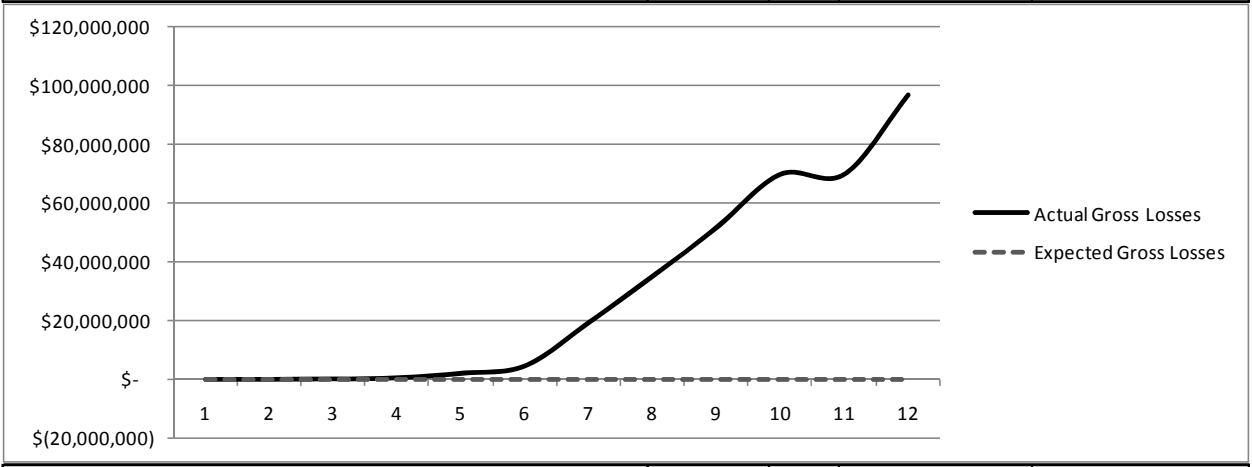
Deal Name	ABSNet Deal I	Month	Actual Gross Losses	Expected Gross Losses
HarborView Mortgage Loan Trust 2006-14	39668	1	$ -	$ 3,574,654
HarborView Mortgage Loan Trust 2006-14	39668	2	$ -	$ 3,904,416
HarborView Mortgage Loan Trust 2006-14	39668	3	$ 368,396	$ 4,263,907
HarborView Mortgage Loan Trust 2006-14	39668	4	$ 6,858,408	$ 4,655,674
HarborView Mortgage Loan Trust 2006-14	39668	5	$ 13,473,277	$ 5,082,458
HarborView Mortgage Loan Trust 2006-14	39668	6	$ 16,771,582	$ 5,547,200
HarborView Mortgage Loan Trust 2006-14	39668	7	$ 21,587,406	$ 6,053,056
HarborView Mortgage Loan Trust 2006-14	39668	8	$ 28,030,117	$ 6,603,399
HarborView Mortgage Loan Trust 2006-14	39668	9	$ 39,750,069	$ 7,201,833
HarborView Mortgage Loan Trust 2006-14	39668	10	$ 44,347,316	$ 7,852,191
HarborView Mortgage Loan Trust 2006-14	39668	11	$ 59,770,494	$ 8,558,546
HarborView Mortgage Loan Trust 2006-14	39668	12	$ 74,945,944	$ 9,325,209



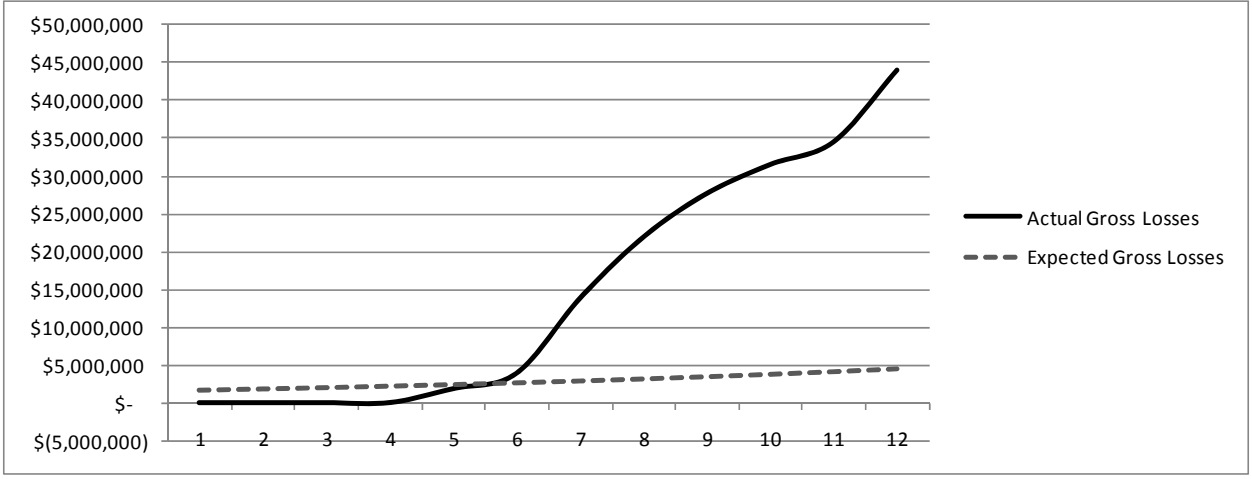
Deal Name	ABSNet Deal I	Month	Actual Gross Losses	Expected Gross Losses
HarborView Mortgage Loan Trust 2006-SB1	39104	1	$ -	$ 698,526
HarborView Mortgage Loan Trust 2006-SB1	39104	2	$ -	$ 762,965
HarborView Mortgage Loan Trust 2006-SB1	39104	3	$ -	$ 833,213
HarborView Mortgage Loan Trust 2006-SB1	39104	4	$ 1,167,337	$ 909,769
HarborView Mortgage Loan Trust 2006-SB1	39104	5	$ -	$ 993,167
HarborView Mortgage Loan Trust 2006-SB1	39104	6	$ 477,277	$ 1,083,983
HarborView Mortgage Loan Trust 2006-SB1	39104	7	$ 1,899,806	$ 1,182,832
HarborView Mortgage Loan Trust 2006-SB1	39104	8	$ 3,186,042	$ 1,290,376
HarborView Mortgage Loan Trust 2006-SB1	39104	9	$ 3,199,660	$ 1,407,316
HarborView Mortgage Loan Trust 2006-SB1	39104	10	$ 4,649,980	$ 1,534,403
HarborView Mortgage Loan Trust 2006-SB1	39104	11	$ 4,741,830	$ 1,672,432
HarborView Mortgage Loan Trust 2006-SB1	39104	12	$ 4,658,378	$ 1,822,246



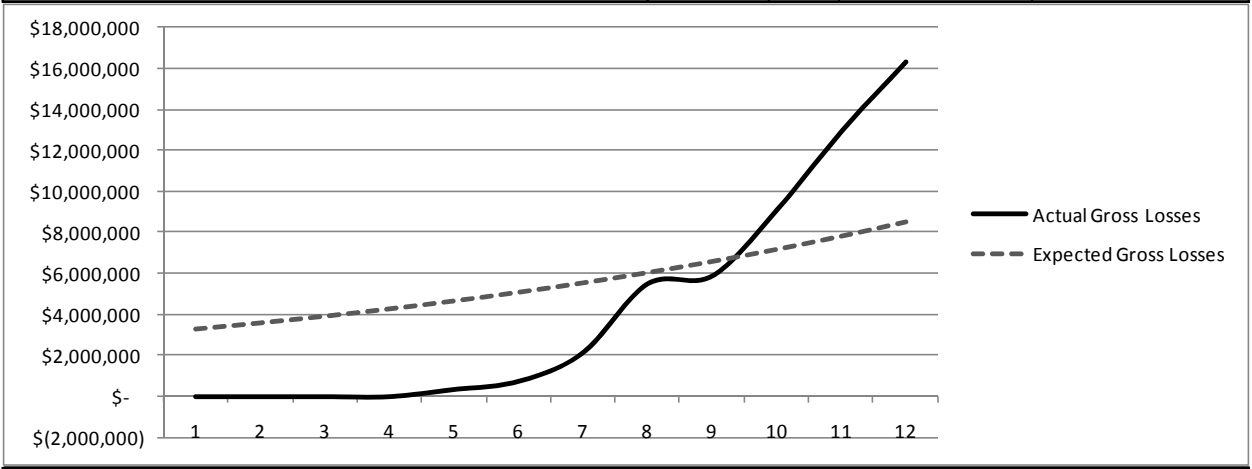
Deal Name	ABSNet Deal I	Month	Actual Gross Losses	Expected Gross Losses
Residential Funding Mortgage Securities II 2007-HSA2	41393	1	$ -	$ -
Residential Funding Mortgage Securities II 2007-HSA2	41393	2	$ -	$ -
Residential Funding Mortgage Securities II 2007-HSA2	41393	3	$ 157,471	$ -
Residential Funding Mortgage Securities II 2007-HSA2	41393	4	$ 483,727	$ -
Residential Funding Mortgage Securities II 2007-HSA2	41393	5	$ 2,081,066	$ -
Residential Funding Mortgage Securities II 2007-HSA2	41393	6	$ 4,572,506	$ -
Residential Funding Mortgage Securities II 2007-HSA2	41393	7	$ 19,343,381	$ -
Residential Funding Mortgage Securities II 2007-HSA2	41393	8	$ 35,109,800	$ -
Residential Funding Mortgage Securities II 2007-HSA2	41393	9	$ 51,664,606	$ -
Residential Funding Mortgage Securities II 2007-HSA2	41393	10	$ 69,818,898	$ -
Residential Funding Mortgage Securities II 2007-HSA2	41393	11	$ 69,818,898	$ -
Residential Funding Mortgage Securities II 2007-HSA2	41393	12	$ 96,847,167	$ -



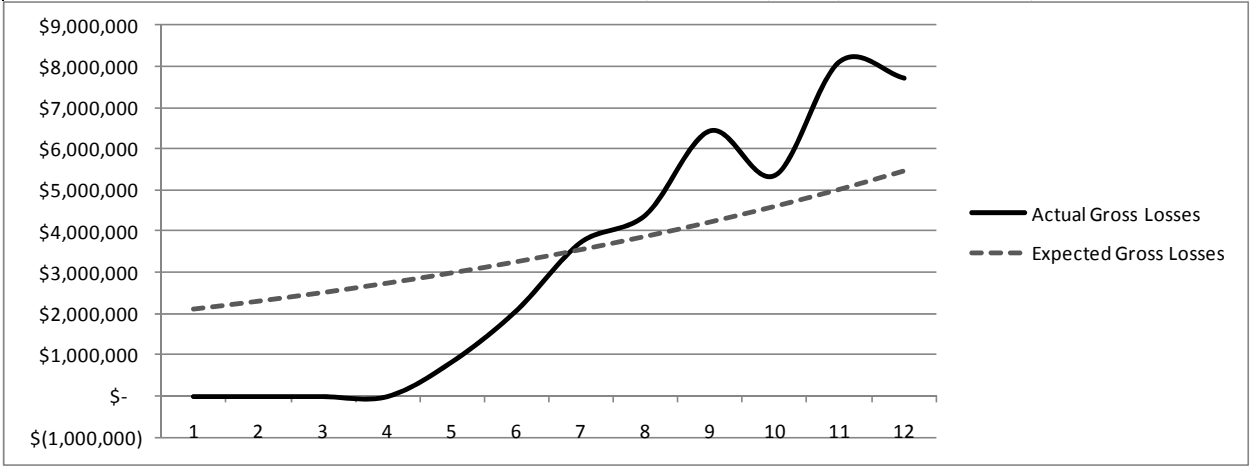
Deal Name	ABSNet Deal I	Month	Actual Gross Losses	Expected Gross Losses
IndyMac INDX Mortgage Loan Trust 2006-AR35	40677	1	$ -	$ 1,734,368
IndyMac INDX Mortgage Loan Trust 2006-AR35	40677	2	$ -	$ 1,894,364
IndyMac INDX Mortgage Loan Trust 2006-AR35	40677	3	$ -	$ 2,068,783
IndyMac INDX Mortgage Loan Trust 2006-AR35	40677	4	$ -	$ 2,258,863
IndyMac INDX Mortgage Loan Trust 2006-AR35	40677	5	$ 1,848,000	$ 2,465,932
IndyMac INDX Mortgage Loan Trust 2006-AR35	40677	6	$ 3,866,023	$ 2,691,418
IndyMac INDX Mortgage Loan Trust 2006-AR35	40677	7	$ 13,740,659	$ 2,936,851
IndyMac INDX Mortgage Loan Trust 2006-AR35	40677	8	$ 21,838,012	$ 3,203,870
IndyMac INDX Mortgage Loan Trust 2006-AR35	40677	9	$ 27,603,649	$ 3,494,221
IndyMac INDX Mortgage Loan Trust 2006-AR35	40677	10	$ 31,428,103	$ 3,809,765
IndyMac INDX Mortgage Loan Trust 2006-AR35	40677	11	$ 34,423,595	$ 4,152,477
IndyMac INDX Mortgage Loan Trust 2006-AR35	40677	12	$ 43,899,521	$ 4,524,450



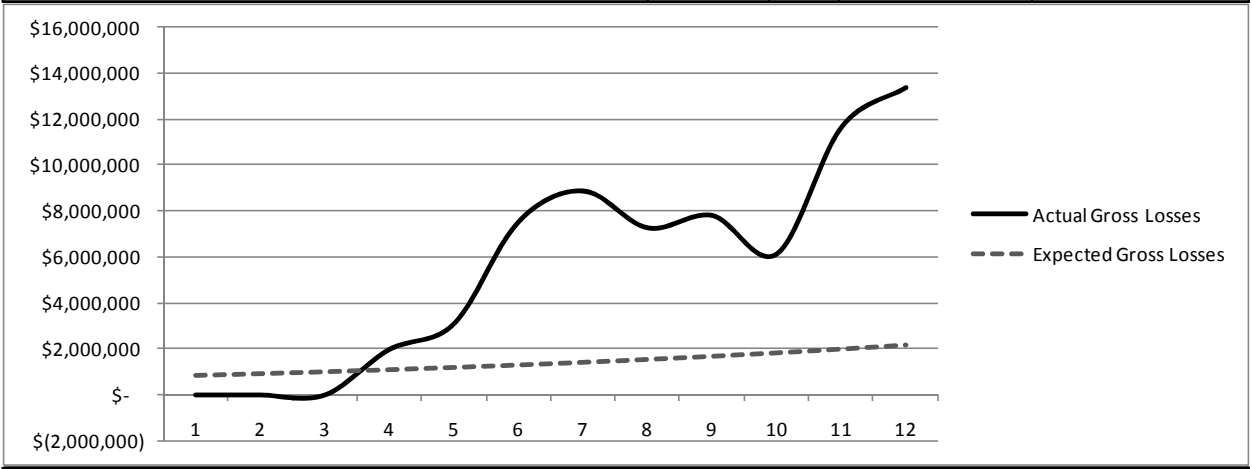
Deal Name	ABSNet Deal I	Month	Actual Gross Losses	Expected Gross Losses
IndyMac INDX Mortgage Loan Trust 2006-AR6	37740	1	$ -	$ 3,273,303
IndyMac INDX Mortgage Loan Trust 2006-AR6	37740	2	$ -	$ 3,575,265
IndyMac INDX Mortgage Loan Trust 2006-AR6	37740	3	$ -	$ 3,904,451
IndyMac INDX Mortgage Loan Trust 2006-AR6	37740	4	$ -	$ 4,263,191
IndyMac INDX Mortgage Loan Trust 2006-AR6	37740	5	$ 346,709	$ 4,653,996
IndyMac INDX Mortgage Loan Trust 2006-AR6	37740	6	$ 743,047	$ 5,079,559
IndyMac INDX Mortgage Loan Trust 2006-AR6	37740	7	$ 2,146,440	$ 5,542,771
IndyMac INDX Mortgage Loan Trust 2006-AR6	37740	8	$ 5,500,716	$ 6,046,719
IndyMac INDX Mortgage Loan Trust 2006-AR6	37740	9	$ 5,884,436	$ 6,594,703
IndyMac INDX Mortgage Loan Trust 2006-AR6	37740	10	$ 9,091,102	$ 7,190,235
IndyMac INDX Mortgage Loan Trust 2006-AR6	37740	11	$ 12,924,144	$ 7,837,043
IndyMac INDX Mortgage Loan Trust 2006-AR6	37740	12	$ 16,320,490	$ 8,539,074



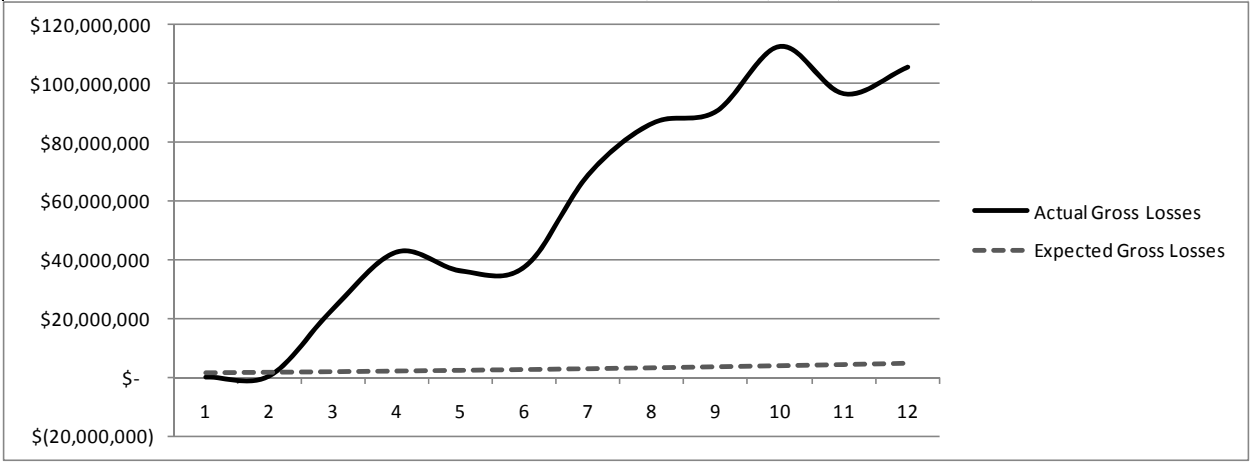
Deal Name	ABSNet Deal I	Month	Actual Gross Losses	Expected Gross Losses
Luminent Mortgage Loan Trust 2006-2	36822	1	$ -	$ 2,098,962
Luminent Mortgage Loan Trust 2006-2	36822	2	$ -	$ 2,292,591
Luminent Mortgage Loan Trust 2006-2	36822	3	$ -	$ 2,503,677
Luminent Mortgage Loan Trust 2006-2	36822	4	$ -	$ 2,733,714
Luminent Mortgage Loan Trust 2006-2	36822	5	$ 837,630	$ 2,984,313
Luminent Mortgage Loan Trust 2006-2	36822	6	$ 2,077,465	$ 3,257,200
Luminent Mortgage Loan Trust 2006-2	36822	7	$ 3,729,555	$ 3,554,228
Luminent Mortgage Loan Trust 2006-2	36822	8	$ 4,392,665	$ 3,877,378
Luminent Mortgage Loan Trust 2006-2	36822	9	$ 6,427,141	$ 4,228,765
Luminent Mortgage Loan Trust 2006-2	36822	10	$ 5,347,433	$ 4,610,642
Luminent Mortgage Loan Trust 2006-2	36822	11	$ 8,096,837	$ 5,025,399
Luminent Mortgage Loan Trust 2006-2	36822	12	$ 7,697,746	$ 5,475,567



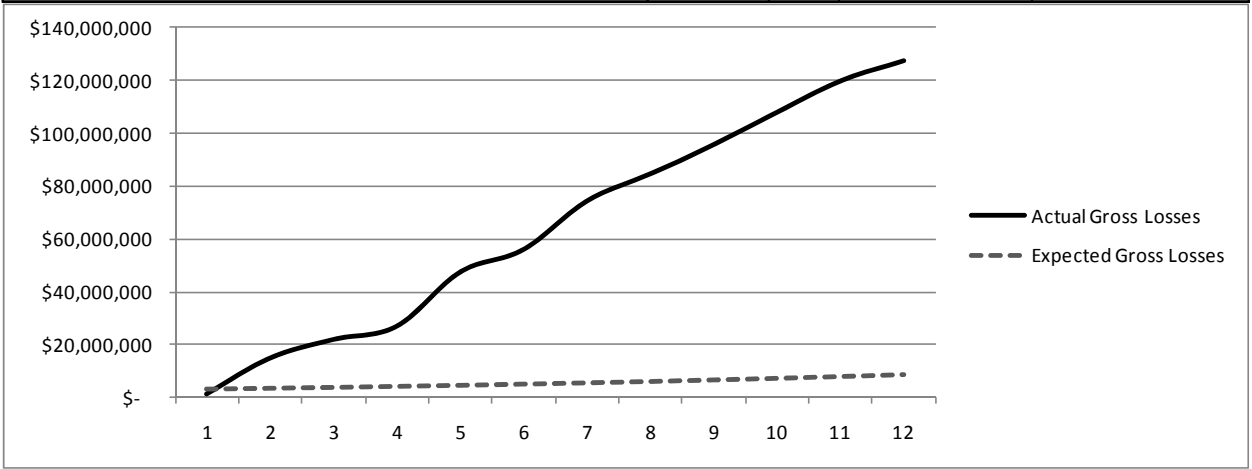
Deal Name	ABSNet Deal I	Month	Actual Gross Losses	Expected Gross Losses
Luminent Mortgage Loan Trust 2007-1	40299	1	$ -	$ 837,607
Luminent Mortgage Loan Trust 2007-1	40299	2	$ -	$ 914,876
Luminent Mortgage Loan Trust 2007-1	40299	3	$ -	$ 999,112
Luminent Mortgage Loan Trust 2007-1	40299	4	$ 1,982,522	$ 1,090,910
Luminent Mortgage Loan Trust 2007-1	40299	5	$ 3,098,851	$ 1,190,913
Luminent Mortgage Loan Trust 2007-1	40299	6	$ 7,535,538	$ 1,299,811
Luminent Mortgage Loan Trust 2007-1	40299	7	$ 8,877,706	$ 1,418,342
Luminent Mortgage Loan Trust 2007-1	40299	8	$ 7,269,659	$ 1,547,298
Luminent Mortgage Loan Trust 2007-1	40299	9	$ 7,809,257	$ 1,687,522
Luminent Mortgage Loan Trust 2007-1	40299	10	$ 6,135,975	$ 1,839,912
Luminent Mortgage Loan Trust 2007-1	40299	11	$ 11,639,877	$ 2,005,424
Luminent Mortgage Loan Trust 2007-1	40299	12	$ 13,374,400	$ 2,185,068



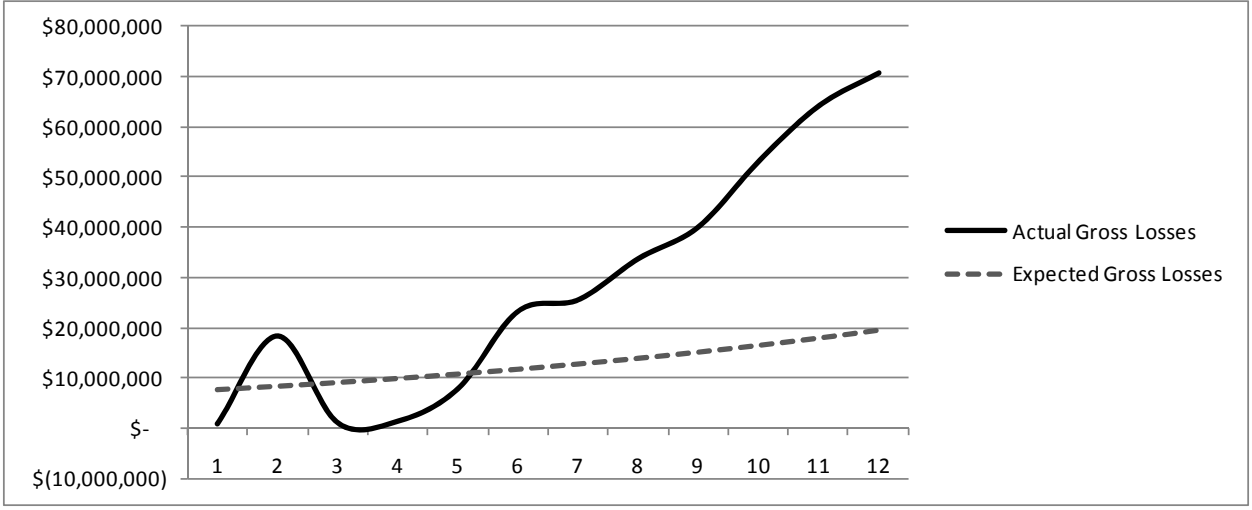
Deal Name	ABSNet Deal I	Month	Actual Gross Losses	Expected Gross Losses
Nomura Home Equity Loan Trust 2007-1	40291	1	$ 159,200	$ 1,737,954
Nomura Home Equity Loan Trust 2007-1	40291	2	$ 619,200	$ 1,898,280
Nomura Home Equity Loan Trust 2007-1	40291	3	$ 23,542,962	$ 2,073,060
Nomura Home Equity Loan Trust 2007-1	40291	4	$ 42,794,130	$ 2,263,533
Nomura Home Equity Loan Trust 2007-1	40291	5	$ 36,287,162	$ 2,471,030
Nomura Home Equity Loan Trust 2007-1	40291	6	$ 37,717,522	$ 2,696,982
Nomura Home Equity Loan Trust 2007-1	40291	7	$ 69,224,811	$ 2,942,923
Nomura Home Equity Loan Trust 2007-1	40291	8	$ 86,609,785	$ 3,210,493
Nomura Home Equity Loan Trust 2007-1	40291	9	$ 90,655,311	$ 3,501,444
Nomura Home Equity Loan Trust 2007-1	40291	10	$ 112,784,673	$ 3,817,641
Nomura Home Equity Loan Trust 2007-1	40291	11	$ 96,635,919	$ 4,161,062
Nomura Home Equity Loan Trust 2007-1	40291	12	$ 105,724,469	$ 4,533,804



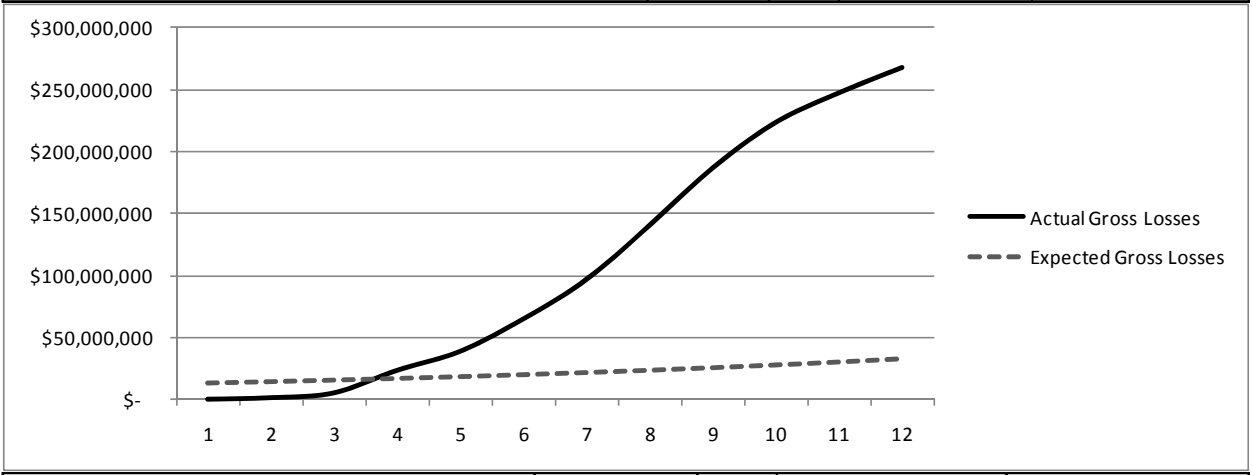
Deal Name	ABSNet Deal I	Month	Actual Gross Losses	Expected Gross Losses
Novastar Mortgage Funding Trust 2006-5	39379	1	$ 1,435,238	$ 3,388,172
Novastar Mortgage Funding Trust 2006-5	39379	2	$ 15,009,169	$ 3,700,731
Novastar Mortgage Funding Trust 2006-5	39379	3	$ 22,047,992	$ 4,041,468
Novastar Mortgage Funding Trust 2006-5	39379	4	$ 27,040,822	$ 4,412,797
Novastar Mortgage Funding Trust 2006-5	39379	5	$ 47,552,372	$ 4,817,316
Novastar Mortgage Funding Trust 2006-5	39379	6	$ 56,075,866	$ 5,257,814
Novastar Mortgage Funding Trust 2006-5	39379	7	$ 74,438,517	$ 5,737,281
Novastar Mortgage Funding Trust 2006-5	39379	8	$ 84,681,723	$ 6,258,914
Novastar Mortgage Funding Trust 2006-5	39379	9	$ 95,762,561	$ 6,826,128
Novastar Mortgage Funding Trust 2006-5	39379	10	$ 108,010,395	$ 7,442,559
Novastar Mortgage Funding Trust 2006-5	39379	11	$ 119,855,905	$ 8,112,065
Novastar Mortgage Funding Trust 2006-5	39379	12	$ 127,523,639	$ 8,838,732



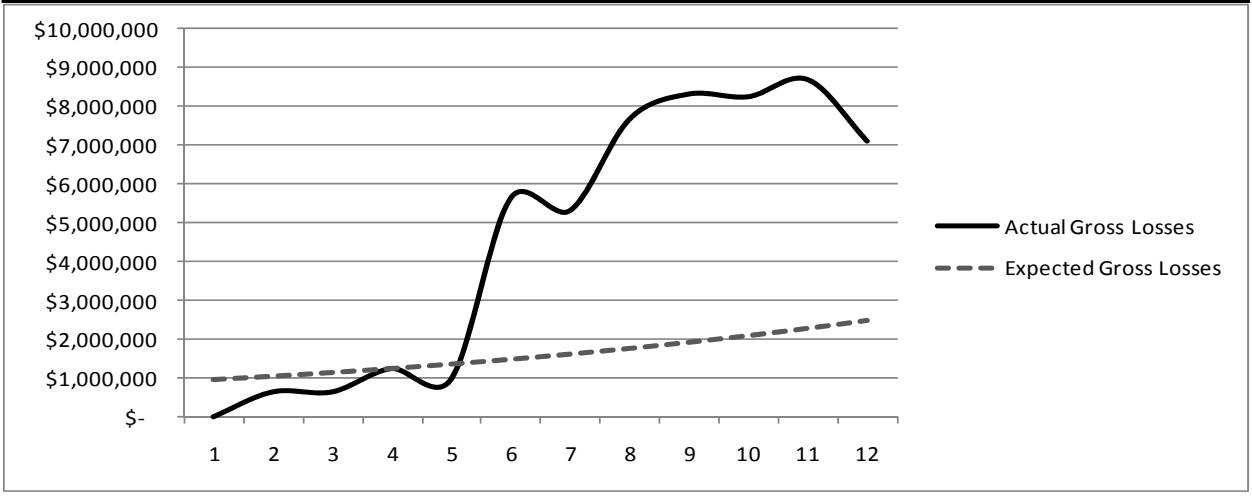
Deal Name	ABSNet Deal I	Month	Actual Gross Losses	Expected Gross Losses
Soundview Home Loan Trust 2006-WF2	39809	1	$ 911,226	$ 7,534,203
Soundview Home Loan Trust 2006-WF2	39809	2	$ 18,341,078	$ 8,229,234
Soundview Home Loan Trust 2006-WF2	39809	3	$ 1,138,334	$ 8,986,923
Soundview Home Loan Trust 2006-WF2	39809	4	$ 1,424,842	$ 9,812,640
Soundview Home Loan Trust 2006-WF2	39809	5	$ 7,863,434	$ 10,712,161
Soundview Home Loan Trust 2006-WF2	39809	6	$ 23,244,822	$ 11,691,686
Soundview Home Loan Trust 2006-WF2	39809	7	$ 25,514,396	$ 12,757,865
Soundview Home Loan Trust 2006-WF2	39809	8	$ 33,685,212	$ 13,917,809
Soundview Home Loan Trust 2006-WF2	39809	9	$ 39,983,224	$ 15,179,112
Soundview Home Loan Trust 2006-WF2	39809	10	$ 52,966,055	$ 16,549,854
Soundview Home Loan Trust 2006-WF2	39809	11	$ 63,985,702	$ 18,038,620
Soundview Home Loan Trust 2006-WF2	39809	12	$ 70,535,110	$ 19,654,495



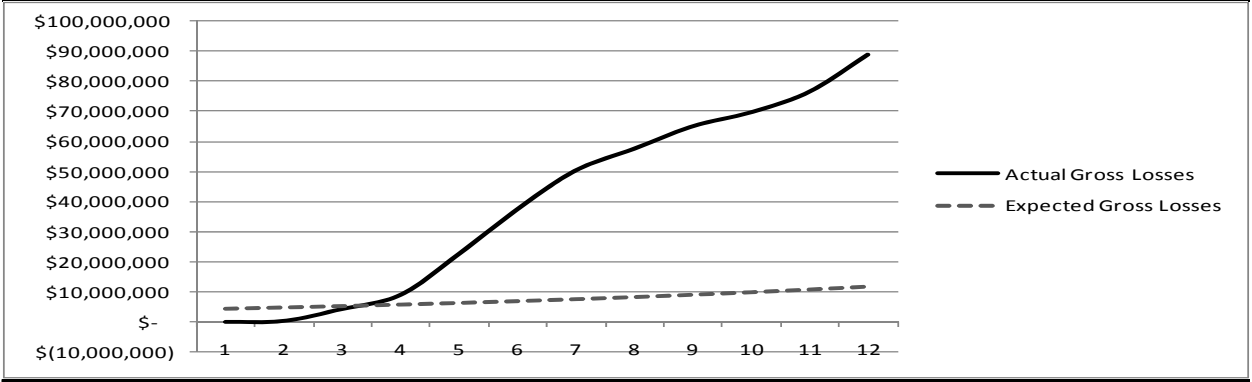
Deal Name	ABSNet Deal I	Month	Actual Gross Losses	Expected Gross Losses
Soundview Home Loan Trust 2007-OPT1	41477	1	$ 800,320	$ 12,708,263
Soundview Home Loan Trust 2007-OPT1	41477	2	$ 1,990,324	$ 13,880,602
Soundview Home Loan Trust 2007-OPT1	41477	3	$ 5,897,021	$ 15,158,629
Soundview Home Loan Trust 2007-OPT1	41477	4	$ 24,033,717	$ 16,551,402
Soundview Home Loan Trust 2007-OPT1	41477	5	$ 39,360,198	$ 18,068,661
Soundview Home Loan Trust 2007-OPT1	41477	6	$ 65,417,195	$ 19,720,869
Soundview Home Loan Trust 2007-OPT1	41477	7	$ 97,194,480	$ 21,519,238
Soundview Home Loan Trust 2007-OPT1	41477	8	$ 140,868,344	$ 23,475,767
Soundview Home Loan Trust 2007-OPT1	41477	9	$ 187,021,181	$ 25,603,259
Soundview Home Loan Trust 2007-OPT1	41477	10	$ 223,791,685	$ 27,915,350
Soundview Home Loan Trust 2007-OPT1	41477	11	$ 247,584,484	$ 30,426,515
Soundview Home Loan Trust 2007-OPT1	41477	12	$ 268,000,765	$ 33,152,080



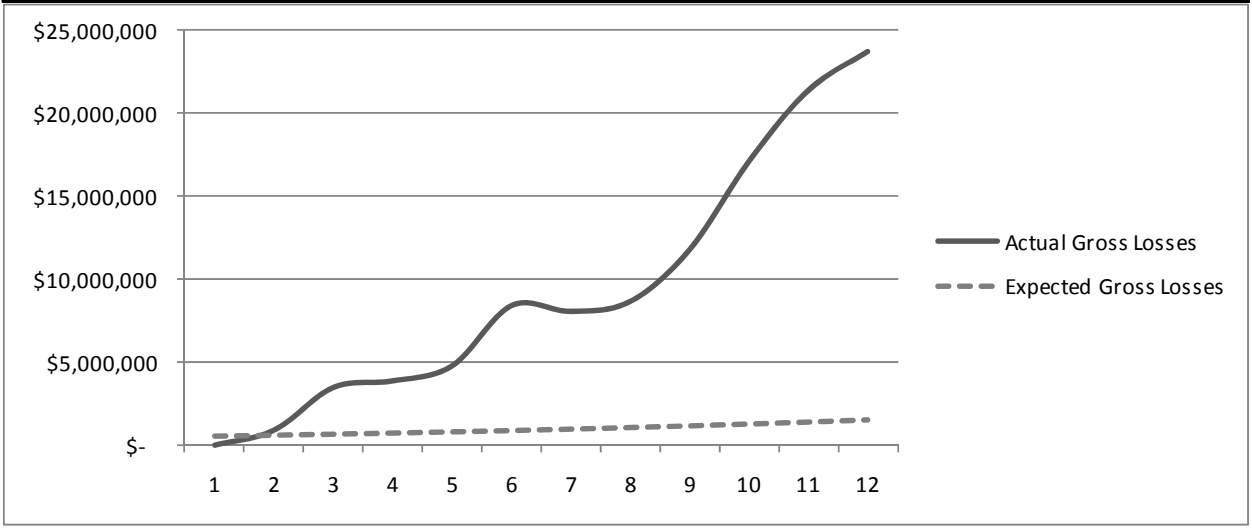
Deal Name	ABSNet Deal Id	Month	Actual Gross Losses	Expected Gross Losses
HarborView Mortgage Loan Trust 2006-6	38212	1	$ -	$ 950,549
HarborView Mortgage Loan Trust 2006-6	38212	2	$ 640,000	$ 1,038,237
HarborView Mortgage Loan Trust 2006-6	38212	3	$ 640,000	$ 1,133,831
HarborView Mortgage Loan Trust 2006-6	38212	4	$ 1,240,000	$ 1,238,007
HarborView Mortgage Loan Trust 2006-6	38212	5	$ 964,000	$ 1,351,494
HarborView Mortgage Loan Trust 2006-6	38212	6	$ 5,622,523	$ 1,475,076
HarborView Mortgage Loan Trust 2006-6	38212	7	$ 5,302,523	$ 1,609,590
HarborView Mortgage Loan Trust 2006-6	38212	8	$ 7,653,841	$ 1,755,934
HarborView Mortgage Loan Trust 2006-6	38212	9	$ 8,302,329	$ 1,915,065
HarborView Mortgage Loan Trust 2006-6	38212	10	$ 8,233,635	$ 2,088,004
HarborView Mortgage Loan Trust 2006-6	38212	11	$ 8,675,973	$ 2,275,834
HarborView Mortgage Loan Trust 2006-6	38212	12	$ 7,094,052	$ 2,479,700



Deal Name	ABSNet Deal Id	Month	Actual Gross Losses	Expected Gross Losses
Saxon Asset Securities Trust 2006-3	39060	1	$ -	$ 4,408,723
Saxon Asset Securities Trust 2006-3	39060	2	$ 327,276	$ 4,815,428
Saxon Asset Securities Trust 2006-3	39060	3	$ 4,305,699	$ 5,258,798
Saxon Asset Securities Trust 2006-3	39060	4	$ 9,014,672	$ 5,741,976
Saxon Asset Securities Trust 2006-3	39060	5	$ 22,639,805	$ 6,268,340
Saxon Asset Securities Trust 2006-3	39060	6	$ 37,466,366	$ 6,841,520
Saxon Asset Securities Trust 2006-3	39060	7	$ 50,358,141	$ 7,465,407
Saxon Asset Securities Trust 2006-3	39060	8	$ 57,544,690	$ 8,144,161
Saxon Asset Securities Trust 2006-3	39060	9	$ 65,001,402	$ 8,882,226
Saxon Asset Securities Trust 2006-3	39060	10	$ 69,665,443	$ 9,684,331
Saxon Asset Securities Trust 2006-3	39060	11	$ 76,468,069	$ 10,555,499
Saxon Asset Securities Trust 2006-3	39060	12	$ 88,802,996	$ 11,501,046



Deal Name	ABSNet Deal ID	Month	Actual Gross Losses	Expected Gross Losses
Wachovia Mortgage Loan Trust 2006-ALT1	40065	1	$ -	$ 571,225
Wachovia Mortgage Loan Trust 2006-ALT1	40065	2	$ 907,000	$ 623,920
Wachovia Mortgage Loan Trust 2006-ALT1	40065	3	$ 3,477,778	$ 681,366
Wachovia Mortgage Loan Trust 2006-ALT1	40065	4	$ 3,865,958	$ 743,970
Wachovia Mortgage Loan Trust 2006-ALT1	40065	5	$ 4,775,290	$ 812,169
Wachovia Mortgage Loan Trust 2006-ALT1	40065	6	$ 8,398,870	$ 886,435
Wachovia Mortgage Loan Trust 2006-ALT1	40065	7	$ 8,047,724	$ 967,270
Wachovia Mortgage Loan Trust 2006-ALT1	40065	8	$ 8,645,036	$ 1,055,214
Wachovia Mortgage Loan Trust 2006-ALT1	40065	9	$ 11,762,701	$ 1,150,843
Wachovia Mortgage Loan Trust 2006-ALT1	40065	10	$ 17,071,099	$ 1,254,769
Wachovia Mortgage Loan Trust 2006-ALT1	40065	11	$ 21,346,144	$ 1,367,643
Wachovia Mortgage Loan Trust 2006-ALT1	40065	12	$ 23,684,214	$ 1,490,155



86. As clearly shown in Figure 2 (*supra*), actual losses spiked almost immediately after issuance of the RMBS. For example, in the Nomura Home Equity Loan Trust 2007-1 offering (shown in Figure 2), actual losses at month 12 exceeded $105 million, 23 times the expected losses of approximately $4.5 million.

87. This dramatic spike in actual versus expected defaults in the securities' mortgage pools during the first 12 months following issuance very strongly evidences that the Originators systematically disregarded the underwriting standards in the Offering Documents.

88. In addition, credit enhancement is designed to ensure that RMBS rated at the highest investment grades perform as rated. The fact that the credit enhancement failed for U.S. Central's investments in senior tranches shows that a substantial number of mortgages in the pool were not originated in accordance with underwriting guidelines.

I. The Collapse of the Certificates' Credit Ratings is Evidence of Systematic Disregard of Underwriting Guidelines

89. Virtually all of the RMBS U.S. Central purchased were rated triple-A at issuance.

90. Moody's and S&P have since downgraded the RMBS U.S. Central purchased to well below investment grade (*see supra* Table 4).

91. A rating downgrade is material. The total collapse in the credit ratings of the RMBS U.S. Central purchased, typically from triple-A to non-investment speculative grade, is evidence of the Originators' systematic disregard of underwriting guidelines, amplifying that these securities were impaired from the outset.

J. Revelations Subsequent to the Offerings Show That the Originators Systematically Disregarded Underwriting Standards

92. Public disclosures subsequent to the issuance of the RMBS reinforce the allegation that the Originators systematically abandoned their stated underwriting guidelines.

United States Senate
PERMANENT SUBCOMMITTEE ON INVESTIGATIONS
Committee on Homeland Security and Governmental Affairs

Carl Levin, Chairman
Tom Coburn, Ranking Minority Member

WALL STREET AND THE FINANCIAL CRISIS: Anatomy of a Financial Collapse

MAJORITY AND MINORITY STAFF REPORT

PERMANENT SUBCOMMITTEE ON INVESTIGATIONS

UNITED STATES SENATE

April 13, 2011

Wall Street and The Financial Crisis: Anatomy of a Financial Collapse

April 13, 2011

In the fall of 2008, America suffered a devastating economic collapse. Once valuable securities lost most or all of their value, debt markets froze, stock markets plunged, and storied financial firms went under. Millions of Americans lost their jobs; millions of families lost their homes; and good businesses shut down. These events cast the United States into an economic recession so deep that the country has yet to fully recover.

This Report is the product of a two-year bipartisan investigation by the U.S. Senate Permanent Subcommittee on Investigations into the origins of the 2008 financial crisis. The goals of this investigation were to construct a public record of the facts in order to deepen the understanding of what happened; identify some of the root causes of the crisis; and provide a factual foundation for the ongoing effort to fortify the country against the recurrence of a similar crisis in the future.

Using internal documents, communications, and interviews, the Report attempts to provide the clearest picture yet of what took place inside the walls of some of the financial institutions and regulatory agencies that contributed to the crisis. The investigation found that the crisis was not a natural disaster, but the result of high risk, complex financial products; undisclosed conflicts of interest; and the failure of regulators, the credit rating agencies, and the market itself to rein in the excesses of Wall Street.

While this Report does not attempt to examine every key moment, or analyze every important cause of the crisis, it provides new, detailed, and compelling evidence of what happened. In so doing, we hope the Report leads to solutions that prevent it from happening again.

I. EXECUTIVE SUMMARY

A. Subcommittee Investigation

In November 2008, the Permanent Subcommittee on Investigations initiated its investigation into some of the key causes of the financial crisis. Since then, the Subcommittee has engaged in a wide-ranging inquiry, issuing subpoenas, conducting over 150 interviews and depositions, and consulting with dozens of government, academic, and private sector experts. The Subcommittee has accumulated and reviewed tens of millions of pages of documents, including court pleadings, filings with the Securities and Exchange Commission, trustee reports, prospectuses for public and private offerings, corporate board and committee minutes, mortgage transactions and analyses, memoranda, marketing materials, correspondence, and emails. The Subcommittee has also reviewed documents prepared by or sent to or from banking and

securities regulators, including bank examination reports, reviews of securities firms, enforcement actions, analyses, memoranda, correspondence, and emails.

In April 2010, the Subcommittee held four hearings examining four root causes of the financial crisis. Using case studies detailed in thousands of pages of documents released at the hearings, the Subcommittee presented and examined evidence showing how high risk lending by U.S. financial institutions; regulatory failures; inflated credit ratings; and high risk, poor quality financial products designed and sold by some investment banks, contributed to the financial crisis. This Report expands on those hearings and the case studies they featured. The case studies are Washington Mutual Bank, the largest bank failure in U.S. history; the federal Office of Thrift Supervision which oversaw Washington Mutual's demise; Moody's and Standard & Poor's, the country's two largest credit rating agencies; and Goldman Sachs and Deutsche Bank, two leaders in the design, marketing, and sale of mortgage related securities. This Report devotes a chapter to how each of the four causative factors, as illustrated by the case studies, fueled the 2008 financial crisis, providing findings of fact, analysis of the issues, and recommendations for next steps.

B. Overview

(1) High Risk Lending: Case Study of Washington Mutual Bank

The first chapter focuses on how high risk mortgage lending contributed to the financial crisis, using as a case study Washington Mutual Bank (WaMu). At the time of its failure, WaMu was the nation's largest thrift and sixth largest bank, with $300 billion in assets, $188 billion in deposits, 2,300 branches in 15 states, and over 43,000 employees. Beginning in 2004, it embarked upon a lending strategy to pursue higher profits by emphasizing high risk loans. By 2006, WaMu's high risk loans began incurring high rates of delinquency and default, and in 2007, its mortgage backed securities began incurring ratings downgrades and losses. Also in 2007, the bank itself began incurring losses due to a portfolio that contained poor quality and fraudulent loans and securities. Its stock price dropped as shareholders lost confidence, and depositors began withdrawing funds, eventually causing a liquidity crisis at the bank. On September 25, 2008, WaMu was seized by its regulator, the Office of Thrift Supervision, placed in receivership with the Federal Deposit Insurance Corporation (FDIC), and sold to JPMorgan Chase for $1.9 billion. Had the sale not gone through, WaMu's failure might have exhausted the entire $45 billion Deposit Insurance Fund.

This case study focuses on how one bank's search for increased growth and profit led to the origination and securitization of hundreds of billions of dollars in high risk, poor quality mortgages that ultimately plummeted in value, hurting investors, the bank, and the U.S. financial system. WaMu had held itself out as a prudent lender, but in reality, the bank turned increasingly to higher risk loans. Over a four-year period, those higher risk loans grew from 19% of WaMu's loan originations in 2003, to 55% in 2006, while its lower risk, fixed rate loans fell from 64% to 25% of its originations. At the same time, WaMu increased its securitization of

subprime loans sixfold, primarily through its subprime lender, Long Beach Mortgage Corporation, increasing such loans from nearly $4.5 billion in 2003, to $29 billion in 2006. From 2000 to 2007, WaMu and Long Beach together securitized at least $77 billion in subprime loans.

WaMu also originated an increasing number of its flagship product, Option Adjustable Rate Mortgages (Option ARMs), which created high risk, negatively amortizing mortgages and, from 2003 to 2007, represented as much as half of all of WaMu's loan originations. In 2006 alone, Washington Mutual originated more than $42.6 billion in Option ARM loans and sold or securitized at least $115 billion to investors, including sales to the Federal National Mortgage Association (Fannie Mae) and Federal Home Loan Mortgage Corporation (Freddie Mac). In addition, WaMu greatly increased its origination and securitization of high risk home equity loan products. By 2007, home equity loans made up $63.5 billion or 27% of its home loan portfolio, a 130% increase from 2003.

At the same time that WaMu was implementing its high risk lending strategy, WaMu and Long Beach engaged in a host of shoddy lending practices that produced billions of dollars in high risk, poor quality mortgages and mortgage backed securities. Those practices included qualifying high risk borrowers for larger loans than they could afford; steering borrowers from conventional mortgages to higher risk loan products; accepting loan applications without verifying the borrower's income; using loans with low, short term "teaser" rates that could lead to payment shock when higher interest rates took effect later on; promoting negatively amortizing loans in which many borrowers increased rather than paid down their debt; and authorizing loans with multiple layers of risk. In addition, WaMu and Long Beach failed to enforce compliance with their own lending standards; allowed excessive loan error and exception rates; exercised weak oversight over the third party mortgage brokers who supplied half or more of their loans; and tolerated the issuance of loans with fraudulent or erroneous borrower information. They also designed compensation incentives that rewarded loan personnel for issuing a large volume of higher risk loans, valuing speed and volume over loan quality.

As a result, WaMu, and particularly its Long Beach subsidiary, became known by industry insiders for its failed mortgages and poorly performing residential mortgage backed securities (RMBS). Among sophisticated investors, its securitizations were understood to be some of the worst performing in the marketplace. Inside the bank, WaMu's President Steve Rotella described Long Beach as "terrible" and "a mess," with default rates that were "ugly." WaMu's high risk lending operation was also problem-plagued. WaMu management was provided with compelling evidence of deficient lending practices in internal emails, audit reports, and reviews. Internal reviews of two high volume WaMu loan centers, for example, described "extensive fraud" by employees who "willfully" circumvented bank policies. A WaMu review of internal controls to stop fraudulent loans from being sold to investors described them as "ineffective." On at least one occasion, senior managers knowingly sold delinquency-prone loans to investors. Aside from Long Beach, WaMu's President described WaMu's prime home loan business as the "worst managed business" he had seen in his career.

Documents obtained by the Subcommittee reveal that WaMu launched its high risk lending strategy primarily because higher risk loans and mortgage backed securities could be sold for higher prices on Wall Street. They garnered higher prices because higher risk meant the securities paid a higher coupon rate than other comparably rated securities, and investors paid a higher price to buy them. Selling or securitizing the loans also removed them from WaMu's books and appeared to insulate the bank from risk.

The Subcommittee investigation indicates that unacceptable lending and securitization practices were not restricted to Washington Mutual, but were present at a host of financial institutions that originated, sold, and securitized billions of dollars in high risk, poor quality home loans that inundated U.S. financial markets. Many of the resulting securities ultimately plummeted in value, leaving banks and investors with huge losses that helped send the economy into a downward spiral. These lenders were not the victims of the financial crisis; the high risk loans they issued were the fuel that ignited the financial crisis.

(2) Regulatory Failure: Case Study of the Office of Thrift Supervision

The next chapter focuses on the failure of the Office of Thrift Supervision (OTS) to stop the unsafe and unsound practices that led to the demise of Washington Mutual, one of the nation's largest banks. Over a five year period from 2004 to 2008, OTS identified over 500 serious deficiencies at WaMu, yet failed to take action to force the bank to improve its lending operations and even impeded oversight by the bank's backup regulator, the FDIC.

Washington Mutual Bank was the largest thrift under the supervision of OTS and was among the eight largest financial institutions insured by the FDIC. Until 2006, WaMu was a profitable bank, but in 2007, many of its high risk home loans began experiencing increased rates of delinquency, default, and loss. After the market for subprime mortgage backed securities collapsed in July 2007, Washington Mutual was unable to sell or securitize its subprime loans and its loan portfolio fell in value. In September 2007, WaMu's stock price plummeted against the backdrop of its losses and a worsening financial crisis. From 2007 to 2008, WaMu's depositors withdrew a total of over $26 billion in deposits from the bank, triggering a liquidity crisis, followed by the bank's closure.

OTS records show that, during the five years prior to WaMu's collapse, OTS examiners repeatedly identified significant problems with Washington Mutual's lending practices, risk management, asset quality, and appraisal practices, and requested corrective action. Year after year, WaMu promised to correct the identified problems, but never did. OTS failed to respond with meaningful enforcement action, such as by downgrading WaMu's rating for safety and soundness, requiring a public plan with deadlines for corrective actions, or imposing civil fines for inaction. To the contrary, until shortly before the thrift's failure in 2008, OTS continually rated WaMu as financially sound.

The agency's failure to restrain WaMu's unsafe lending practices stemmed in part from an OTS regulatory culture that viewed its thrifts as "constituents," relied on bank management to

correct identified problems with minimal regulatory intervention, and expressed reluctance to interfere with even unsound lending and securitization practices. OTS displayed an unusual amount of deference to WaMu's management, choosing to rely on the bank to police itself in its use of safe and sound practices. The reasoning appeared to be that if OTS examiners simply identified the problems at the bank, OTS could then rely on WaMu's assurances that problems would be corrected, with little need for tough enforcement actions. It was a regulatory approach with disastrous results.

Despite identifying over 500 serious deficiencies in five years, OTS did not once, from 2004 to 2008, take a public enforcement action against Washington Mutual to correct its lending practices, nor did it lower the bank's rating for safety and soundness. Only in 2008, as the bank incurred mounting losses, did OTS finally take two informal, nonpublic enforcement actions, requiring WaMu to agree to a "Board Resolution" in March and a "Memorandum of Understanding" in September, neither of which imposed sufficient changes to prevent the bank's failure. OTS officials resisted calls by the FDIC, the bank's backup regulator, for stronger measures and even impeded FDIC oversight efforts by at times denying FDIC examiners office space and access to bank records. Tensions between the two agencies remained high until the end. Two weeks before the bank was seized, the FDIC Chairman contacted WaMu directly to inform it that the FDIC was likely to have a ratings disagreement with OTS and downgrade the bank's safety and soundness rating, and informed the OTS Director about that communication, prompting him to complain about the FDIC Chairman's "audacity."

Hindered by a culture of deference to management, demoralized examiners, and agency infighting, OTS officials allowed the bank's short term profits to excuse its risky practices and failed to evaluate the bank's actions in the context of the U.S. financial system as a whole. Its narrow regulatory focus prevented OTS from analyzing or acknowledging until it was too late that WaMu's practices could harm the broader economy.

OTS' failure to restrain Washington Mutual's unsafe lending practices allowed high risk loans at the bank to proliferate, negatively impacting investors across the United States and around the world. Similar regulatory failings by other agencies involving other lenders repeated the problem on a broad scale. The result was a mortgage market saturated with risky loans, and financial institutions that were supposed to hold predominantly safe investments but instead held portfolios rife with high risk, poor quality mortgages. When those loans began defaulting in record numbers and mortgage related securities plummeted in value, financial institutions around the globe suffered hundreds of billions of dollars in losses, triggering an economic disaster. The regulatory failures that set the stage for those losses were a proximate cause of the financial crisis.

(3) Inflated Credit Ratings: Case Study of Moody's and Standard & Poor's

The next chapter examines how inflated credit ratings contributed to the financial crisis by masking the true risk of many mortgage related securities. Using case studies involving Moody's Investors Service, Inc. (Moody's) and Standard & Poor's Financial Services LLC

(S&P), the nation's two largest credit rating agencies, the Subcommittee identified multiple problems responsible for the inaccurate ratings, including conflicts of interest that placed achieving market share and increased revenues ahead of ensuring accurate ratings.

Between 2004 and 2007, Moody's and S&P issued credit ratings for tens of thousands of U.S. residential mortgage backed securities (RMBS) and collateralized debt obligations (CDO). Taking in increasing revenue from Wall Street firms, Moody's and S&P issued AAA and other investment grade credit ratings for the vast majority of those RMBS and CDO securities, deeming them safe investments even though many relied on high risk home loans.[1] In late 2006, high risk mortgages began incurring delinquencies and defaults at an alarming rate. Despite signs of a deteriorating mortgage market, Moody's and S&P continued for six months to issue investment grade ratings for numerous RMBS and CDO securities.

Then, in July 2007, as mortgage delinquencies intensified and RMBS and CDO securities began incurring losses, both companies abruptly reversed course and began downgrading at record numbers hundreds and then thousands of their RMBS and CDO ratings, some less than a year old. Investors like banks, pension funds, and insurance companies, who are by rule barred from owning low rated securities, were forced to sell off their downgraded RMBS and CDO holdings, because they had lost their investment grade status. RMBS and CDO securities held by financial firms lost much of their value, and new securitizations were unable to find investors. The subprime RMBS market initially froze and then collapsed, leaving investors and financial firms around the world holding unmarketable subprime RMBS securities that were plummeting in value. A few months later, the CDO market collapsed as well.

Traditionally, investments holding AAA ratings have had a less than 1% probability of incurring defaults. But in 2007, the vast majority of RMBS and CDO securities with AAA ratings incurred substantial losses; some failed outright. Analysts have determined that over 90% of the AAA ratings given to subprime RMBS securities originated in 2006 and 2007 were later downgraded by the credit rating agencies to junk status. In the case of Long Beach, 75 out of 75 AAA rated Long Beach securities issued in 2006, were later downgraded to junk status, defaulted, or withdrawn. Investors and financial institutions holding the AAA rated securities lost significant value. Those widespread losses led, in turn, to a loss of investor confidence in the value of the AAA rating, in the holdings of major U.S. financial institutions, and even in the viability of U.S. financial markets.

Inaccurate AAA credit ratings introduced risk into the U.S. financial system and constituted a key cause of the financial crisis. In addition, the July mass downgrades, which were unprecedented in number and scope, precipitated the collapse of the RMBS and CDO secondary markets, and perhaps more than any other single event triggered the beginning of the financial crisis.

[1] S&P issues ratings using the "AAA" designation; Moody's equivalent rating is "Aaa." For ease of reference, this Report will refer to both ratings as "AAA."

The Subcommittee's investigation uncovered a host of factors responsible for the inaccurate credit ratings issued by Moody's and S&P. One significant cause was the inherent conflict of interest arising from the system used to pay for credit ratings. Credit rating agencies were paid by the Wall Street firms that sought their ratings and profited from the financial products being rated. Under this "issuer pays" model, the rating agencies were dependent upon those Wall Street firms to bring them business, and were vulnerable to threats that the firms would take their business elsewhere if they did not get the ratings they wanted. The rating agencies weakened their standards as each competed to provide the most favorable rating to win business and greater market share. The result was a race to the bottom.

Additional factors responsible for the inaccurate ratings include rating models that failed to include relevant mortgage performance data; unclear and subjective criteria used to produce ratings; a failure to apply updated rating models to existing rated transactions; and a failure to provide adequate staffing to perform rating and surveillance services, despite record revenues. Compounding these problems were federal regulations that required the purchase of investment grade securities by banks and others, which created pressure on the credit rating agencies to issue investment grade ratings. While these federal regulations were intended to help investors stay away from unsafe securities, they had the opposite effect when the AAA ratings proved inaccurate.

Evidence gathered by the Subcommittee shows that the credit rating agencies were aware of problems in the mortgage market, including an unsustainable rise in housing prices, the high risk nature of the loans being issued, lax lending standards, and rampant mortgage fraud. Instead of using this information to temper their ratings, the firms continued to issue a high volume of investment grade ratings for mortgage backed securities. If the credit rating agencies had issued ratings that accurately reflected the increasing risk in the RMBS and CDO markets and appropriately adjusted existing ratings in those markets, they might have discouraged investors from purchasing high risk RMBS and CDO securities, and slowed the pace of securitizations.

It was not in the short term economic interest of either Moody's or S&P, however, to provide accurate credit ratings for high risk RMBS and CDO securities, because doing so would have hurt their own revenues. Instead, the credit rating agencies' profits became increasingly reliant on the fees generated by issuing a large volume of structured finance ratings. In the end, Moody's and S&P provided AAA ratings to tens of thousands of high risk RMBS and CDO securities and then, when those products began to incur losses, issued mass downgrades that shocked the financial markets, hammered the value of the mortgage related securities, and helped trigger the financial crisis.

(4) Investment Bank Abuses: Case Study of Goldman Sachs and Deutsche Bank

The final chapter examines how investment banks contributed to the financial crisis, using as case studies Goldman Sachs and Deutsche Bank, two leading participants in the U.S. mortgage market.

Investment banks can play an important role in the U.S. economy, helping to channel the nation's wealth into productive activities that create jobs and increase economic growth. But in the years leading up to the financial crisis, large investment banks designed and promoted complex financial instruments, often referred to as structured finance products, that were at the heart of the crisis. They included RMBS and CDO securities, credit default swaps (CDS), and CDS contracts linked to the ABX Index. These complex, high risk financial products were engineered, sold, and traded by the major U.S. investment banks.

From 2004 to 2008, U.S. financial institutions issued nearly $2.5 trillion in RMBS and over $1.4 trillion in CDO securities, backed primarily by mortgage related products. Investment banks typically charged fees of $1 to $8 million to act as the underwriter of an RMBS securitization, and $5 to $10 million to act as the placement agent for a CDO securitization. Those fees contributed substantial revenues to the investment banks, which established internal structured finance groups, as well as a variety of RMBS and CDO origination and trading desks within those groups, to handle mortgage related securitizations. Investment banks sold RMBS and CDO securities to investors around the world, and helped develop a secondary market where RMBS and CDO securities could be traded. The investment banks' trading desks participated in those secondary markets, buying and selling RMBS and CDO securities either on behalf of their clients or in connection with their own proprietary transactions.

The financial products developed by investment banks allowed investors to profit, not only from the success of an RMBS or CDO securitization, but also from its failure. CDS contracts, for example, allowed counterparties to wager on the rise or fall in the value of a specific RMBS security or on a collection of RMBS and other assets contained or referenced in a CDO. Major investment banks developed standardized CDS contracts that could also be traded on a secondary market. In addition, they established the ABX Index which allowed counterparties to wager on the rise or fall in the value of a basket of subprime RMBS securities, which could be used to reflect the status of the subprime mortgage market as a whole. The investment banks sometimes matched up parties who wanted to take opposite sides in a transaction and other times took one or the other side of the transaction to accommodate a client. At still other times, investment banks used these financial instruments to make their own proprietary wagers. In extreme cases, some investment banks set up structured finance transactions which enabled them to profit at the expense of their clients.

Two case studies, involving Goldman Sachs and Deutsche Bank, illustrate a variety of troubling practices that raise conflicts of interest and other concerns involving RMBS, CDO, CDS, and ABX related financial instruments that contributed to the financial crisis.

The Goldman Sachs case study focuses on how it used net short positions to benefit from the downturn in the mortgage market, and designed, marketed, and sold CDOs in ways that created conflicts of interest with the firm's clients and at times led to the bank's profiting from the same products that caused substantial losses for its clients.

From 2004 to 2008, Goldman was a major player in the U.S. mortgage market. In 2006 and 2007 alone, it designed and underwrote 93 RMBS and 27 mortgage related CDO

securitizations totaling about $100 billion, bought and sold RMBS and CDO securities on behalf of its clients, and amassed its own multi-billion-dollar proprietary mortgage related holdings. In December 2006, however, when it saw evidence that the high risk mortgages underlying many RMBS and CDO securities were incurring accelerated rates of delinquency and default, Goldman quietly and abruptly reversed course.

Over the next two months, it rapidly sold off or wrote down the bulk of its existing subprime RMBS and CDO inventory, and began building a short position that would allow it to profit from the decline of the mortgage market. Throughout 2007, Goldman twice built up and cashed in sizeable mortgage related short positions. At its peak, Goldman's net short position totaled $13.9 billion. Overall in 2007, its net short position produced record profits totaling $3.7 billion for Goldman's Structured Products Group, which when combined with other mortgage losses, produced record net revenues of $1.1 billion for the Mortgage Department as a whole.

Throughout 2007, Goldman sold RMBS and CDO securities to its clients without disclosing its own net short position against the subprime market or its purchase of CDS contracts to gain from the loss in value of some of the very securities it was selling to its clients.

The case study examines in detail four CDOs that Goldman constructed and sold called Hudson 1, Anderson, Timberwolf, and Abacus 2007-AC1. In some cases, Goldman transferred risky assets from its own inventory into these CDOs; in others, it included poor quality assets that were likely to lose value or not perform. In three of the CDOs, Hudson, Anderson and Timberwolf, Goldman took a substantial portion of the short side of the CDO, essentially betting that the assets within the CDO would fall in value or not perform. Goldman's short position was in direct opposition to the clients to whom it was selling the CDO securities, yet it failed to disclose the size and nature of its short position while marketing the securities. While Goldman sometimes included obscure language in its marketing materials about the possibility of its taking a short position on the CDO securities it was selling, Goldman did not disclose to potential investors when it had already determined to take or had already taken short investments that would pay off if the particular security it was selling, or RMBS and CDO securities in general, performed poorly. In the case of Hudson 1, for example, Goldman took 100% of the short side of the $2 billion CDO, betting against the assets referenced in the CDO, and sold the Hudson securities to investors without disclosing its short position. When the securities lost value, Goldman made a $1.7 billion gain at the direct expense of the clients to whom it had sold the securities.

In the case of Anderson, Goldman selected a large number of poorly performing assets for the CDO, took 40% of the short position, and then marketed Anderson securities to its clients. When a client asked how Goldman "got comfortable" with the New Century loans in the CDO, Goldman personnel tried to dispel concerns about the loans, and did not disclose the firm's own negative view of them or its short position in the CDO.

In the case of Timberwolf, Goldman sold the securities to its clients even as it knew the securities were falling in value. In some cases, Goldman knowingly sold Timberwolf securities to clients at prices above its own book values and, within days or weeks of the sale, marked

down the value of the sold securities, causing its clients to incur quick losses and requiring some to post higher margin or cash collateral. Timberwolf securities lost 80% of their value within five months of being issued and today are worthless. Goldman took 36% of the short position in the CDO and made money from that investment, but ultimately lost money when it could not sell all of the Timberwolf securities.

In the case of Abacus, Goldman did not take the short position, but allowed a hedge fund, Paulson & Co. Inc., that planned on shorting the CDO to play a major but hidden role in selecting its assets. Goldman marketed Abacus securities to its clients, knowing the CDO was designed to lose value and without disclosing the hedge fund's asset selection role or investment objective to potential investors. Three long investors together lost about $1 billion from their Abacus investments, while the Paulson hedge fund profited by about the same amount. Today, the Abacus securities are worthless.

In the Hudson and Timberwolf CDOs, Goldman also used its role as the collateral put provider or liquidation agent to advance its financial interest to the detriment of the clients to whom it sold the CDO securities.

The Deutsche Bank case study describes how the bank's top global CDO trader, Greg Lippmann, repeatedly warned and advised his Deutsche Bank colleagues and some of his clients seeking to buy short positions about the poor quality of the RMBS securities underlying many CDOs. He described some of those securities as "crap" and "pigs," and predicted the assets and the CDO securities would lose value. At one point, Mr. Lippmann was asked to buy a specific CDO security and responded that it "rarely trades," but he "would take it and try to dupe someone" into buying it. He also at times referred to the industry's ongoing CDO marketing efforts as a "CDO machine" or "ponzi scheme." Deutsche Bank's senior management disagreed with his negative views, and used the bank's own funds to make large proprietary investments in mortgage related securities that, in 2007, had a notional or face value of $128 billion and a market value of more than $25 billion. Despite its positive view of the housing market, the bank allowed Mr. Lippmann to develop a large proprietary short position for the bank in the RMBS market, which from 2005 to 2007, totaled $5 billion. The bank cashed in the short position from 2007 to 2008, generating a profit of $1.5 billion, which Mr. Lippmann claims is more money on a single position than any other trade had ever made for Deutsche Bank in its history. Despite that gain, due to its large long holdings, Deutsche Bank lost nearly $4.5 billion from its mortgage related proprietary investments.

The Subcommittee also examined a $1.1 billion CDO underwritten by Deutsche Bank known as Gemstone CDO VII Ltd. (Gemstone 7), which issued securities in March 2007. It was one of 47 CDOs totaling $32 billion that Deutsche Bank underwrote from 2004 to 2008. Deutsche Bank made $4.7 million in fees from Gemstone 7, while the collateral manager, a hedge fund called HBK Capital Management, was slated to receive $3.3 million. Gemstone 7 concentrated risk by including within a single financial instrument 115 RMBS securities whose financial success depended upon thousands of high risk, poor quality subprime loans. Many of those RMBS securities carried BBB, BBB-, or even BB credit ratings, making them among the highest risk RMBS securities sold to the public. Nearly a third of the RMBS securities contained

subprime loans originated by Fremont, Long Beach, and New Century, lenders well known within the industry for issuing poor quality loans. Deutsche Bank also sold securities directly from its own inventory to the CDO. Deutsche Bank's CDO trading desk knew that many of these RMBS securities were likely to lose value, but did not object to their inclusion in Gemstone 7, even securities which Mr. Lippmann was calling "crap" or "pigs." Despite the poor quality of the underlying assets, Gemstone's top three tranches received AAA ratings. Deutsche Bank ultimately sold about $700 million in Gemstone securities, without disclosing to potential investors that its global head trader of CDOs had extremely negative views of a third of the assets in the CDO or that the bank's internal valuations showed that the assets had lost over $19 million in value since their purchase. Within months of being issued, the Gemstone 7 securities lost value; by November 2007, they began undergoing credit rating downgrades; and by July 2008, they became nearly worthless.

Both Goldman Sachs and Deutsche Bank underwrote securities using loans from subprime lenders known for issuing high risk, poor quality mortgages, and sold risky securities to investors across the United States and around the world. They also enabled the lenders to acquire new funds to originate still more high risk, poor quality loans. Both sold CDO securities without full disclosure of the negative views of some of their employees regarding the underlying assets and, in the case of Goldman, without full disclosure that it was shorting the very CDO securities it was marketing, raising questions about whether Goldman complied with its obligations to issue suitable investment recommendations and disclose material adverse interests.

The case studies also illustrate how these two investment banks continued to market new CDOs in 2007, even as U.S. mortgage delinquencies intensified, RMBS securities lost value, the U.S. mortgage market as a whole deteriorated, and investors lost confidence. Both kept producing and selling high risk, poor quality structured finance products in a negative market, in part because stopping the "CDO machine" would have meant less income for structured finance units, smaller executive bonuses, and even the disappearance of CDO desks and personnel, which is what finally happened. The two case studies also illustrate how certain complex structured finance products, such as synthetic CDOs and naked credit default swaps, amplified market risk by allowing investors with no ownership interest in the reference obligations to place unlimited side bets on their performance. Finally, the two case studies demonstrate how proprietary trading led to dramatic losses in the case of Deutsche Bank and undisclosed conflicts of interest in the case of Goldman Sachs.

Investment banks were the driving force behind the structured finance products that provided a steady stream of funding for lenders originating high risk, poor quality loans and that magnified risk throughout the U.S. financial system. The investment banks that engineered, sold, traded, and profited from mortgage related structured finance products were a major cause of the financial crisis.

C. Recommendations

The four causative factors examined in this Report are interconnected. Lenders introduced new levels of risk into the U.S. financial system by selling and securitizing complex home loans with high risk features and poor underwriting. The credit rating agencies labeled the resulting securities as safe investments, facilitating their purchase by institutional investors around the world. Federal banking regulators failed to ensure safe and sound lending practices and risk management, and stood on the sidelines as large financial institutions active in U.S. financial markets purchased billions of dollars in mortgage related securities containing high risk, poor quality mortgages. Investment banks magnified the risk to the system by engineering and promoting risky mortgage related structured finance products, and enabling investors to use naked credit default swaps and synthetic instruments to bet on the failure rather than the success of U.S. financial instruments. Some investment banks also ignored the conflicts of interest created by their products, placed their financial interests before those of their clients, and even bet against the very securities they were recommending and marketing to their clients. Together these factors produced a mortgage market saturated with high risk, poor quality mortgages and securities that, when they began incurring losses, caused financial institutions around the world to lose billions of dollars, produced rampant unemployment and foreclosures, and ruptured faith in U.S. capital markets.

Nearly three years later, the U.S. economy has yet to recover from the damage caused by the 2008 financial crisis. This Report is intended to help analysts, market participants, policymakers, and the public gain a deeper understanding of the origins of the crisis and take the steps needed to prevent excessive risk taking and conflicts of interest from causing similar damage in the future. Each of the four chapters in this Report examining a key aspect of the financial crisis begins with specific findings of fact, details the evidence gathered by the Subcommittee, and ends with recommendations. For ease of reference, all of the recommendations are reprinted here. For more information about each recommendation, please see the relevant chapter.

Recommendations on High Risk Lending

1. **Ensure "Qualified Mortgages" Are Low Risk.** Federal regulators should use their regulatory authority to ensure that all mortgages deemed to be "qualified residential mortgages" have a low risk of delinquency or default.

2. **Require Meaningful Risk Retention.** Federal regulators should issue a strong risk retention requirement under Section 941 by requiring the retention of not less than a 5% credit risk in each, or a representative sample of, an asset backed securitization's tranches, and by barring a hedging offset for a reasonable but limited period of time.

3. **Safeguard Against High Risk Products.** Federal banking regulators should safeguard taxpayer dollars by requiring banks with high risk structured finance products, including complex products with little or no reliable performance data, to meet conservative loss reserve, liquidity, and capital requirements.

4. **Require Greater Reserves for Negative Amortization Loans.** Federal banking regulators should use their regulatory authority to require banks issuing negatively amortizing loans that allow borrowers to defer payments of interest and principal, to maintain more conservative loss, liquidity, and capital reserves.

5. **Safeguard Bank Investment Portfolios.** Federal banking regulators should use the Section 620 banking activities study to identify high risk structured finance products and impose a reasonable limit on the amount of such high risk products that can be included in a bank's investment portfolio.

Recommendations on Regulatory Failures

1. **Complete OTS Dismantling.** The Office of the Comptroller of the Currency (OCC) should complete the dismantling of the Office of Thrift Supervision (OTS), despite attempts by some OTS officials to preserve the agency's identity and influence within the OCC.

2. **Strengthen Enforcement.** Federal banking regulators should conduct a review of their major financial institutions to identify those with ongoing, serious deficiencies, and review their enforcement approach to those institutions to eliminate any policy of deference to bank management, inflated CAMELS ratings, or use of short term profits to excuse high risk activities.

3. **Strengthen CAMELS Ratings.** Federal banking regulators should undertake a comprehensive review of the CAMELS ratings system to produce ratings that signal whether an institution is expected to operate in a safe and sound manner over a specified period of time, asset quality ratings that reflect embedded risks rather than short term profits, management ratings that reflect any ongoing failure to correct identified deficiencies, and composite ratings that discourage systemic risks.

4. **Evaluate Impacts of High Risk Lending.** The Financial Stability Oversight Council should undertake a study to identify high risk lending practices at financial institutions, and evaluate the nature and significance of the impacts that these practices may have on U.S. financial systems as a whole.

Recommendations on Inflated Credit Ratings

1. **Rank Credit Rating Agencies by Accuracy.** The SEC should use its regulatory authority to rank the Nationally Recognized Statistical Rating Organizations in terms of performance, in particular the accuracy of their ratings.

2. **Help Investors Hold CRAs Accountable.** The SEC should use its regulatory authority to facilitate the ability of investors to hold credit rating agencies accountable in civil lawsuits for inflated credit ratings, when a credit rating agency knowingly or recklessly fails to conduct a reasonable investigation of the rated security.

3. **Strengthen CRA Operations.** The SEC should use its inspection, examination, and regulatory authority to ensure credit rating agencies institute internal controls, credit rating methodologies, and employee conflict of interest safeguards that advance rating accuracy.

4. **Ensure CRAs Recognize Risk.** The SEC should use its inspection, examination, and regulatory authority to ensure credit rating agencies assign higher risk to financial instruments whose performance cannot be reliably predicted due to their novelty or complexity, or that rely on assets from parties with a record for issuing poor quality assets.

5. **Strengthen Disclosure.** The SEC should exercise its authority under the new Section 78o-7(s) of Title 15 to ensure that the credit rating agencies complete the required new ratings forms by the end of the year and that the new forms provide comprehensible, consistent, and useful ratings information to investors, including by testing the proposed forms with actual investors.

6. **Reduce Ratings Reliance.** Federal regulators should reduce the federal government's reliance on privately issued credit ratings.

Recommendations on Investment Bank Abuses

1. **Review Structured Finance Transactions.** Federal regulators should review the RMBS, CDO, CDS, and ABX activities described in this Report to identify any violations of law and to examine ways to strengthen existing regulatory prohibitions against abusive practices involving structured finance products.

2. **Narrow Proprietary Trading Exceptions.** To ensure a meaningful ban on proprietary trading under Section 619, any exceptions to that ban, such as for market-making or risk-mitigating hedging activities, should be strictly limited in the implementing regulations to activities that serve clients or reduce risk.

3. **Design Strong Conflict of Interest Prohibitions.** Regulators implementing the conflict of interest prohibitions in Sections 619 and 621 should consider the types of conflicts of interest in the Goldman Sachs case study, as identified in Chapter VI(C)(6) of this Report.

4. **Study Bank Use of Structured Finance.** Regulators conducting the banking activities study under Section 620 should consider the role of federally insured banks in designing, marketing, and investing in structured finance products with risks that cannot be reliably measured and naked credit default swaps or synthetic financial instruments.

JUSTICE NEWS

Department of Justice

Office of Public Affairs

FOR IMMEDIATE RELEASE Tuesday, November 19, 2013

Justice Department, Federal and State Partners Secure Record $13 Billion Global Settlement with JPMorgan for Misleading Investors About Securities Containing Toxic Mortgages

CORRECTION: The release below previously stated that New York is receiving $613.8 million in this settlement, however, the number is $613.0 million. This correction notice was posted on Nov. 20, 2013.

The Justice Department, along with federal and state partners, today announced a $13 billion settlement with JPMorgan - the largest settlement with a single entity in American history - to resolve federal and state civil claims arising out of the packaging, marketing, sale and issuance of residential mortgage-backed securities (RMBS) by JPMorgan, Bear Stearns and Washington Mutual prior to Jan. 1, 2009. As part of the settlement, JPMorgan acknowledged it made serious misrepresentations to the public - including the investing public - about numerous RMBS transactions. The resolution also requires JPMorgan to provide much needed relief to underwater homeowners and potential homebuyers, including those in distressed areas of the country. The settlement does not absolve JPMorgan or its employees from facing any possible criminal charges.

This settlement is part of the ongoing efforts of President Obama's Financial Fraud Enforcement Task Force's RMBS Working Group.

"Without a doubt, the conduct uncovered in this investigation helped sow the seeds of the mortgage meltdown," said Attorney General Eric Holder. "JPMorgan was not the only financial institution during this period to knowingly bundle toxic loans and sell them to unsuspecting investors, but that is no excuse for the firm's behavior. The size and scope of this resolution should send a clear signal that the Justice Department's financial fraud investigations are far from over. No firm, no matter how profitable, is above the law, and the passage of time is no shield from accountability. I want to personally thank the RMBS Working Group for its tireless work not only in this case, but also in the investigations that remain ongoing."

The settlement includes a statement of facts, in which JPMorgan acknowledges that it regularly represented to RMBS investors that the mortgage loans in various securities complied with underwriting guidelines. Contrary to those representations, as the statement of facts explains, on a number of different occasions, JPMorgan employees knew that the loans in question did not comply with those guidelines and were not otherwise appropriate for securitization, but they allowed the loans to be securitized – and those securities to be sold – without disclosing this information to investors. This conduct, along with similar conduct by other banks that bundled toxic loans into securities and misled investors who purchased those securities, contributed to the financial crisis.

"Through this $13 billion resolution, we are demanding accountability and requiring remediation from those who helped create a financial storm that devastated millions of Americans," said Associate Attorney General Tony West. "The conduct JPMorgan has acknowledged - packaging risky home loans into

securities, then selling them without disclosing their low quality to investors - contributed to the wreckage of the financial crisis. By requiring JPMorgan both to pay the largest FIRREA penalty in history and provide needed consumer relief to areas hardest hit by the financial crisis, we rectify some of that harm today."

Of the record-breaking $13 billion resolution, $9 billion will be paid to settle federal and state civil claims by various entities related to RMBS. Of that $9 billion, JPMorgan will pay $2 billion as a civil penalty to settle the Justice Department claims under the Financial Institutions Reform, Recovery, and Enforcement Act (FIRREA), $1.4 billion to settle federal and state securities claims by the National Credit Union Administration (NCUA), $515.4 million to settle federal and state securities claims by the Federal Deposit Insurance Corporation (FDIC), $4 billion to settle federal and state claims by the Federal Housing Finance Agency (FHFA), $298.9 million to settle claims by the State of California, $19.7 million to settle claims by the State of Delaware, $100 million to settle claims by the State of Illinois, $34.4 million to settle claims by the Commonwealth of Massachusetts, and $613 million to settle claims by the State of New York.

JPMorgan will pay out the remaining $4 billion in the form of relief to aid consumers harmed by the unlawful conduct of JPMorgan, Bear Stearns and Washington Mutual. That relief will take various forms, including principal forgiveness, loan modification, targeted originations and efforts to reduce blight. An independent monitor will be appointed to determine whether JPMorgan is satisfying its obligations. If JPMorgan fails to live up to its agreement by Dec. 31, 2017, it must pay liquidated damages in the amount of the shortfall to NeighborWorks America, a non-profit organization and leader in providing affordable housing and facilitating community development.

The U.S. Attorney's Offices for the Eastern District of California and Eastern District of Pennsylvania and the Justice Department's Civil Division, along with the U.S. Attorney's Office for the Northern District of Texas, conducted investigations into JPMorgan's, Washington Mutual's and Bear Stearns' practices related to the sale and issuance of RMBS between 2005 and 2008.

"Today's global settlement underscores the power of FIRREA and other civil enforcement tools for combatting financial fraud," said Assistant Attorney General for the Civil Division Stuart F. Delery, co-chair of the RMBS Working Group. "The Civil Division, working with the U.S. Attorney's Offices and our state and agency partners, will continue to use every available resource to aggressively pursue those responsible for the financial crisis."

"Abuses in the mortgage-backed securities industry helped turn a crisis in the housing market into an international financial crisis," said U.S. Attorney for the Eastern District of California Benjamin Wagner. "The impacts were staggering. JPMorgan sold securities knowing that many of the loans backing those certificates were toxic. Credit unions, banks and other investor victims across the country, including many in the Eastern District of California, continue to struggle with losses they suffered as a result. In the Eastern District of California, we have worked hard to prosecute fraud in the mortgage industry. We are equally committed to holding accountable those in the securities industry who profited through the sale of defective mortgages."

"Today's settlement represents another significant step towards holding accountable those banks which exploited the residential mortgage-backed securities market and harmed numerous individuals and entities in the process," said U.S. Attorney for the Eastern District of Pennsylvania Zane David Memeger. "These banks packaged and sold toxic mortgage-backed securities, which violated the law and contributed to the financial crisis. It is particularly important that JPMorgan, after assuming the significant assets of Washington Mutual Bank, is now also held responsible for the unscrupulous and deceptive conduct of Washington Mutual, one of the biggest players in the mortgage-backed securities market."

This settlement resolves only civil claims arising out of the RMBS packaged, marketed, sold and issued by JPMorgan, Bear Stearns and Washington Mutual. The agreement does not release individuals from civil charges, nor does it release JPMorgan or any individuals from potential criminal prosecution. In addition, as part of the settlement, JPMorgan has pledged to fully cooperate in investigations related to the conduct covered by the agreement.

To keep JPMorgan from seeking reimbursement from the federal government for any money it pays pursuant to this resolution, the Justice Department required language in the settlement agreement which prohibits JPMorgan from demanding indemnification from the FDIC, both in its capacity as a corporate entity and as the receiver for Washington Mutual.

“The settlement announced today will provide a significant recovery for six FDIC receiverships. It also fully protects the FDIC from indemnification claims out of this settlement,” said FDIC Chairman Martin J. Gruenberg. “The FDIC will continue to pursue litigation where necessary in order to recover as much as possible for FDIC receiverships, money that is ultimately returned to the Deposit Insurance Fund, uninsured depositors and creditors of failed banks.”

“NCUA’s Board extends our thanks and appreciation to our attorneys and to the Department of Justice, who have worked closely together for more than three years to bring this matter to a successful resolution,” said NCUA Board Chairman Debbie Matz. “The faulty mortgage-backed securities created and packaged by JPMorgan and other institutions created a crisis in the credit union industry, and we’re pleased a measure of accountability has been reached.”

“JPMorgan and the banks it bought securitized billions of dollars of defective mortgages,” said Acting FHFA Inspector General Michael P. Stephens. “Investors, including Fannie Mae and Freddie Mac, suffered enormous losses by purchasing RMBS from JPMorgan, Washington Mutual and Bear Stearns not knowing about those defects. Today’s settlement is a significant, but by no means final step by FHFA-OIG and its law enforcement partners to hold accountable those who committed acts of fraud and deceit. We are proud to have worked with the Department of Justice, the U.S. attorneys in Sacramento and Philadelphia and the New York and California state attorneys general; they have been great partners and we look forward to our continued work together.”

The attorneys general of New York, California, Delaware, Illinois and Massachusetts also conducted related investigations that were critical to bringing about this settlement.

“Since my first day in office, I have insisted that there must be accountability for the misconduct that led to the crash of the housing market and the collapse of the American economy,” said New York Attorney General Eric Schneiderman, Co-Chair of the RMBS Working Group. “This historic deal, which will bring long overdue relief to homeowners around the country and across New York, is exactly what our working group was created to do. We refused to allow systemic frauds that harmed so many New York homeowners and investors to simply be forgotten, and as a result we’ve won a major victory today in the fight to hold those who caused the financial crisis accountable.”

“JP Morgan Chase profited by giving California’s pension funds incomplete information about mortgage investments,” California Attorney General Kamala D. Harris said. “This settlement returns the money to California’s pension funds that JP Morgan wrongfully took from them.”

“Our financial system only works when everyone plays by the rules,” said Delaware Attorney General Beau Biden. “Today, as a result of our coordinated investigations, we are holding accountable one of the financial institutions that, by breaking those rules, helped cause the economic crisis that brought our nation to its knees. Even as the American people recover from this crisis, we will continue to seek accountability on their behalf.”

“We are still cleaning up the mess that Wall Street made with its reckless investment schemes and fraudulent conduct,” said Illinois Attorney General Lisa Madigan. “Today’s settlement with JPMorgan will assist Illinois in recovering its losses from the dangerous and deceptive securities that put our economy on the path to destruction.”

“This is a historic settlement that will help us to hold accountable those investment banks that played a role in creating and exacerbating the housing crisis,” said Massachusetts Attorney General Martha Coakley. “We appreciate the work of the Department of Justice and the other enforcement agencies in bringing about this resolution and look forward to continuing to work together in other securitization cases.”

The RMBS Working Group is a federal and state law enforcement effort focused on investigating fraud and abuse in the RMBS market that helped lead to the 2008 financial crisis. The RMBS Working Group brings together more than 200 attorneys, investigators, analysts and staff from dozens of state and federal agencies including the Department of Justice, 10 U.S. attorney’s offices, the FBI, the Securities and Exchange Commission (SEC), the Department of Housing and Urban Development (HUD), HUD’s Office of Inspector General, the FHFA-OIG, the Office of the Special Inspector General for the Troubled Asset Relief Program, the Federal Reserve Board’s Office of Inspector General, the Recovery Accountability and Transparency Board, the Financial Crimes Enforcement Network, and more than 10 state attorneys general offices around the country.

The RMBS Working Group is led by five co-chairs: Assistant Attorney General for the Civil Division Stuart Delery, Acting Assistant Attorney General for the Criminal Division Mythili Raman, Co-Director of the SEC’s Division of Enforcement George Canellos, U.S. Attorney for the District of Colorado John Walsh and New York Attorney General Eric Schneiderman.

Learn more about the RMBS Working Group and the Financial Fraud Enforcement Task Force at: www.stopfraud.gov.

Related Materials:

JPMorgan Settlement Agreement
Annex 1: Statement of Facts
Annex 2: Consumer Relief
Annex 3: List of RMBS covered by the settlement
Exhibit A: Claims resolved by the State of New York
Exhibit B: Claims resolved by the Federal Housing Finance Agency
Exhibit C: Claims resolved by the National Credit Union Administration
Exhibit D: Claims resolved by the Federal Deposit Insurance Corporation

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Updated October 8, 2014