



Policy Study 402  
May 2012

# Restoring Trust in Mortgage-Backed Securities: How the Private Sector Can Return to Mortgage Finance

by Marc Joffe and Anthony Randazzo



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## Executive Summary

The mortgage finance market has leaned heavily on government support over the past few years. More than 90 percent of mortgages originated in 2011 were securitized by government entities using taxpayer funds to guarantee investors against default risk. This support cannot continue forever. The status quo perpetuates many of the policies that contributed to the housing bubble and consequently promotes an unstable mortgage market. In order to avoid another crisis, the government must exit mortgage finance and private capital must shoulder mortgage default risk.

Policy proposals from both Republicans and Democrats, a white paper from the Treasury Department and the Department of Housing and Urban Development, and a host of research groups and academics have almost all focused on reform ideas that view the private sector as the foundation for the housing market. Despite this uniform focus, a number of roadblocks severely limit the pace and scope of mortgage finance risk to the private sector:

- A profound lack of confidence in the models used by credit rating agencies to assess residential mortgage-backed securities (RMBS) and in the rating agencies themselves;
- High conforming loan limits which perpetuate market share dominance of Fannie Mae and Freddie Mac, and the growing market share of Ginnie Mae and FHA;
- Risk retention requirements in the Dodd-Frank Act; and
- The complex legal framework governing RMBS.

The proposed rating-agency changes in Dodd-Frank are not enough to overcome this distrust. What we propose instead to overcome private sector skepticism is a series of legislative policy reforms, industry-led reforms, and regulatory reforms:

- First, Congress should authorize underwriters to include property-level address data in RMBS disclosures so that investors or independent analytic firms can perform more detailed and accurate risk assessments at lower cost.
- Second, the mortgage-finance industry should create an organization—a Mortgage Underwriting Standards Board—to provide self-regulation against misrepresentation and to define categories of mortgages to replace Qualified Residential Mortgages in an effort to enhance liquidity.
- Third, the mortgage-finance industry should encourage common formatting of RMBS collateral data and the inclusion of cashflow-waterfall models with prospectuses to make investor due diligence easier, more competitive, and less costly.
- Fourth, the Nationally Recognized Statistical Ratings Organization (NRSRO) system should be completely abolished. While it remains, regulators should encourage greater access to RMBS offering materials prior to origination (so that they are not only available to the NRSROs), and allow third parties to challenge overly optimistic ratings used in the determination of bank regulatory capital requirements.

These proposals would encourage investor due diligence and facilitate the availability of third-party analysis. By increasing access to information and insight, they should encourage investors to buy private-label RMBS, enabling the government to scale back its involvement in residential mortgage finance without precipitating a collapse in home prices. Attracting private capital to residential mortgage finance is challenging. But perpetuating government control of housing finance in today's era of high deficits is unaffordable.

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## Part 1

# Introduction

The mortgage finance market has been leaning heavily on the government for support over the past few years. But the taxpayer-funded subsidies that covered more than 90 percent of 2011's mortgage originations cannot continue forever. The status quo is perpetuating many of the policies that contributed to the housing bubble and is consequently promoting an unstable mortgage market. In order to avoid another crisis it is essential that the government exit mortgage finance and that private capital shoulder mortgage default risk. However, it is unclear when the government will transition away from being the primary financier of American mortgages and allow private sector financing to hold a dominant market share.

Setting aside the debates over whether taxpayer resources should be used to subsidize homeownership, few contest that the financial crisis was *triggered* by the deflation of the largest housing bubble in U.S. history. The decade that preceded the financial crisis was marked by lowered lending standards, excessive underwriting of subprime debt, and trillions in unsustainable liabilities taken on by households and financial institutions. Many of the subprime mortgages issued were financed through government-backed programs, including purchases by government-sponsored enterprises (GSE) Fannie Mae and Freddie Mac, the Federal Home Loan Banks, and insurance provided by the Federal Housing Administration (FHA). There is little debate on these facts.

More controversial is our view that low lending standards were driven by the Clinton administration's national homeownership strategy of the 1990s, which set the tone for poor quality lending that continued in the 2000s. Although private lenders exacerbated the problem with unsound and often illegal lending practices, taxpayer-subsidized housing finance inflated the real estate bubble.

It was not until 2003 that non-GSE securitization really began to take off before coming to a halt in 2007 after the peak of the housing bubble.<sup>1</sup> It is highly unlikely that the same amount of poor quality lending and subprime securitization underwriting that occurred in the 2000s would have happened without federal housing policy—carried out by Fannie, Freddie, FHA, et al—leading the way.

When the bubble burst, the sudden deflation caused defaults and bankruptcies, as financial companies found that they were holding assets worth less than their liabilities. So it is unfortunate that the U.S. government provides more financing for mortgages today than it did at any point

during the housing bubble. Fannie, Freddie, and Ginnie Mae securitizations reached 78 percent in 2003, declined for a few years, and then spiked to 96 percent or higher in each year since 2009.<sup>2</sup> Taxpayers now own or insure over \$5.8 trillion in home mortgages,<sup>3</sup> an unsustainable perpetuation of the ill-fated government support policies of the bubble era.

Both defenders of the government's housing policies and its critics share the view that the status quo of federal housing policy is unsustainable. However, there is sharp division over the question of whether the private sector is ready to step back into the mortgage finance gap if the government removes its support beams for the housing market. Policymakers introduced over a dozen proposed changes to current housing policy in Congress in 2011. Some changes sought to remove the government entirely from housing finance. Others suggested establishing an explicit federal guarantee program (to replace Fannie Mae and Freddie Mac). All ultimately focused on a system with less government support for mortgage investors than exists today, but concerns that the housing market is not ready to stand on its own sidelined nearly every proposed change.

Policymakers sense that the market for private-label, residential mortgage-backed securities (RMBS) is broken beyond repair. They fear that private lenders, including large financial institutions and thrifts, would be unable or unwilling to fill the breach left if government stepped out of the mortgage market. After all, in 2007 and 2008, prices for private label RMBS fell sharply as worries about increased defaults and lack of transparency scared off investors. Unless private lenders step in, home prices would collapse without Uncle Sam's support.

How do we reach conditions where the private sector can be trusted to finance mortgages without any government backstop? If investors could obtain reliable analysis of RMBS and other mortgage finance products, there would be much greater demand for these securities. That, in turn, would enable the government to scale back its involvement in residential mortgage finance more rapidly without a collapse in home prices.

This paper examines what would be required for private capital fully to assume mortgage credit risk, focusing on the lack of reliable third-party assessments for investors in mortgage products.<sup>4</sup> The paper links proposed policy changes for promoting the return of private capital to housing finance to questions of how to reform the credit rating agencies, lower the costs of due diligence, and increase liquidity in the RMBS market through clearer, more reliable, and more readily available information. The paper is set out as follows:

Part 2 evaluates the likely level of private capital flowing into housing finance if there were no change to the status quo other than the removal of the GSEs.

Part 3 considers various legislative and regulatory changes, as well as changes to the industry, that might be undertaken to increase the robustness of housing finance without causing a bubble, focusing in particular on the lack of confidence in rating agency assessments of RMBS.

Part 4 investigates the problems with the former system of information provision for investors, which relied primarily on the ratings agencies. The section surveys analogous, less regulated industries in search of business models that could replace the government enforced rating agency oligopoly.

Part 5 critiques the government's response to fixing the old system.

Part 6 provides a list of policy proposals that would more effectively address the problems with the former system and thereby help attract private capital back to housing finance.

## Part 2

# Would Private Capital Return to Housing Finance Without Reform?

It is our view that as the government reduced its role in the mortgage finance market, the private sector would likely re-enter to some degree, albeit slowly if there were no change in the status quo.

The first evidence to support this contention can be found in growing demand in the jumbo RMBS market, i.e. mortgages beyond the size that the government subsidizes with insurance for investors (that small percentage of the market remaining in the private sector). Since 2010, real-estate investment firm Redwood Trust successfully launched five RMBS deals containing jumbo loans—including two transactions in the first three months of 2012. These deals have been fully subscribed—one was six times oversubscribed—and the initial transaction, Sequoia 2010-H1, has performed well thus far.<sup>5</sup>

With the reduction in Fannie and Freddie's conforming loan limit from \$729,950 to \$625,000 in high-cost areas such as northern California, Redwood Trust and other participants will have the opportunity to scale up their RMBS platforms to meet the increased supply of collateral (although the higher limit still applies to FHA loans). Whether they are able to develop and issue expanded RMBS deals effectively will help clarify whether policy changes are absolutely necessary for private capital to return or whether those changes would merely boost the total amount of private capital devoted to housing finance.<sup>6</sup>

Issuance has also resumed in the market for commercial mortgage-backed securities (CMBS), but the evidence is mixed. CMBS face less competition from government-assisted capital sources than the residential-mortgage secondary market (which is dominated by Fannie Mae and Freddie Mac). CMBS issuance resumed in 2009, increased in 2010, but flattened in 2011, remaining far below the peak reached in 2007.

Further evidence can be found in financial history, which contains a number of examples of once-discredited asset classes making a comeback without government assistance. After several years of rapid growth during the 1980s, the market for high-yield corporate bonds collapsed amidst the prosecution of Michael Milken, the bankruptcy of Drexel Burnham, and the high default rates at the onset of the early 1990s recession. As economist Glenn Yago notes, junk bond issuance almost completely disappeared for one year but then returned and reached new heights by the late 1990s.<sup>7</sup>

More recently, Internet stock IPOs have returned, several years after the collapse of the dot-com bubble in 2001.

In the case of RMBS, mortgage defaults are closely related to declines in housing prices as borrowers are more likely to risk losing homes to foreclosure if their equity has been wiped out. Since the United States has recently been through a very sharp and prolonged decline in real estate values, the risk of a further large decline is significantly less than it was in 2006. Prices have fallen below their long-run historical averages relative to income.<sup>8</sup> And the cost of property ownership (i.e., mortgage payments, property tax and—in the case of condos—association fees) no longer exceeds the cost of renting comparable properties across most of the nation.<sup>9</sup>

Since the risk of price declines and mortgage defaults is lower, many investors would undoubtedly see newly issued private-label RMBS as a safer investment than they did several years ago.<sup>10</sup> (The risk of further large price declines is lower but not zero, especially given the fact that government has been promoting home price inflation for the last 80 years.) On the other hand, if the government were to wind down the GSEs, the risk to mortgage investors would likely increase, but only because the government was no longer transferring this risk to taxpayers.

Finally, there is evidence that the rating industry is taking steps to reform itself and thus provide more confidence in its securitization analysis. Two new rating firms, Kroll Bond Rating Agency and Morningstar Structured Credit Ratings (formerly Realpoint, Inc.) announced RMBS ratings initiatives in 2011.<sup>11</sup> While increased competition could result in “ratings shopping” on the part of issuers, these new entrants may also distinguish themselves by conducting more thorough analysis. Meanwhile, incumbent rating agencies have tightened their standards, and some of the revised methods look promising. They have also started to offer some unsolicited—and thus uncompensated—research on new transactions as a complement to other business activities.<sup>12</sup> Finally, a number of analytic firms and credit-raters outside the Nationally Recognized Statistical Ratings Organization (NRSRO) system, such as Bloomberg, CoreLogic, Andrew Davidson, and Lewtan, have either added or enhanced investor-oriented RMBS services.

Therefore, private financing could replace the government in the absence of any regulatory changes. However, present conditions make it more attractive for banks to sell mortgages to the GSEs. There are several things that can be done, though, to increase the willingness of private sector participants to assume mortgage credit risk (i.e., speed up the pace for recapturing housing finance market share from the government). Specifically, government needs to remove the regulations and the industry needs to stop the practices that are roadblocks to private capital coming back to housing finance. It is to these that we now turn.

**Part 3**

# Roadblocks to the Return of Private Capital to Housing Finance

Prior to the 2007–2008 financial crisis, investors devoted large amounts of private at-risk capital to residential mortgage finance. The reasons for the virtual disappearance of private mortgage capital during the crisis are complex and highly interrelated, but likely stem from three factors. First, the high volume of defaults on mortgages originated in 2006 and early 2007 drove many originators into bankruptcy. Second, these defaults contributed directly and indirectly to the failure of several large financial companies and Structured Investment Vehicles (SIVs), impacting the liquidity of all structured asset classes and many non-structured debt instruments. And, third, also as a direct consequence, there was a sudden lack of confidence in ratings on mortgage-backed securities because the widespread mortgage defaults led to a belief that AAA rated RMBS and asset-backed security collateralized debt obligations (ABS CDOs) would suffer losses.

The first two of these factors have greatly abated since 2008. By 2011, the rate of new foreclosure activity dropped to levels not seen since the beginning of the financial crisis, suggesting that the rate of future losses on RMBS will slow considerably.<sup>13</sup> (We do note, however, that there remain a large number of underwater mortgages in the U.S. and that the foreclosure crisis is not yet over.) Similarly, credit markets stabilized after fall 2008 once they digested the news of Lehman, AIG, Fannie, and Freddie and experienced no high magnitude aftershocks. However, the third factor—mistrust in the ratings-agency assessments—remains a roadblock to the return of private capital. Additionally, three more roadblocks to private capital returning to housing finance have emerged: the dominance of the GSEs and FHA, risk retention requirements in the Dodd-Frank Act, and legal complications.

## **A. Roadblock 1: Confidence in RMBS Risk Assessment by NRSROs**

Prior to the financial crisis, RMBS market participants relied heavily on ratings issued by the three major NRSROs: Moody's, Standard & Poor's and Fitch. The bulk of RMBS received AAA ratings, making them eligible for purchase under the rules of most institutional investors.<sup>14</sup> Since AAA rated instruments were assumed to be safe, investors often purchased these instruments without performing any analysis or other due diligence.

In 2007 and 2008, the NRSROs cut the ratings of most RMBS, as mortgage defaults greatly exceeded their expectations.<sup>15</sup> Most AAA securities backed by subprime and Alt-A mortgages lost value, with many worth less than 40 cents on the dollar.<sup>16</sup> Tranches of ABS CDOs—structures that re-securitized subordinated RMBS—performed even worse.

As a result, NRSROs lost credibility due to legitimate investor concerns about the predictive power of their ratings. In the absence of credible third-party risk assessments of RMBS, could demand for these securities return?

## **B. Roadblock 2: The Continued Dominance of Fannie Mae and Freddie Mac & the Growing Dominance of Ginnie Mae and the Federal Housing Administration**

In place of the private market, the government has supported home prices both by providing low-cost agency financing (through FHA, Veteran Affairs, and Rural Housing Service loans) and by propping up Fannie Mae and Freddie Mac, which assume losses on behalf of mortgage investors through their guarantees. Facing imminent insolvency, Fannie and Freddie entered federal conservatorship in September 2008 under, essentially, the full authority of the Federal Housing Finance Agency (FHFA), putting the federal government at the helm of the mortgage giants. Since then, the federal government has injected billions of dollars into the enterprises to keep them afloat (\$187.5 billion as of March 2012).<sup>17</sup> Through this subsidized access to capital, GSEs have captured nearly all market share in the mortgage secondary market, and the government has used the GSEs power—in addition to mortgage-backed securities purchases by the Federal Reserve—to help put downward pressure on mortgage interest rates in hopes of propping up home prices in the wake of the bubble collapse. Congress even expanded conforming loan limits to \$729,750 from 2008 through the end of fiscal year 2011, enabling Fannie, Freddie, and FHA to play a wide role in supporting home prices.

Although Congress allowed the conforming loan limits to fall to \$625,500 in October 2011, a month later they made an exception and empowered FHA to resume lending up to the higher \$729,750 limit.<sup>18</sup> Both of today's conforming loan limits contrast sharply with the \$417,000 maximum that constrained GSE market share during the bubble years. But these new higher limits have driven the government's share of the secondary market for newly originated mortgages from 60 percent in 2005 to more than 90 percent in late 2011.<sup>19</sup> Since government-backed RMBS are shielded from default risk, high conforming-loan limits have effectively priced out of the market all but a few private-label, residential mortgage-backed securities.

In February 2011, the Treasury Department and the Department of Housing and Urban Development issued a joint report calling for a full wind-down of the GSEs and increased private mortgage financing.<sup>20</sup> This recommendation places the Obama administration in broad agreement with congressional Republicans, who have also advocated a greater role for private mortgage capital. However, not a single piece of legislation was brought for a vote on the House or Senate

floor in 2011, and the White House made no effort to direct FHFA to use its powers to start the process of winding down the GSEs.

The nature of this roadblock is constantly evolving. Ginnie Mae—which securitizes and guarantees the timeliness of payments from borrowers who have FHA, VA, or Rural Housing Service mortgages—packaged nearly 60 percent of all home purchases (non-refinances) in 2011.<sup>21</sup> The US Department of Agriculture’s Rural Housing Service is also expanding with broader definitions of “rural” that include some suburbs (like Belmont, NC) and even small cities (such as St. Cloud, FL). Estimates suggest the Rural Housing Service’s share of the home purchase market is surging past 10 percent (though its overall housing market share is much lower).<sup>22</sup>

The best deals for potential mortgagors today also come from USDA/Ginnie Mae and FHA/Ginnie Mae (plus VA loans, which have always been offered the best terms but are limited to those who have served in the U.S. armed forces). This means that even if Fannie Mae and Freddie Mac were wound down and their doors closed, FHA and other federally backed mortgages would be a dominating presence in the housing market and create a similar roadblock to private mortgage financing as the GSEs have created in the past few years.

### **C. Roadblock 3: Risk Retention Requirements in the Dodd-Frank Act**

The Dodd-Frank Act, passed in July 2010, attempted to solve the problems created by the RMBS/ABS CDO rating crisis that started in 2007. One of the signature provisions of the new mortgage market regulations it authorizes is a 5 percent risk-retention requirement for underwriters of mortgage-backed securities. The legislation directs regulators to define a “qualified residential mortgage” (QRM) that would serve as a high standard for mortgage underwriting and be exempt from the five-percent retention rule. But early drafts of the regulation suggest most mortgages will fall outside of the QRM definition and will be subject to the retention rules.

Beyond the debates over how strict a QRM should be defined, the core challenge for the return of private capital to mortgage financing is that the Dodd-Frank Act provides an exemption to risk retention for FHA.<sup>23</sup> Furthermore, the first drafts of proposed QRM regulations released in 2011 also exempt the GSEs from risk-retention requirements. Since the cost of underwriters retaining 5 percent of the risk in an RMBS on their own balance sheets can be quite high, these exemptions ultimately mean the two most powerful public-sector competitors will have a substantial cost advantage relative to private-label RMBS—a serious roadblock as the private sector tries to regain market share.

### **D. Roadblock 4: Legal Complications**

One fairly popular set of government interventions could, ironically, slow housing market recovery by stalling the restoration of the market for RMBS. Restrictions on foreclosures and requirements

to offer loan modifications create new risks for prospective RMBS investors. Previously, servicers could foreclose upon and sell properties that had gone into default on a preset timetable, providing bondholders with reasonably predictable recoveries. Policy initiatives and litigation at both the federal and state levels, which intend to keep delinquent mortgagors in their homes, undermine the certainty with which holders of RMBS can obtain recoveries on defaulted mortgages. The legal environment needs to be clarified and streamlined so that investors regain certainty that non-performing mortgages will be liquidated in a reasonable timeframe. The February 2012 settlement between the Department of Justice, 49 state attorneys general, and five leading servicers offers some hope that clarification is coming. On the other hand, many mortgage servicers were not party to this settlement, which, in any case, does not resolve all forms of litigation against the mortgage servicers.

Conflicts among different participants in the transaction have also hampered securitizations. While these conflicts are not new, market participants did not recognize them as a roadblock in the benign credit environment that prevailed prior to 2007. Now that heavy losses in collateral pools have proven to be a real possibility, tranche warfare—the fight among various classes of investors as to who shoulders these losses—has come to the fore. This warfare has highlighted defects in the incentive structures of many deals.

For example, if the junior note holder is affiliated with a company that services the underlying mortgages, the company in its role as servicer has an incentive to manage the portfolio in a way that harms senior investors. Specifically, a servicer/subordinate bondholder could manipulate the outcomes of certain collateral tests, which—when triggered—force an accelerated payout to senior investors. While these tests are designed to protect senior investors from deterioration in the quality of the mortgage collateral, a servicer can manipulate the results of these tests, preventing them from triggering. A 2010 policy proposal from Redwood Trust gives an example:

*The delinquency trigger measures the unpaid principal balance of “delinquent” loans in the numerator vs. the unpaid principal balance of all loans in the denominator. A servicer could buy out delinquent loans, replace delinquent loans with performing loans, modify loans, or accelerate losses on delinquent loans, resulting in lower delinquent loans in the numerator and improving the ratio to pass the test. And as owner of the residual, the servicer had a financial incentive to manipulate those trigger test results, as the economic loss from repurchasing delinquent loans was far less than the windfall that would be gained if tests were passed.<sup>24</sup>*

The Redwood paper argues for legal protections to prevent such behavior by servicers. While new legislation could impose these, Redwood voluntarily provided the protections in its recent, successful securitizations. Perhaps then encouraging senior investors to return to RMBS is a sufficient incentive for issuers and underwriters to provide effective protections against servicer conflicts. Indeed, these protections might well become industry standards as issuers following them benefit from greater trust and lower borrowing costs.

Another proposed idea is the appointment of an independent third party to review claims that individual mortgages failed to conform to representations and warranties in the prospectus. If this

reviewer (as mediator) had the power to impose sanctions on the issuer, issuers would be less likely to engage in misrepresentation in the first place. For example, if there were convincing evidence that the loan-to-value (LTV) ratio of a particular mortgage exceeded the range specified in offering materials, the independent reviewer could require the issuer to remove the mortgage from the collateral pool. The American Securitization Forum (ASF) has suggested giving the issuer the option of buying back the defective mortgage for cash or substituting another loan.<sup>25</sup> The ASF proposal also includes measures to guarantee the objectivity of the independent reviewer, by, for example, providing a mechanism through which investors could terminate the reviewer. Although compensation for the independent reviewer reduces the amount of interest income available to investors, this proposed reform may be necessary given the rampant falsification of mortgage documents during the bubble. As with the servicer conflicts discussed above, independent reviewers do not need to be mandated by regulation; deal arrangers could voluntarily incorporate them into agreements.

## **E. How to Remove the Roadblocks**

Research groups, academics, and policymakers from a wide range of political orientations have issued numerous calls for a reduced government role in housing finance by lowering subsidies provided by GSEs and by the federal government itself through Ginnie Mae, FHA, et al (see footnote for a sample list of policy papers).<sup>26</sup> Policy options include reducing conforming loan limits (much further than Congress allowed in 2011) and increasing guarantee fees (more than the 0.10 percent increase mandated by Congress earlier this year). Also, nationwide settlements that reduce foreclosure-related litigation can clear the legal roadblocks deterring investors from taking on mortgage risk (though the national mortgage settlement authorized by the Federal District Court of D.C. in April 2011 falls short of achieving this goal).<sup>27</sup>

There are not, however, clearly articulated ideas for addressing the challenge of obtaining reliable research into the credit quality of mortgage-backed securities. The protections for senior investors against servicer conflicts and independent collateral reviews may offer comfort to senior RMBS investors burned during the 2007–2008 meltdown, and the removal of GSE-subsidized competition would no longer price competitors out of the market, but these reforms may only encourage a limited flow of non-government subsidized private capital back into mortgage financing. They may not give the confidence necessary for informed investing. To do that, government and the industry must make changes in the risk-assessment sector by using available alternative systems.

**Part 4**

# Problems with the Old System of Housing Finance Data Analysis: Credit Rating Agency Failures in Context

Historically, investors have relied heavily on credit rating agencies to perform or supplement their risk assessment of RMBS. But the ratings system was not without controversy before the crisis: rating agencies have faced criticism for over 70 years. However, the controversy has intensified over the past decade.

Prior to the problems with CDO and RMBS ratings in 2007 and 2008, regulators and the media castigated the three major firms—Standard & Poor’s, Fitch, and Moody’s—for their failure to warn investors about the impending the Enron and Worldcom bankruptcies. These earlier incidents led to enactment of the Credit Rating Agency Reform Act of 2006, which gave the Securities and Exchange Commission enhanced powers to regulate NRSROs but did not anticipate or prevent the later RMBS/CDO ratings crisis.<sup>28</sup>

More recently, commentators have criticized the agencies for their treatment of municipal bonds and monoline bond insurers. The rating agencies have been accused of creating an artificial market for municipal bond insurance—at a substantial cost to local taxpayers—by allegedly under-rating municipal bonds while assigning the insurers AAA ratings.<sup>29</sup> During the financial crisis, all AAA municipal bond insurers went bankrupt or suffered multiple-notch downgrades primarily because they also insured RMBS and CDOs. Rating agencies have also faced significant criticism during the sovereign debt crisis. (It should be noted, however, that the criticism has come from advocates of both faster and slower downgrades, with some of the loudest complaints coming from governments running large deficits.)

On this short analysis alone, the rating-agency model appears fundamentally broken. Looking deeper, this section outlines the main problems with the rating-agency system that relate to the financial crisis, including its regulatory complexity and misaligned incentives. Next, it considers activities that are conceptually similar to credit ratings, i.e. those that involve providing informed opinions at little or no cost. There are a number of examples in which unregulated private institutions have succeeded in this endeavor, including the review site Yelp, J.D. Power and

Associates, and Consumers Union. One of these more successful models could serve as a template for a reinvented credit-assessment industry.

## A. Regulatory Complexity of Credit Ratings

While a poorly researched credit rating is conceptually similar to a misleading review on Yelp, decades of legislation and banking regulations have made credit ratings far more consequential and thus far more of a systemic risk to the economy.

The Banking Act of 1935 established federal deposit insurance as a permanent program and instituted a number of other changes intended to make the banking system more secure. One provision empowered the Comptroller of the Currency to establish restrictions on securities banks could purchase. In 1936, the Comptroller exercised this authority by prohibiting banks from purchasing speculative-grade securities, as defined in manuals published by rating agencies. At the time, Moody's and other rating firms derived their incomes primarily from the sales of annual bond manuals, which included letter ratings for many of the securities they covered.

John Moody pioneered bond ratings in 1909 by including them in a railroad investment manual. By 1924, three other firms—Standard Statistics, Poor's Publishing Company, and Fitch Publishing Company—had incorporated ratings in their investment manuals. The firms assigned ratings not only to railroads, but also to utilities, industrial corporations, and governments.<sup>30</sup>

The value of these ratings was questionable. Melchior Palyi, writing in 1938, reported that a large proportion of so-called investment grade securities (those rated BBB/Baa or higher) had defaulted during the Depression.<sup>31</sup> He also found that 70 percent of defaulted railroad securities in 1924—a non-depression year—had been investment grade. Palyi's 74-year old critique of rating agency practices and performance almost reads as if it had been written yesterday. For example, Palyi concludes:

*This shortcoming of inadequate analysis is natural, indeed, in view of the size of the task. For instance, the 1937 industrial manual of Moody lists 5,032 companies on which statistical information has been gathered and prepared; 691 bond issues of these companies have been rated. The utility staff of the same agency covered 1,986 companies "fully" and added short paragraphs on a further 347 units; 1,547 public utility bonds were selected for rating. As to railways, 1,597 roads are listed with 1,668 issues rated. The municipal manual discussed 14,711 taxing bodies and rated 4,816 securities of 3,704 issuing units. One cannot escape being impressed by the volume of expensive work involved and by the conclusion that a uniform pattern of rating, making all these different issues comparable with one another in terms of some nine grades, handled by a large staff of moderately paid analysts with necessarily divergent experiences, biases, and opinions, can only be applied if based on none but obviously visible and easily comparable features. The staggering cost of detailed study of some 23,000 issuing units, or even of the almost 9,000 rated issues, is prohibitive. Accordingly, the responsible agencies advise the customer not to rely upon the ratings alone but to use them*

*together with the text of the manual and even to buy special investment advisory services, which they are ready to supply. The candid observer cannot help wondering whether it would not be a still more responsible attitude to stop the publication of ratings altogether in the best interest of all concerned.*

Yet despite admonitions from academics, as well as from the Investment Bankers Association of America, the mandate to use agency ratings when choosing investments remained in place for the next seven decades. This undoubtedly cemented the role of these rating agencies and undoubtedly hampered the emergence of alternatives.

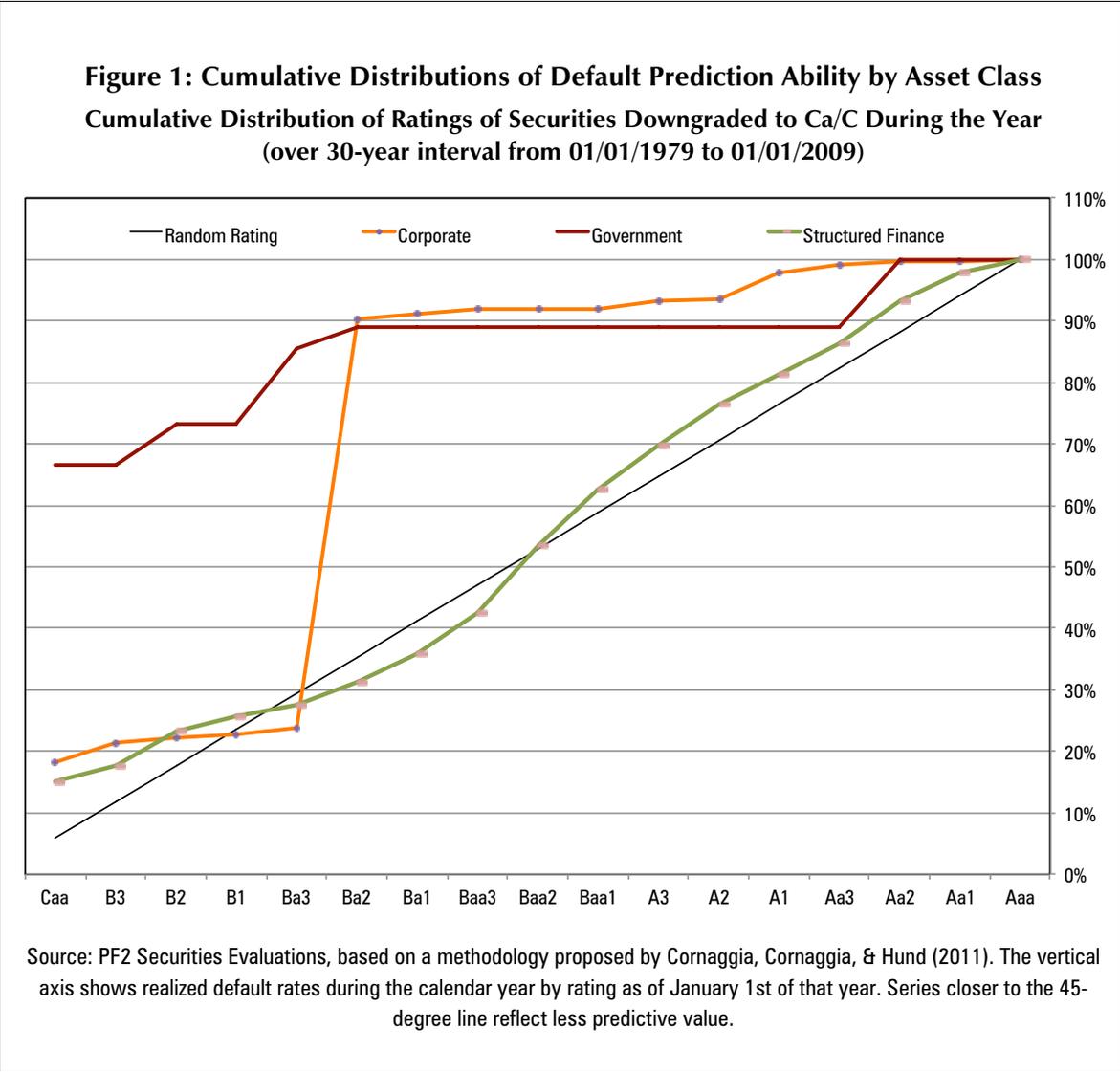
Palyi's critique came at a time when rating agencies did not employ the issuer-pays model (in which the bond issuer pays for the rating). Rating agencies earned revenues primarily from manuals sold to investors and libraries. Analysis focused on larger bond issues that had more investor demand. Beginning in 1949, S&P implemented a policy under which municipalities marketing small bond issues—with face value less than \$1 million—could pay the agency to conduct a rating analysis, which would otherwise not be worth the company's while.<sup>32</sup> In 1968, S&P began charging for all municipal bond ratings. The issuer-pays model then spread to all asset classes and was implemented by competing agencies.

The commercial considerations driving the transition from the investor-pays to issuer-pays model are not fully transparent. One theory blames the photocopier. After the mid-century mark, rating agencies responded to demand for more timely ratings by supplementing their annual bond manuals with more frequent, specific reports.<sup>33</sup> These shorter publications were more vulnerable to photocopying—a newly emergent technology at that time. Photocopying of agency reports created a “free rider” problem for rating agencies, which they purportedly resolved by turning to the issuer-pays model (though some observers dispute this theory).

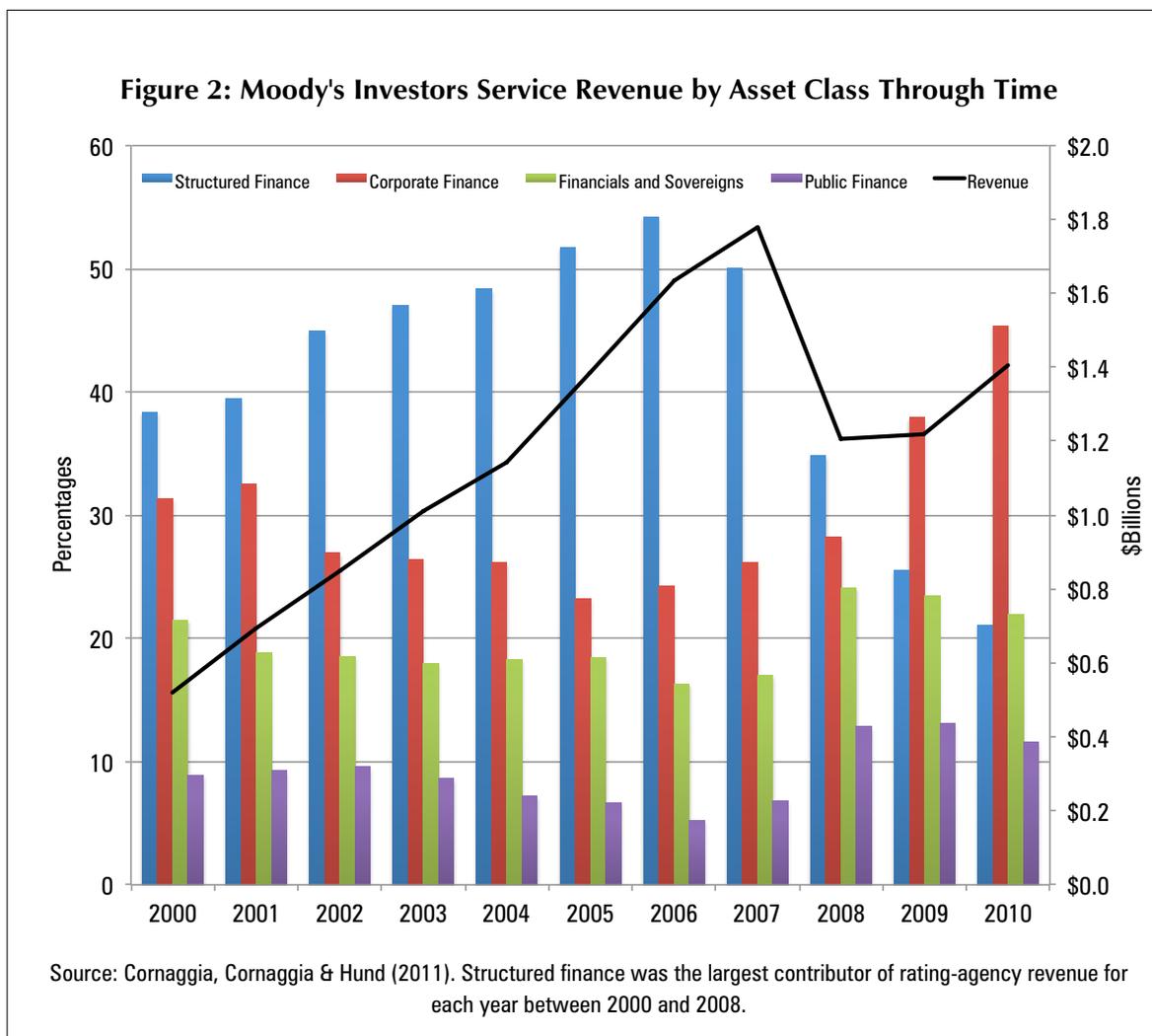
In any case, this change in revenue model failed to prompt regulators to reconsider dependence on credit ratings for eligible securities determination, and, later, for determining the amount of risk-weighted assets when setting capital requirements. The only regulatory response was the establishment of a registration mechanism for Nationally Recognized Statistical Rating Organizations (NRSROs) in 1975. Once registered, however, agencies did not face any form of regulatory review of their credit assessment functions.<sup>34</sup>

## B. Credit Rating Agency Incentive Problems

A 2011 study by business professors Jess Cornaggia, Kimberly R. Cornaggia, and John Hund finds that the accuracy of Moody’s credit ratings varied by asset class, with corporate credit ratings being significantly more accurate than structured finance-instrument ratings (see Figure 1).<sup>35</sup> The authors define accuracy as the degree to which lower ratings are associated with subsequent defaults.



They also find that structured ratings were more lenient than corporate ratings, with ratings for sovereigns and municipal issuers being the harshest. They conclude that these results correlate with the relative profitability of rating each type of bond, i.e. since rating agencies receive more revenue from structured issuers than other classes of issuers, they inflate the ratings in this category relative to the others (see Figure 2).



The relatively small number of issuers in this category might also contribute to structured-product rating inflation. Only 25 issuers accounted for 95 percent of subprime RMBS issuance in 2006, whereas the corporate and municipal markets each comprise thousands of issuers, none of which constitute a significant share of the market.<sup>36</sup> Ratings agencies may thus have been more receptive to the demands of individual structured issuers than they were to those of issuers in other categories. The Financial Crisis Inquiry Commission Report, which documented the ability of structured-finance issuers to influence the rating process at Moody's, supports this view.<sup>37</sup>

Finally, structured bond ratings may have been higher because issuers have the ability to “structure to the test,” just as today's public schools often “teach to the test.” Rating agencies publish methodologies that document the criteria for obtaining a top rating. Structured-finance deals are purpose-built to ensure that most of the bonds receive this AAA rating. Corporate, sovereign, and municipal issuers lack this flexibility; historical circumstances and external forces largely beyond the control of their treasurers and finance ministers drive their credit profiles.

### C. Market Provision of Assessments

Institutional bond investors are, in a very real sense, consumers. They are trying to select from a very wide array of fixed-income products, and, they often seek advice when doing so. Like other kinds of consumers, they prefer free advice but are sometimes willing to pay for expert opinions.

Unfortunately, free advice is often biased.<sup>38</sup> In fact, when they can be found, uncompensated, reliable opinions—such as hotel reviews on a travel website—could be considered a public good. While providing public goods is often a challenge for market institutions, it is one they frequently overcome.<sup>39</sup>

Websites that offer consumer reviews are a good example. While such sites are easy to set up and can be financed by advertising, there is no guarantee that they will contain enough high quality reviews to be worth visiting. One company that has risen above the rest, though, is the local user review and social networking website, Yelp.com.

In a 2008 *New York Times* blog post, Saul Hansel argued that, in a universe of largely uninspiring review sites, Yelp had become a success story because it found ways to build a community of prolific review writers.<sup>40</sup> While reviewers may not receive financial compensation, Yelp uses a variety of techniques to encourage these individuals to take pride in their work. For example, Yelp highlights the contributions of individual reviewers on the site and organizes parties and other social events for top reviewers.<sup>41</sup>

Yelp also uses computer algorithms to screen out biased reviews automatically. These algorithms are not perfect; sometimes they screen out legitimate reviews. Despite this imperfection and occasional criticism, the site has clearly been an enormous success. According to alexa.com, an Internet traffic monitoring company, Yelp was the 48<sup>th</sup> most popular website in the U.S. in late 2011 with an audience quadruple that of its nearest competitor, Cityscape. On a typical day, about 1 in 200 Internet users visits Yelp.

The Yelp model derives most of its revenue from ads placed by service providers reviewed on the site. In other words, Yelp uses an issuer-pays model. In contrast to credit rating agencies, however, Yelp advertisers do not pay for their own reviews. This helps avoid the conflict of interest that is at the core of troubles for current rating-agency business models where debt issuers pay ratings agencies directly for providing credit ratings on their debt.

Another well-respected, free review site is TripAdvisor. While this site has become notable for a large number of negative traveler reviews, it provides management an opportunity to respond to consumer criticisms. Other major sites that have successfully aggregated and leveraged crowdsourced feedback include Amazon and eBay.

Moreover, “crowdsourced” opinions are not unique to the Internet. Tim and Nina Zagat pioneered the approach of aggregating a large number of individual comments to distill credible restaurant reviews in 1979, relying on mail-in surveys and printed publications to disseminate the results.

While Yelp, TripAdvisor, and Zagat have succeeded with a for-profit model, Consumer’s Union—which publishes the widely regarded *Consumer Reports* magazine—demonstrates the advantages of a not-for-profit approach. Freed of pressure to take advertising, *Consumer Reports* has faced few doubts about the objectivity of its reviews over its 75-year history even if the reviews’ accuracy is challenged from time to time. Although *Consumer Reports* is not free, subscriptions to the magazine and website are inexpensive—and many of its opinions are widely reported, thereby making them accessible without any payment at all. Despite its not-for-profit status, Consumer Union realized over \$240 million of revenue in 2010.

Another respected opinion aggregator is J. D. Power and Associates, well known for its awards based on consumer surveys. A 2004 *US News and World Report* article noted that the company is able to provide its rankings to the public for free because it sells the bulk of its survey data to businesses.<sup>42</sup> Publicity surrounding these awards helped the company burnish its image and attract enough business users to generate \$130 million in annual revenue. In 2005, the company was purchased by McGraw Hill, which also owns Standard & Poor’s.

This brief survey of consumer-ratings technologies suggests a number of potential market-based solutions that could (and, in some cases, already do) improve the quality of free and low-cost analysis of fixed-income securities. These examples are not intended to be exhaustive, and in some cases, they are not perfect comparisons. But they do demonstrate that it is possible to find alternate ways of assessing value and risk. Like Yelp, incumbent and new credit rating agencies could encourage their staffs to take pride in the quality of their work and thereby motivate them to provide higher quality opinions. Like Consumer’s Union, a not-for-profit credit rating agency could launch. Or, like J. D. Power, rating agencies and other analytical firms could give investors on the buy side small cuts of data and analysis while deriving revenue by offering more comprehensive data to sell-side participants.

However, innovations like these may be more difficult to accomplish in the credit-rating space due to restrictions on market size. A vast number of consumers purchase products, but a relatively small number of institutions purchase exotic fixed-income instruments, limiting the demand for credit research.<sup>43</sup> Yet even the financial industry generates advertiser-supported content (such as CNBC), leverages crowd sourced opinions (such as forums on Yahoo Finance) and includes not-for-profit players (such as the American Securitization Forum mentioned above). While the number of investors in certain asset classes is small, the notional amounts at risk are quite large—creating incentives to generate analytical content if underlying data are readily available. In late 2011, a European non-profit inaugurated Wikirating—an effort to apply Wiki technology to credit assessments. It remains to be seen whether this effort will be successful, but it does reflect a non-governmental remedy to the rating-agency problem.

## Part 5

## Regulatory Failure: Problems with the Dodd-Frank Ratings Solution

As previously mentioned, the Dodd-Frank Act was an attempt to solve the problems unearthed by the financial crisis that peaked in 2008 and 2009. But the legislation did not fully address the problems described above, including the misaligned incentives of the leading ratings business models. Dodd-Frank also left in place the oligopolistic NRSRO registration system that proved unable to prevent the financial crisis despite having been in place since 1975 and undermines competition by creating high barriers to alternatives entering the risk-analysis business. While Dodd-Frank did mandate the removal of credit ratings from federal regulations, banks will still have the option of using them under Basel III capital-adequacy rules, and credit ratings may remain embedded in state regulations, such as those governing insurance companies or state-run pension investments. Further, draft SEC regulations implementing this provision of Dodd-Frank continue to permit the use of agency ratings as a standard for creditworthiness.

Contemporary regulatory approaches to rating agency problems are contradictory and can have unintended consequences. For example, certifying more NRSROs may promote rating accuracy, but it could also exacerbate the phenomenon of “ratings shopping” in which issuers induce agencies to compete for rating assignments by lowering their standards and compromising their issued ratings.

Further, the increased reporting and analyst-training requirements imposed by Dodd-Frank may undermine the competitive benefits of certifying more NRSROs. These rules increase the cost of entering the field thereby cementing the position of incumbent firms. Since the incumbents already have a substantial revenue base, they can more readily shoulder additional compliance costs.

In 2010, Senator Al Franken proposed a reform to mitigate the ratings shopping problem. The so-called Franken Amendment would have created an entity whose purpose would be to assign structured finance deals to credit rating agencies. By imposing a third party between issuers and raters, Franken hoped to remove incentives to gain business by compromising rating standards. While Dodd-Frank in its original form did not include the Franken Amendment, the final bill directs the SEC to study and determine whether Franken’s assigned-ratings mechanism should be implemented.

Unfortunately, any assigned-ratings agency approach would have to overcome a number of potential problems:

- *Issuers could circumvent the system easily.* If an issuer did not like the rating agency selected to assess its RMBS deal, it could withdraw the deal, package the mortgages into a new structure, and then try again.
- *The assignment organization would have conflicts of interest.* If the organization employs junior analysts who aspire to work at a high-paying investment bank, it would have the same problem that has historically affected ratings analysts: employees would have a motive to build good relationships with the underwriters who may one day become their employers. At the assignment organization, analysts could further their careers by assigning a more lenient agency to the bank's deals.
- *Issuers and investors would be unable to choose the highest-quality rating firm, and rating agencies would have little motivation to improve their quality.* Despite recent criticism, the fact is that rating agencies do invest in improving their methodologies in order to burnish their reputations within the investment community. Rating agency websites contain a large number of methodology papers discussing best practices for assessing various asset classes, and many of these papers receive frequent updates. These publications are intended to gain mindshare with sophisticated investors by establishing a reputation for expertise and quality. Assigned ratings could remove incentives to compete in this manner and could thus lead to a general "dumbing down" of rating methodologies. If a firm obtains no competitive benefit from publishing a more sophisticated methodology, it may stop making the investment in research to improve its methodologies.
- *The approach raises First Amendment concerns.* In the past, credit ratings have been successfully defended as opinions meriting free-speech protections.<sup>44</sup> The government cannot decide which newspapers, broadcasters, or bloggers cover a particular political issue, nor can it create an organization that would do so. Likewise, government intervention into the selection of who can or cannot render an opinion about the creditworthiness of assets could attract litigation on First Amendment grounds. This issue is especially relevant in light of recent criticism of S&P's decision to downgrade the U.S. sovereign credit rating. Government actions that penalize or appear to penalize rating agencies for stating their views of U.S. creditworthiness could hamper the free flow of opinions in investment markets and thus the ability of investors to make fully informed decisions.

In summary, the assigned-ratings approach is a highly engineered solution vulnerable to unintended consequences. Other approaches that maintain the NRSRO system similarly create more problems than they solve and ignore some of the core challenges facing the present ratings system.

A better alternative is to enable more experimentation with different credit-assessment business models. Just as Yelp succeeded by employing innovative ways to deliver quality reviews of local businesses on the Web, Consumers Union successfully maintained a not-for-profit model for over

75 years, and J.D. Power has thrived by funding its publicly provided products with data sales to a smaller audience, a more open market would enable analysts to find the best way(s) to deliver excellent credit opinions.

Further, increased competition in an unregulated market would not necessarily trigger a race to minimize credit standards in response to ratings shopping. If the playing field is leveled between traditional issuer-paid rating agencies and analytic providers supported by investor subscriptions, advertising, and even donors (in the case of a not-for-profit) model, there will be offsetting pressure to improve quality. Credit analysts would have incentives not only to chase issuer fees but also investor eyeballs.

## Part 6

# A Policy Framework to Reform Housing Finance Data Analysis

While it is convenient to blame rating agencies for losses on RMBS and other exotic instruments in 2007 and 2008, the responsibility for making poor investment decisions ultimately lies with the investor. Although consumer-product ratings technology has evolved substantially in the past decade, it has not replaced the need for consumers to supplement what they learn from ratings services with their own judgment and due diligence. This is even truer in the world of institutional fixed-income investing, where professionals are paid to choose which bonds to buy and sell and when to do so. The decision to forego internal due diligence and simply select bonds based on external ratings should be seen as an abrogation of professional responsibility on the part of fixed-income portfolio managers. Moreover, a computer connected to a ratings data feed could replace easily any manager who simply chooses assets based on their ratings.

However, the due diligence necessary for effective understanding of the risks associated with a mortgage-backed security can be a costly undertaking. These costs create a potentially high barrier to private capital regaining a substantial share of residential-housing finance. There are a number of reforms, though, that would make this analysis less costly for internal due diligence, as well as improve the reliability of third-party analytic services (including current NRSROs). The industry as a whole could pursue some reforms; other reforms would require legislative or regulatory action. Ultimately, these reforms would enable the proliferation of alternate models for providing information on RMBS and other mortgage products to potential investors.

### **A. Legislative Policy Reform: Include Address Level Data**

As discussed below, both the ASF and the SEC have published proposed standard formats for the RMBS loan-level data made available to investors, potential investors, and rating agencies. One data element conspicuously absent from these proposed formats is the address of the property. Privacy provisions in the Fair Credit Reporting Act of 1970 exclude property addresses from data files provided to RMBS investors with the alleged concern that investors could use the address to determine the identity of borrowers and thereby invade the borrower's privacy.<sup>45</sup>

However, ignorance of the borrower's address and identity is a major disadvantage for the RMBS investor or anyone trying to analyze RMBS deals. Perhaps the single most important predictor of a mortgage default is the ratio between all mortgage debt on a property and the value of that property, the so-called Combined Loan-to-Value Ratio (CLTV). Loan-level data files provide the CLTV at the time of deal origination, but this value is not updated over the life of the RMBS securitization deal.

Several factors impact the CLTV on an ongoing basis. A key driver is the change in the property's value, which determines the denominator of the CLTV calculation. If investors and potential investors had the property address, they could run it through an Automated Valuation Model (AVM), such as that available at Zillow.com, to estimate the property's current value.

Under the status quo, RMBS investors can only obtain the property's zip code. While this data point provides some ability to estimate the change in property value, it is extremely imprecise. Zip codes can contain several thousand properties and may also embrace large, often heterogeneous areas. For example, recently available single-family homes on Zillow.com in zip code 20002 (Northeast Washington D.C.) ranged from \$250,000 fixers in the Little Trinidad neighborhood to a \$2.8 million upscale townhouse on Capitol Hill. Wolfram Alpha reports that 54 US zip codes have more than 30,000 housing units while 62 zip codes cover at least 2000 square miles each.

The numerator of the CLTV calculation is the principal outstanding on the securitized mortgage, which is provided in the data file, plus the principal outstanding on any other mortgage liens held against the property. The loan-level file shows the remaining balance on the securitized mortgage, but, without data identifying the specific borrower or property, the investor is once again at a loss to determine the status of any other indebtedness on the property.

Investors may be able to purchase an updated CLTV calculation—or at least its inputs—from a credit reporting agency, which can cross reference the property identifier in the loan-level data file against its own records. But this imposes an extra step and an additional fee (to the credit-reporting agency) on investors or other parties attempting to analyze the collateral pool. Since AAA investors can expect to receive only a small margin above (“risk-free”) Treasury rates, even relatively small incremental costs can dissuade them from providing capital for housing finance.

While access to more identifying information would facilitate better analysis of RMBS, concerns about the widespread distribution of borrower identities are valid. In contrast to banks and credit-reporting agencies, investors and analytics providers may have limited network security procedures. This increases the risk that confidential borrower information could become public, increasing opportunities for identity theft. That being said, individuals provide personal data over the Internet with regularity, trusting in the security of computer systems at retail outlets that supply books, music, movies, clothes, and other items.

One way to accommodate individual privacy preferences would be to allow borrowers to choose, during the mortgage origination process, whether to allow disclosure of their addresses to mortgage

investors. In exchange, those that provide this authorization would be compensated with reduced closing costs or lower interest rates since their mortgages would be easier to securitize. Conversely, since it is more expensive for investors to perform due diligence, particularly on-going due diligence, without the address-level data, mortgages without that information disclosed would cost a bit more. But the privacy option would ultimately be the borrower's choice. Mortgage servicers would have incentives to ensure the confidentiality of the borrower's address and other personal information through the chain of assignees, since any breach of confidentiality warrants would impact on their reputations and they could potentially be held liable in court. (The situation is comparable in some ways to the protection of information by credit-card companies, which have strong incentives to preserve the reputation of their businesses.) Homebuyers may also prefer this optional disclosure to the alternate reform that has been proposed to protect investors: a prohibition on second mortgages.

Finally, it is worth noting the mortgages are recorded and thus become part of the public records available at any County Clerk's office. The fact that one's home carries a mortgage is thus not a secret, irrespective of whether the address appears in a loan-level RMBS data file.

## **B. Industry-Led Policy Reforms**

### ***1. Create a Mortgage Underwriting Standards Board for Industry-Defined Qualifying Residential Mortgages***

An industry-led, self-regulatory organization could be established to set standards for qualifying residential mortgages, to increase transparency and make mortgage-related products—whether RMBS, covered-bonds, unit investment trusts, or even large portfolios of whole loans—easier to analyze for risk.

The Dodd-Frank Act requires that lenders verify income and provide accurate documentation on mortgages. It further directs federal regulators to define a very safe “qualified residential mortgage” (QRM) that would be considered low risk for lenders and borrowers alike. For mortgages that do not meet QRM standards, Dodd-Frank requires originators to retain 5 percent of the credit risk. Few have liked the initial proposed rule, though. Depending on their beliefs about the federal role in housing, various constituencies have criticized initial draft rules for QRMs as being either too lenient or too strict. In either case, QRM standards remain exposed to political pressure since social policy considerations and industry pressures have historically driven housing policy decisions in Washington.

Accurate, comprehensive, and consistent reporting of mortgage attributes largely obviates the need for a QRM standard. Investors can see the FICO scores, CLTV, DTI, and other attributes of all mortgages in the collateral pool and make their own judgments about whether these mortgages conform to their own risk appetites. Indeed, a binary standard of qualifying and non-qualifying

mortgages improperly shields investors from (or at least disincentivizes them from) performing detailed analysis. The assumption has been that investing in bonds backed by QRMs is analogous to investing in bonds sporting AAA ratings—but just as “AAA”-rated RMBS issued before 2008 were clearly not equivalent in risk to some other types of “AAA”-rated bonds, it is likely that QRMs will also not actually be equivalent to other AAA securities.

However, if there were still a perceived need for QRM standards, a self-regulatory body could take on the task. Just as the World Wide Web Consortium sets standards for HTML and the Financial Accounting Standards Board promulgates accounting standards, a Mortgage Underwriting Standards Board (MUSB) could develop standards for various qualifying residential mortgages that would help the industry better price risk and create liquidity through more transparent lending practices. The law should not require these underwriting standards or prevent anyone from securitizing mortgages outside of the MUSB definitions. Rather, as compliance would increase the marketability of their bonds, issuers would have an incentive to adhere to industry standards. (See Appendix A for more details on how a Mortgage Underwriting Standards Board might work.)

In order to create a MUSB, Congress would have to repeal the mortgage-related sections of Dodd-Frank, and the new industry group would probably have to coordinate with federal regulators. Lobbyists aiming to retain the status quo would pose substantial challenges to the creation of an MUSB, and once instituted, the MUSB would, like regulators, run the risk of becoming captured by the industry. But, if a MUSB would provide a more liquid mortgage market, these would be challenges to overcome rather than reasons to not build.

## ***2. Create an Industry Self-Regulatory Group to Prevent Misrepresentations***

Investors and their surrogates—both rating agencies and analytic providers—can only effectively measure the risk of RMBS by analyzing accurate information about the collateral pool and the deal’s priority of payments. Unfortunately, this information was often not available during the real estate bubble. Debt-to-income (DTI) ratios and CLTV ratios are often used to predict delinquency and default rates on mortgage collateral. If an unscrupulous mortgage originator misstated a borrower’s income or encouraged an appraiser to inflate the estimated value of a property, these ratios were meaningless.

Inclusion of the borrowers’ addresses in the loan files would enable investors to detect some false appraisals since they could run the addresses through automated valuation models. But unless and until this disclosure is implemented, investors are reliant on the accuracy of issuer-provided appraisals (or on the efforts of data vendors and credit reporting agencies that map loan-level data to public records). Further, it may not be either practical or desirable for investors to verify borrower incomes, so additional disclosure could not address fraudulent DTI ratios. Ultimately, investors’ inability to trust the accuracy of mortgage application data included in loan-level files will hamper the RMBS market.

The federal government had the authority to stop the rampant falsification of mortgage documents during the real-estate bubble: there has been a law against lying on mortgage applications on the books since 1948 (see 18 USC 1014). The FBI Mortgage Fraud Unit claims the Bureau has been working actively to investigate mortgage fraud in various cities across the United States since 1999. The unit also focuses on “fostering relationships and partnerships with the mortgage industry to promote mortgage fraud awareness.”<sup>46</sup>

Despite having the authority, however, the federal government failed to stop the fraud. Part of the reason for this failure may be that, even in cases of a straightforward breach of contract, the FBI and other regulators perceive suing an impecunious borrower as a time and resource waste and prefer to devote their investigative focus to fraud committed by swindling originators.

Private organizations, however, have proven quite effective at policing even minor fraud. For example, thanks to negative community feedback, eBay can identify disreputable sellers and banish them from the community. Stock and commodity exchanges also regulate member behavior.

A self-regulatory organization representing issuers, investors, and interested third parties could create and enforce standards for securitized mortgages. The self-regulatory body could either be a new organization (like the MUSB) or a part of the Financial Industry Regulatory Authority (FINRA). It could contract with consulting firms that investigate mortgage fraud, such as Interthinx, to identify clusters of fraudulent mortgages. Issuers violating industry standards could face sanctions from the self-regulatory agency, including restrictions on their ability to sell new securities to member firms.

The actions of mortgagors themselves (rather than those of originators) often contribute to inaccuracies in RMBS loan-level data. For example, investor-owned properties and second homes have historically suffered higher default rates than owner-occupied primary residences. The industry addresses this issue by asking mortgagors how they intend to use the property and varying interest rates accordingly. The ownership type is then reported to investors in the loan-level data file. But what if the mortgagor lies in order to obtain a lower rate, or what if an owner occupant suddenly needs to relocate and decides to rent out his property? In either case, the loan file now contains misleading information.

While some have proposed penalizing mortgagors for not fulfilling their stated intention to occupy the property, a simpler solution may be for mortgage servicers to ask mortgagors to report their occupation status on an annual basis.<sup>47</sup> This approach would provide secondary-market investors with more up-to-date information without imposing penalties on individuals whose plans legitimately change. A self-regulatory organization could implement such a reporting mechanism.

Similarly, mortgagors increase the risk to holders of RMBS when they take on home-equity lines or second mortgages. By increasing the amount of debt on their properties, they increase the odds of an eventual foreclosure. The simplest solution may be to just ensure accurate reporting of the

new second-lien exposure. Armed with this information and with more accurate home-valuation data obtained from the correct property address, investors could more effectively assess the incremental risk added by the second lien. Another way to address this problem could be to give servicers the right to charge a fee on the first mortgage in order to offset the newly added risk from the second lien.

Investors could shoulder the risk that an owner-occupied property becomes an investor-owned property or an increased CLTV ratio due to the assumption of a second mortgage so long as mortgagors reported these changes in a timely and accurate fashion. Higher yields on mortgage-backed securities, funded in turn by higher mortgage interest rates, could offset the additional risk.

### ***3. Enable Common Formatting of Data***

Disclosure currently available to RMBS investors includes prospectuses, loan-level data files, and performance reports, which are generally useful only once the deal has launched. Performance reports show how much of the collateral pool is delinquent, in default, or in the process of being foreclosed and liquidated. They also show how much principal and interest have been and are being paid to each class of securities.

Loan-level data files list all the mortgages in the collateral pool supporting the bonds. These files contain several dozen data points for each mortgage loan, including balances, delinquency or default status, property zip code, and borrower FICO score.

Formats for performance reports and loan-level data files vary by data provider. Most often, the data provider is the trustee who administers the RMBS deal. Eight data providers supply the bulk of RMBS performance and loan-level information, and each uses a separate, proprietary data format. In other words, each of the providers offer a different selection of data points, arranged in different ways and often with different meanings. For example, providers describe loan types (e.g., 30-year fixed rate, 5/1 hybrid, or 1 year ARM) differently.

Thus, an investor, analytic provider, or rating agency may have to maintain as many as eight different processes to assimilate RMBS data. Due diligence would be far easier (and less costly) for consumers of RMBS data if all eight of these providers used a common format.

Fortunately, the American Securitization Forum (ASF) has proposed a standard reporting format, which has been largely incorporated in proposed SEC regulations.<sup>48</sup> Industry-wide adoption of this standard should substantially reduce the cost of due diligence. While a regulatory-imposed reporting standard would provide greater transparency, a self-regulatory body (as proposed above) may be able to implement such a standard more quickly and in a more flexible manner. And, perhaps most importantly, privately set standards could change more readily in response to circumstances than bureaucratically established rules could.

#### *4. Reform Prospectuses Using Cashflow-Waterfall Modeling*

The last form of disclosure (aside from the performance reports and loan-level files discussed above) is the prospectus. RMBS prospectuses can run to hundreds of pages and usually contain substantial amounts of dense legal language. Just as individuals rarely read credit card agreements or mutual fund disclosures, it would not be surprising to learn that institutional investors—especially those investing in AAA tranches—do not thoroughly review RMBS prospectuses.

A particularly important component of an RMBS prospectus is the priority of payments, often called a “cashflow waterfall” in industry-speak. This language governs how interest and principal payments yielded by the collateral pool are to be divided among different classes of investors and other stakeholders in the RMBS deal (such as the trustee that produces the performance reports mentioned earlier).

Rather than try to comprehend the legal priority of payments language, investors often purchase a cashflow-waterfall model. The user enters assumptions about collateral performance into the model, which then converts those assumptions into projected principal and interest payments on bonds issued by the RMBS deal. The model is able to perform this conversion because someone—either an employee of the bond underwriter or an employee of the firm selling the cashflow-waterfall model—coded the legal priority of payment language into a computer algorithm.

A firm called Intex Solutions, based in Needham, Massachusetts, dominates the market for cashflow-waterfall models. Intex Solutions uses a proprietary programming language for representing priority of payments provisions and charges clients an estimated \$50,000 per year or more for its cashflow-waterfall technology.<sup>49</sup> This \$50,000 annual subscription represents a substantial barrier to entry—especially for an investor in AAA RMBS, who is only expecting to receive a small margin over risk-free rates. For example, AAA private-label RMBS typically paid spreads of about 10 basis points over LIBOR (London Inter-Bank Offer Rate) in 2006. Assuming the investor has the alternative of earning LIBOR on low-risk instruments that do not require significant analysis, he would have to shift at least \$50 million into AAA RMBS just to earn back the subscription cost.<sup>50</sup>

The SEC has proposed, in draft regulations, to lower this cost barrier by requiring underwriters to publish a cashflow-waterfall model for each deal they market.<sup>51</sup> Investors, rating agencies, and other interested parties could thus obtain the ability to perform automated analysis of the priority of payments without an out-of-pocket cost. In fact, the SEC has even proposed that the cashflow-waterfall model be written in the open-source Python programming language, so that investors would not have to purchase any software to run these models.

While the idea of including a cashflow-waterfall model as part of the disclosure package is a good one, this regulatory solution could be further improved by reconsidering the choice of Python as the programming language. Only a limited number of structured-finance market participants have Python expertise; Microsoft Excel is much more common. While many investors would find an

Excel-based tool more accessible, others may prefer the speed offered by a waterfall written in a compiled language. Therefore, the issuer, leveraging its understanding of investor preferences, should choose the programming language for the cashflow waterfalls they provide with its disclosure. Ideally, the waterfall would be delivered together with the loan-level and performance data files and accompanied by a basic interface, which would allow the user to quickly analyze basic collateral performance scenarios.

Another criticism of the mandatory, issuer-provided, cashflow-waterfall models is that they could subject issuers to liability if the models contain coding errors or fail to address unusual circumstances. If issuers are fully liable for all gaps in their models, they may be deterred from bringing deals to the market. Liability limitations or rights to disclaim cashflow-waterfall results could address this concern under certain circumstances. On the other hand, the possibility of being held liable for waterfall coding errors may encourage issuers to simplify their structures, a development that would benefit investors or anyone trying to understand the deal.

The self-regulatory group discussed elsewhere in this paper might be the best at implementing guidelines for issuer-provided, cashflow-waterfall models. The development of tools that both meet investor needs—while optimizing issuer liability—is likely to be an iterative process. The necessary iterations could occur faster outside of the proposing, commenting, and adopting cycle required for government regulation. A self-regulatory group would also allow for voluntary adoption of this practice and let underwriters use cashflow-waterfall models as an added service in competing with other institutions for RMBS investors.

## C. NRSRO Regulatory Policy Reforms

### *1. Greater Availability of Offering Materials*

The best course of regulatory action the government could take would be to scrap the NRSRO system entirely, enabling all credit analysis firms to operate on a level playing field. Indeed, eliminating the NRSRO certification is consistent with the goals of Dodd-Frank, which (as discussed earlier) mandated the elimination of regulatory requirements to use NRSRO ratings in determining creditworthiness. And if government regulations no longer require the use of NRSRO ratings (as Dodd-Frank aims to accomplish), then it is hard to see the imperative for registering and regulating NRSROs.

If policymakers choose to retain the NRSRO system, they could still implement reforms that would foster greater, quality-based competition. One incremental change relates to the availability of primary market disclosure.

Traditionally, only the NRSRO(s) hired to rate a specific deal was/were given access to prospectuses and loan-level data files prior to the date on which the bonds were first sold. This

meant that, unless the issuer chose to share the offering materials with others, only the hired rating agency could analyze the deal before it was sold to investors in the primary market. Since a large proportion of RMBS trading volume consists of primary market purchases by buy-and-hold investors, this situation conferred a substantial benefit on the hired rating agency or agencies.

SEC Rule 17g-5 addresses this information gap by requiring that issuers publish all documents used to rate an asset-backed security on a website available to all NRSROs (without breaching privacy).<sup>52</sup> This reform enables competing NRSROs to produce unsolicited ratings, leveraging the full set of information available to the hired agency. The rule also requires the hired NRSRO to maintain a website listing the deals it is rating, with links to each arranger's documents.

The SEC could modify this regulation to promote the availability of independent, third-party analysis in time for investors to review it before deciding whether to purchase RMBS in the primary market. Presuming the NRSRO system is not fully dissolved in the near-term, the SEC should allow analytic firms that are not NRSROs to access the 17g-5 websites. This would enable firms supported by investor fees or advertising to compete on a level playing field against issuer-paid NRSROs.

Opening up access to non-NRSROs may mean, however, that firms with limited or non-existent security procedures could retrieve the data, thereby creating the risk that it could become public. To address this concern, the SEC could institute a registration process for analytic firms in which they attest to having security procedures in place. Registrants would then be subject to enforcement actions if they leaked confidential information.

## ***2. Ratings Challenges for Capital Adequacy***

While the presence of additional voices may help investors avoid deals with inferior collateral or disadvantageous structures, it does not address the implications for bank capital adequacy. To the extent that new Federal Reserve, FDIC, and OCC regulations implementing Basel III still permit the use of NRSRO ratings for capital calculations, overly lenient ratings produced by issuer-paid NRSROs could still threaten bank solvency.

In our view, capital adequacy regulation is a suboptimal means of ensuring bank solvency. Two centuries of government intervention in the banking system have transferred risk away from bank owners (through limited liability laws), onto depositors, and then over to taxpayers (with the inception of deposit insurance during the Great Depression).<sup>53</sup> Ideally, a system in which the owners, managers, and counterparties of financial institutions were responsible for their risks would replace capital regulation. In the event that a financial institution becomes insolvent, senior managers and highly compensated traders should be required to forfeit a portion of their prior cash and equity compensation to satisfy creditor claims. FDIC insurance payouts should be capped at 90 percent of any lost deposits, and taxpayers should never be required to make good on balances above \$250,000. Bank employees, counterparties, and individual depositors should have incentives

to monitor the risks being assumed by their financial institutions. Unless reforms like these are implemented, there will always be a risk that taxpayers will be compelled to come to the rescue of real estate finance, even if the GSEs are phased out.

Unless and until these ideas are accepted, bank capital regulation will remain the only barrier to financial institutions taking on unlimited risk and transferring it to taxpayers. Since capital requirements based on a bank's internal assessments contain a clear conflict of interest, regulation must somehow rely on third-party credit assessment. Dodd-Frank required regulators to develop alternatives to ratings for capital-adequacy regulation. In a December 2011 proposed rule, the FDIC, Fed, and OCC have recommended basing RMBS capital requirements on the proportion of debt subordinate to the RMBS tranche and overall losses in the underlying collateral pool.<sup>54</sup> The proposed regulatory formula offers an objective alternative to ratings, but may be subject to circumvention. Deal arrangers could add obscure provisions to the priority of payments or use servicing techniques that siphon cash away from a bond at the top of the capital structure, yet that bond would still attract a minimum capital charge.

Another alternative available to the regulatory community with the empowerment of non-NRSRO participants would be a procedure for third-party rating challenges. Under such a system, an independent credit-assessment firm could submit a statement to the Federal Reserve (or conceivably a specially appointed industry review board) challenging the rating assigned by an NRSRO. If the Federal Reserve determined that the challenge had merit, it could ask the NRSRO to respond and hold a public hearing to determine the validity of the challenge. If the Federal Reserve determined that the rating was flawed, the affected securities would attract a maximum capital charge until the rating agency issued a new rating supported by the challenger or another rating agency, selected by the issuer, published a rating.

Non-NRSRO assessment firms could establish or burnish their reputations through successful challenges while NRSROs would have an incentive to properly rate deals and thus avoid the embarrassment of seeing their ratings dismissed.

To avoid the admittedly complex and imperfect process outlined above, the government should eliminate the NRSRO system entirely, and greater risk assumption by financial market participants should replace capital regulation. But doing away with capital regulation is a tall order that would likely require international agreement; in the meantime, the United States needs a system that limits risk-taking, does not rely solely on self-assessments by regulated entities, and does not depend on the unchallenged opinions of potentially conflicted NRSROs.

## Part 7

# Conclusion

This paper has suggested a number of changes that would encourage a renaissance of RMBS issuance while reducing the role of government in housing finance and provide substantive benefits to the housing market. Ideally, these changes should be implemented together with reforms that facilitate covered-bond issuance and balance-sheet lending—or some combination thereof—to replace taxpayer-subsidized mortgage finance (see Appendix B). Market participants could then determine which private financing mechanism would be most appropriate for any given circumstance.

However, the private financing of mortgages could take root even without serious changes by the government, though, without changes to Fannie Mae and Freddie Mac's subsidized pricing, the return may be limited. The existence of GSEs, the complexities in the law governing RMBS, and, above all, the lack of confidence in the risk assessment of residential-mortgage investments are significant roadblocks to the overall return of private capital.

Given the failure of RMBS ratings in 2007 and 2008, investors may be reluctant to take on mortgage-default risk solely on the basis of letter grades from rating agencies. Indeed, an investor who chooses to rely solely on a rating is not discharging his or her fiduciary responsibilities. To effectively and affordably analyze potential RMBS investments, money managers will need greater access to analytics and trustworthy opinions.

The proposed ratings agency changes in Dodd-Frank are not enough to overcome the distrust in rating-agency assessments. Instead, Congress should allow for the inclusion of property-level address data in RMBS disclosure so that investors or independent analytic firms could perform more detailed and accurate risk assessments at a lower cost. The mortgage-finance industry could also create an organization—an MUSB—to provide self-regulation against misrepresentation and to define categories of mortgages to replace QRMs in an effort to enhance liquidity.

These proposals would encourage investor due diligence and facilitate the availability of third-party analysis. By increasing access to information and insight, they should encourage investors to return to the private-label RMBS playing field.

If these actions are taken, the removal of government subsidies through the GSEs should only marginally affect interest rates charged on mortgages, and rates would still be at historically low levels.<sup>55</sup> It does not seem likely that an interest-rate change of this magnitude would trigger a

further significant fall in home prices. At the same time, market-determined interest rates should help prevent the emergence of a new housing bubble.

Attracting private capital to residential mortgage finance may be challenging. But perpetuating government control of housing finance in today's era of high deficits is unaffordable.

## About the Authors

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## Related Reason Foundation Studies

**Privatizing the Housing Finance System: A Brief History of the Housing Bubble and Ways to Keep It From Happening Again**

Anthony Randazzo

March 15, 2011

**Rethinking Homeownership: A Framework for 21st Century Housing Finance Reform, Policy Brief 93**

Anthony Randazzo

October 26, 2010

**Fixing the Regulation of Wall Street, Study 377**

Anthony Randazzo

September 14, 2009

## Appendix A

# Appendix A: Mortgage Underwriting Standards Board

### Purpose & Mission

The mission of this organization would be to establish industry standards for identifying mortgages, increase transparency, and make mortgage-related products—such as RMBS, covered-bonds, unit-investment trusts, or even large portfolios of whole loans—easier to analyze for risk. A series of categories defining buckets of mortgages would create liquidity by establishing large pools of mortgages with similar characteristics. Having the industry set the standards (instead of the government) would allow for more flexibility, less gaming of the terms by regulators influenced by public-policy goals for housing, and more direct influence by the lenders and investors putting their capital on the line.

### Charter & Organizational Structure

Similar to the Financial Accounting Standards Board, an MUSB could be chartered by a collection of the top housing lenders, securitization underwriters, mortgage bond-traders, and investment firms. The MUSB would be a non-profit organization that would only seek to fund its operating costs and salary expenses. The MUSB would be independent from any one firm or other industry group. It would have its own board of directors and would be funded by fees assessed on the lenders, underwriters, traders, and investment groups based on percentage of market share. Small fees could also be assessed on a transaction basis, similar to interchange fees.

Congress could charter such an organization in the same legislation that would remove QRM and the risk-retention requirements outlined in Dodd-Frank, but a congressional charter would give the impression that mortgage-standard definitions would carry the weight of government authority. However, the government could charter an MUSB and then spin it off as an independent organization—which would be better than the status quo.

## Operational Focus

The primary task of the MUSB would be to establish a range of standard mortgages with varying levels of risk but each with tight bands on mortgage characteristics. Criteria could include, but would not be limited to, payment terms/amortization schedule, LTVs/CLTVs, DTIs, FICO scores, PMIs (credit enhancement), occupancy and/or demonstration of occupancy, verification of income, and other loan documentation standards. There would be no limit on different mortgage definitions, each with its own label. Examples:

“Mortgage 1”—FICO 780 to 809, DTI 34% to 36%, Down Payment  $\geq$  20%

“Mortgage 8”—FICO 630 to 659, DTI 32% to 33%, Down Payment  $\geq$  15%

However, tight bands on the mortgage characteristics would make mortgages with the same label readily swappable. An RMBS marketed as “30% Mortgage 1, and 70% Mortgage 8” would give an investor a much better estimate of the risk profile for the security than a simple “triple-A” or “double-B” rating.

The need for tight bands in which the averages of risk profiles in a security cannot be substantially gamed is important. The MUSB would need to monitor how securities are put together with these mortgages and whether bands should be tighter or looser. The MUSB would collect loan-level data on securities or mortgage bonds, ensure mortgages fit one of the various definitions, and then rate the product with a percentage label based on its contents (e.g. “50% Mortgage 1, 25% Mortgage 2, and 25% Mortgage 8”).

The MUSB would require underwriters to make deal documents for all asset-backed securities and structured finance securities publicly available to market participants and regulators. The MUSB would ensure loan-level information provided by underwriters would be readily available to investors and regulators wanting to look beyond the labels to evaluate risk, expected performance, and adequacy of collateral. And the MUSB would enforce misrepresentation standards, proposing sanctions against unscrupulous issuers that would include restricting the ability of their loans to be included in future securities.

The MUSB could also create a marker/tracer to follow each loan (similar to CUSIP numbers for securities)—or even more specifically develop a document (a securitization certificate) that travels with the loan along with other relevant documents.<sup>56</sup>

If desired, an MUSB could further create standard pooling and servicing agreements for RMBS at the behest of the industry to streamline processes.

## Transitioned Authority

Upon the chartering of an MUSB, Congress would need to repeal the laws that instituted a range of federal regulations. Congress could also choose to transfer particular authorities to the MUSB for monitoring and identification of fraud or other illicit activities. An incomplete starter list of regulations to be repealed would include:

- Section 941 of the Dodd-Frank Act that creates qualified mortgage, qualified residential mortgage, and risk-retention provisions. These would be replaced by MUSB designations for particular types of mortgages.
- Section 942 of the Dodd-Frank Act that requires issuers of asset-backed securities (ABS) to provide asset-level and loan-level data for each security and to provide all data in a singular standard format. This information is important, but, as noted, it would be better to have industry-established standards.
- Section 943 of the Dodd-Frank Act that requires Nationally Recognized Statistical Rating Organizations (NRSROs), i.e. Moody's, S&P, etc., to provide a description of the representations, warranties, and enforcement mechanisms available to investors in an ABS offering. This is in addition to the issuer being required to file with the SEC the history of the requests received and repurchases made relating to its outstanding ABS. The MUSB would take over providing these descriptions and collecting this information.
- Section 945 of the Dodd-Frank Act that requires issuers of ABS registered under the Securities Act to conduct a review of the assets underlying the ABS. This requirement applies to all registered asset-backed securities, regardless of the assets that comprise the bundle. A third party may be hired to perform the review, but must be deemed an expert. The MUSB could make these reviews at particular cost and/or ensure compliance.
- Section 932 of the Dodd-Frank Act that requires that an issuer or underwriter of an ABS offering to file a new form to include certain disclosures relating to third-party due diligence providers. This would be obsolete with an MUSB system.
- Section 936 of the Dodd-Frank Act requires that any person employed by an NRSRO be tested for competence and knowledge. Empowerment of non-NRSRO analytic firms, as advocated elsewhere in this paper, would obviate the need for requirements of this type.
- Section 938 of the Dodd-Frank Act that requires NRSROs to establish universal ratings symbols that assess probability of default, clearly define and disclose the meaning of all symbols, and are used in a consistent manner for all securities. As suggested above, eliminating the NRSRO designation is preferable to further NRSRO regulation.
- Section 939D of the Dodd-Frank Act that requires that a study be conducted to find alternate means for compensating NRSROs so as to avoid perverse incentives.
- The whole of the Dodd-Frank Act's Subtitle A and Subtitle B under Title XIV—Mortgage Reform and Anti-Predatory Lending Act. Section 1402 requires that mortgages are not “unfair, deceptive or abusive” and are subject to regulation. Section 1405 standardizes

regulation and consumer disclosure. Section 1414 outlines further standards and requirements for mortgages.

- Regulation AB (codified registration, disclosure, and reporting of ABS) that was published in 2005 by the SEC and subsequently amended by the Dodd-Frank Act. The MUSB may replace the need for much of this (which accomplished little on transparency anyway).

A repeal of these provisions would just be the first step. More research should be conducted into what laws and regulations would need to be scrubbed or amended with the establishment of an MUSB. Consideration should also be given to what authorities the federal government would have or would need to have upon the potential failure of the MUSB to execute its charter.

## Appendix B

# Appendix B: Alternatives to RMBS

RMBS is only one mechanism for providing private mortgage finance—and it may not be preferable to alternatives. While securitization has dominated U.S. housing finance in recent decades, previous domestic experience and observations from other advanced economies show a number of practical market-based alternatives to RMBS.

### Private Alternatives to RMBS in U.S. Financial History

Traditionally, U.S. mortgage lending was the province of banks, savings and loan associations, and homebuilders. Indeed, prior to the Depression, the federal government had no role in housing finance—yet the overwhelming majority of Americans had a place to live.<sup>57</sup>

When viewed in nominal terms, the rise in home prices since the Depression is particularly striking. Median home prices in the Washington, D.C. area rose from \$6,515 in 1932 to \$340,900 in 2011—an increase of more than 52 times.<sup>58</sup> This compares to a 17-times increase in the Consumer Price Index over the same period. While government policies intended to encourage housing affordability may have benefited some owners in the short run, the long-run effects appear to have been higher home prices, less affordability, and greater volatility.

Another lasting legacy of early government intervention in the housing market is the 30-year, fixed-rate, prepayable mortgage.<sup>59</sup> When viewed from a lender's perspective, this mortgage product has serious risks that would appear to render it uneconomic. If interest rates rise over the long term of this mortgage, the lender faces the risk of negative spread. On the other hand, if interest rates fall, the lender faces prepayment risk. Finally, because 30-year loans amortize quite slowly at first, the lender also shoulders substantial default risk, especially when LTV is high and home prices are stable or falling.

While the market did not create 30-year, fixed-rate, prepayable mortgages, private organizations have matched this government innovation—sometimes with adverse consequences. In 1979, rising interest rates nearly destroyed the savings and loan industry—the major private source of mortgage finance at the time. Government support came in the form of deregulation of passbook savings interest rates, increased Federal Savings and Loan Insurance Corporation coverage, Regulatory Accounting Principles (RAP accounting), and relaxed regulation of S&L lending activities. Unfortunately, these changes contributed to the savings and loan crisis of the late 1980s and early

1990s. With S&Ls laid low, securitization became the dominant form of private mortgage finance in the U.S.

### Private Alternatives to RMBS Internationally

The U.S. experience is atypical.<sup>60</sup> In Western Europe, Canada, and Australia, neither RMBS nor government-guaranteed mortgages are as common as in the United States. These advanced economies rely much more heavily on bank balance-sheet lending and covered bonds. In Denmark, covered bonds are the sole form of residential mortgage finance and account for over half of the housing finance in Sweden. Meanwhile, France and Germany each finance about 20 percent of residential lending with these instruments. The overall volume of outstanding covered bonds across Europe is on the order of \$3 trillion.<sup>61</sup>

Covered bonds differ from U.S.-style, private-label RMBS in two fundamental ways. First, they are claims on both the financial institution issuing them and the asset pool itself. Investors thus have an extra level of protection: if the mortgages underperform, investors still can avoid losses if the issuing institution remains solvent. Issuers retain a portion of the risk on mortgages securitized under a covered bond and thus have a greater incentive to limit risk within the mortgage pool.

Second, covered bonds are not tranching: there are no senior and junior instruments. All investors are equally exposed to credit losses (with added protection from the issuing institution). Covered bonds are thus analogous to pass-through securities issued by Ginnie Mae. They require less analysis than do RMBS since no cashflow waterfall is involved. Investors do have the challenge of analyzing both the portfolio and the financial institution, but information and analysis on publicly traded financial firms is widely available.

The FDIC opposes legislation that would establish a legal framework necessary to support large-scale, covered-bond issuance in the United States, arguing that it would limit the government's ability to liquidate asset portfolios referenced by covered bonds and would give Treasury regulatory authority over covered bond issuance.<sup>62</sup> This concern, whether valid or not, must be weighed against the risks to taxpayers that arise by putting off recovery of private mortgage finance. To enable a more robust covered bond market in the United States, Congress should move forward with proposed legislation.<sup>63</sup>

Covered bonds may be the only way to privately finance non-prime mortgages in the near to intermediate term. To successfully market a structured residential securitization, buyers must be found for the junior (subordinated) tranches—those that absorb losses stemming from the first several mortgage defaults. Since participants now have convincing evidence that subprime and Alt-A borrowers frequently default, it would be very difficult to find buyers for these subordinated notes.

During the bubble, subordinated tranches of non-prime RMBS deals were most often purchased by asset-backed security collateralized debt obligations (ABS CDOs). These vehicles then issued bonds backed by the subordinated RMBS. Most of the debt issued by ABS CDOs were rated AAA. The core assumption behind these high ratings was that diversification would protect investors. Essentially, the theory was that if an ABS CDO purchased subordinated bonds from a wide array of subprime and Alt-A RMBS deals, only a small percentage would default, leaving enough cash flow to pay senior ABS CDO note holders. In fact, this diversification assumption proved false in the face of a nationwide decline in real estate values and poor mortgage underwriting standards. Most AAA tranches of ABS CDOs now trade at a small fraction of their face value.

Given this bitter experience, it is unlikely that ABS CDOs will return. Since they can no longer be resecuritized, subordinated non-prime RMBS would have to be held by the issuer or another financial institution. Given high default rates on the underlying collateral, these instruments would have to offer very high coupons to attract potential investors. These high coupons could only be supported by charging much higher interest rates to non-prime borrowers—a banking practice that would attract substantial criticism and perhaps a regulatory response.

If all investors share equally in the default risk of subprime and Alt-A borrowers, it may be possible to create pass-through instruments that provide adequate risk/return characteristics without requiring exorbitant mortgage rates. Covered bonds may provide such a vehicle, although their popularity with issuers will depend on their capital treatment.

While subprime and Alt-A lending may be difficult to finance, previous domestic and international experience shows that either balance-sheet lending or covered bonds can finance prime mortgages. RMBS of the type that were pervasive prior to 2008 and government-guaranteed mortgages are by no means the only options.

## Endnotes

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- <sup>1</sup> Acharya, Viral V., Matthew Richardson, Stijn Van Nieuwerburgh, Lawrence J. White, *Guaranteed To Fail: Fannie Mae, Freddie Mac, and the Debacle of Mortgage Finance*, 2011: Princeton University Press. <http://research.stlouisfed.org/conferences/gse/White.pdf>.
  - <sup>2</sup> Statistics from MBS Issuance Data published by Housing Wire, <http://www.housingwire.com/news/gse-market-share-increases-1q>. Also see Viral V. Acharya et al. *Guaranteed To Fail*.
  - <sup>3</sup> Federal Reserve, *Flow of Funds Accounts of the United States, Flows and Outstandings, Third Quarter 2011 (Washington, DC: Board of Governors of the Federal Reserve System (2011), 98, Table L.218, <http://www.federalreserve.gov/releases/z1/20111208/z1.pdf>.*
  - <sup>4</sup> This study will frequently refer to “private capital” re-entering the mortgage market. Private investors do purchase GSE-mortgage-backed securities. However, GSEs—and so by extension the federal government—insure these securities against default risk. Investors continue to assume prepayment risk—the risk that the mortgages will pay-off prematurely, leaving the investor with unexpected cash to redeploy. But in this low-interest-rate era, the effect of faster than anticipated prepayments is minimal.
  - <sup>5</sup> Performance reports for Sequoia 2010-H1 are available on the SEC’s EDGAR platform at <http://www.sec.gov/cgi-bin/browse-edgar?action=getcompany&CIK=0001490028&owner=exclude&count=40>. In April 2012, *Housing Wire* reported that only one borrower of the 1,800 mortgages in Redwood Trust’s five RMBS deals issued since 2010 was delinquent. And that one borrower has a 50 percent LTV loan and is expected to remedy the situation. Furthermore, 75 percent of the loans in the 2010 RMBS issuance had been paid in full by April 2012. Kerri Panchuck, “Fitch: Recent Redwood RMBS deals solid” *Housing Wire*, April 2, 2012, <http://www.housingwire.com/article/fitch-recent-redwood-rmbs-deals-solid>.
  - <sup>6</sup> However, in November 2011, well after originators began adapting to the new conforming loan limits, Redwood Trust CEO Martin Hughes testified that multiple reforms would be required for the private-label RMBS market to grow beyond a handful of deals. *Hearing on The Private Mortgage Market Investment Act, Before the United States House of Representatives Subcommittee on Capital Markets and Government Sponsored Enterprises 112<sup>th</sup> Cong. (2011) (statement of Martin S. Hughes, President and Chief Executive Officer, Redwood Trust, Inc.), <http://financialservices.house.gov/UploadedFiles/110311hughes.pdf>*
  - <sup>7</sup> *Concise Encyclopedia of Economics*, s.v. “Junk Bonds” by Glenn Yago, accessed April 11, 2012, <http://www.econlib.org/library/Enc/JunkBonds.html>.
  - <sup>8</sup> “House of Horrors, Part 2,” *The Economist*, November 26, 2011, <http://www.economist.com/node/21540231>.
  - <sup>9</sup> David Leonhardt, “In Sour Home Market, Buying Often Beats Renting,” *New York Times*, April 21, 2010, <http://www.nytimes.com/2010/04/21/business/economy/21leonhardt.html>.

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- <sup>10</sup> The persistence of the Federal Reserve’s quantitative easing program complicates estimation of the impact on housing prices in the medium-term. The Federal Open Market Committee has used QE purchases to effectively lower mortgage rates and put upward pressure on housing values, and it has further committed to keeping the Federal Funds rate at near zero until at least 2014. With this support, and the promise of more QE purchases if necessary, it is unlikely that housing prices will fall dramatically in the near- to medium-term.
- <sup>11</sup> In 2011, Marc Joffe was a consultant to Kroll Bond Rating Agency but was not associated with its RMBS rating service. From May 2002 to April 2011, Mr. Joffe was an employee of Moody’s Corporation.
- <sup>12</sup> Moody’s published unsolicited research on Sequoia 2011-1: “Moody’s warns of earthquake risk on new RMBS transaction”, Moody’s Investor Service, Feb. 17, 2011, [http://www.moodys.com/printresearchdoctopdf.aspx?docid=PR\\_214384](http://www.moodys.com/printresearchdoctopdf.aspx?docid=PR_214384). S&P published unsolicited research on Sequoia 2012-1: “S&P Comments on Sequoia Mortgage Trust 2012-1”, Standard & Poor’s, Jan. 19, 2012, <http://www.standardandpoors.com/prot/ratings/articles/en/us/?articleType=HTML&assetID=1245327505341> (login required).
- <sup>13</sup> 2011’s foreclosure activity is the lowest since 2007, before the recession began. *Associated Press*, January 12, 2012. <http://news.yahoo.com/2011s-foreclosure-rate-lowest-since-pre-recession-120337180.html>.
- <sup>14</sup> Moody’s uses the symbol Aaa instead of AAA to denote the highest possible rating.
- <sup>15</sup> See, for example, *Global Structured Finance Default And Transition Study—1978-2008: Credit Quality Of Global Structured Securities Fell Sharply In 2008 Amid Capital Market Turmoil*, Standard & Poors (2009), <http://www.standardandpoors.com/prot/ratings/articles/en/us/?articleType=HTML&assetID=1245320190859> (login required)
- <sup>16</sup> According to ABX/PrimeX Pricing & Analytics published by JP Morgan on October 28, 2011, four ABX AAA indices were trading below 40. Each index contains a group of sub-prime RMBS issued at roughly the same time. The worst performing ABX indices related to securities issued in late 2006 and 2007. Alt-A indices included in the JP Morgan report were all trading well below par. ABX and PrimeX are index products of MarkIt Partners.
- <sup>17</sup> Anthony Randazzo, “Freddie Mac Takes Another \$146 Million,” *Out of Control Policy Blog*, March 12, 2012, <http://reason.org/blog/show/freddie-mac-takes-146-million-more>.
- <sup>18</sup> Ironically, Congress is increasing the burden on FHA at a time when its capital is stretched beyond the breaking point. Wharton Professor Joseph Gyourko recently estimated that FHA will need a taxpayer-funded capital infusion of at least \$50 billion over the next several years. See Joseph Gyourko, “Is FHA the Next Housing Bailout?” (AEI Working Paper Number 2011-06, November 21, 2011), [http://real-estate.wharton.upenn.edu/documents/research/FHA-AEI\\_11%2015\\_for%20posting-final\\_jgedits.pdf](http://real-estate.wharton.upenn.edu/documents/research/FHA-AEI_11%2015_for%20posting-final_jgedits.pdf).
- <sup>19</sup> SIFMA, “US ABS Issuance and Outstanding (xls)— yearly, quarterly or monthly data from 1985 to October 2011 (2011), <http://www.sifma.org/uploadedFiles/Research/Statistics/StatisticsFiles/SF-US-Mortgage-Related-Issuance-SIFMA.xls>.
- <sup>20</sup> US Department of the Treasury, *Reforming America’s Housing Market: A Report to Congress*, 112<sup>th</sup> Congress, 1<sup>st</sup> session (2011),

<http://www.treasury.gov/initiatives/Documents/Reforming%20America%27s%20Housing%20Finance%20Market.pdf>.

- <sup>21</sup> Jon Prior, “Ginnie Mae calls 2011 ‘best year yet,’” *Housing Wire*, November 9, 2011, <http://www.housingwire.com/2011/11/09/ginnie-mae-calls-2011-best-year-yet>
- <sup>22</sup> Calculation by Edward J. Pinto, senior fellow at the American Enterprise Institute and former chief credit officer for Fannie Mae. Data from “2004–2010 HMDA Home Purchase Owner-Occupied by Borrower Race” (draft paper, the Mortgage Bankers Association, January 13, 2012).
- <sup>23</sup> Most of the mortgage finance-related provisions of Dodd-Frank were not finalized regulations at the time of this writing. However, there were many draft regulations issued in 2011 that threatened to establish more roadblocks to the return of private capital. Many of these were discussed in Peter J. Wallison, “Empty promise: the holes in the administration’s housing finance reform plan,” *AEI Financial Services Outlook*, February 29, 2012, <http://www.aei.org/outlook/economics/financial-services/housing-finance/empty-promise-the-holes-in-the-administrations-housing-finance-reform-plan/>.
- <sup>24</sup> Redwood Trust, *Guide to Restoring Private-Sector Residential Mortgage Securitization* (2010). Retrieved April 14, 2012 from <http://www.snl.com/Cache/1001157919.PDF?D=&O=PDF&IID=103579&Y=&T=&FID=1001157919>.
- <sup>25</sup> This and other ASF proposals for resurrecting the RMBS market can be found on the organization’s Project RESTART page, <http://www.americansecuritization.com/story.aspx?id=3461>.
- <sup>26</sup> The list of robust policy proposals for addressing Fannie Mae and Freddie Mac includes (but is not limited to):
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- <sup>27</sup> Anthony Randazzo, “A Robo-Signing Deal That Has Almost Nothing to Do with Robo-Signing,” *Reason Foundation*, February 16, 2012, <http://reason.org/news/show/a-robo-signing-deal-that-has-almost>; and Anthony Randazzo “A Highly Unjust Mortgage Settlement,” *RealClearMarkets.com*, February 23, 2012, [http://www.realclearmarkets.com/articles/2012/02/23/an\\_unjust\\_political\\_mortgage\\_settlement\\_99528.html](http://www.realclearmarkets.com/articles/2012/02/23/an_unjust_political_mortgage_settlement_99528.html)
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- <sup>31</sup> Melchior Palyi, “Bank Portfolios and the Control of the Capital Market,” *The Journal of Business of the University of Chicago*, Vol. 11, No. 1. pp. 70–111, <http://www.jstor.org/stable/2349621>.
- <sup>32</sup> Hearing on *Financing Municipal Facilities, Before the Subcommittee on Economic Progress of the Joint Economic Committee*, 90<sup>th</sup> Congress, Volume II, 193 (1968) (testimony of Brenton W. Harries, Standard & Poor’s Corporation).
- <sup>33</sup> Jerome S. Fons, “Rating Competition and Structured Finance,” *Journal of Structured Finance*, 14(3) (2008): 7–15, <http://www.ijournals.com/doi/abs/10.3905/JSF.2008.14.3.007>.
- <sup>34</sup> Financial Crisis Inquiry Commission, *The Financial Crisis Inquiry Commission Report* (New York: Public Affairs Books, 2011), page 119. Some NRSROs are also Registered Investment Advisers and are thus subject to SEC oversight under the Investment Advisers Act of 1940.
- <sup>35</sup> Jess Cornaggia, Kimberly Rodgers Cornaggia, and John Hund, “Credit Ratings across Asset Classes: A ≡ A?” (working paper, 2011), <http://ssrn.com/abstract=1909091>.
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- <sup>37</sup> Financial Crisis Inquiry Commission Report, pages 206–211.

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- <sup>38</sup> The irony of this statement is not lost as this paper has been developed and distributed for free and certainly contains a bias despite attempts to remain dispassionate.
- <sup>39</sup> See e.g. Alexander Tabarrok, “The private provision of public goods via dominant assurance contracts,” *Public Choice* 96 (1996): 345–62 ; David Schmitz, *The Limits of Government* (Boulder, Col.: Westview Press, 1991); Tyler Cowen (Ed.), *The theory of market failure* (Fairfax, VA: George Mason University Press, 1988).
- <sup>40</sup> Saul Hansell, “Why Yelp Works,” *Bits* (May 12, 2008), <http://bits.blogs.nytimes.com/2008/05/12/why-yelp-works/>.
- <sup>41</sup> Yelp activities for elite reviewers are discussed at <http://www.yelp.com/elite>.
- <sup>42</sup> Richard J. Newman, “Ratings ruler seeks subjects”, *US News and World Report* (March 7, 2004). <http://www.usnews.com/usnews/biztech/articles/040315/15eepower.htm>.
- <sup>43</sup> RMBS are rarely offered to the general public although this is more the result of industry convention than any regulatory restriction. If securities were divided into smaller chunks and offered through broader retail channels, the demand for quality information on the creditworthiness of the bonds would increase.
- <sup>44</sup> Caleb Deats, “Talk that Isn’t Cheap: Does the First Amendment Protect Credit Rating Agencies’ Faulty Methodologies from Regulation?” *Columbia Law Review*, Vol. 110, pages 1818-1864. <http://www.columbialawreview.org/assets/pdfs/110/7/Deats.pdf>.
- <sup>45</sup> For text of the Fair Credit Reporting Act of 1970 as subsequently amended, see <http://www.ftc.gov/os/statutes/031224fcra.pdf>. Section 604(3) provides a list of acceptable purposes for releasing a credit report, which includes the borrower address. It may be possible to interpret this list to include prospective RMBS investors, but it definitely excludes third party analysts. Congress’ intention to maintain address confidentiality is suggested by the recently proposed Private Mortgage Investment Act, which explicitly instructs FHFA to ensure that borrower identifying information is excluded from loan level disclosure. See [http://financialservices.house.gov/UploadedFiles/DD\\_-\\_Private\\_Mortgage\\_Market\\_Investment\\_Act.pdf](http://financialservices.house.gov/UploadedFiles/DD_-_Private_Mortgage_Market_Investment_Act.pdf) page 14.
- <sup>46</sup> Federal Bureau of Investigation, *Financial Crimes Report to the Public 2005* (Washington, DC: FBI, 2005), [http://www.fbi.gov/stats-services/publications/fcs\\_report2005](http://www.fbi.gov/stats-services/publications/fcs_report2005).
- <sup>47</sup> An argument for the penalty approach can be found in Peter Wallison, Alex J. Pollock, & Edward J. Pinto, *Taking the Government Out of Housing Finance: Principles for Reforming the Housing Finance Market* (Washington, DC: American Enterprise Institute, 2011), <http://www.aei.org/files/2011/03/24/AEI-White-Paper-FINAL-3-22-11.pdf>.
- <sup>48</sup> SEC Release Nos. 33-9117; 34-61858; File No. S7-08-10, starting at page 547, <http://www.sec.gov/rules/proposed/2010/33-9117.pdf>.
- <sup>49</sup> The authors used their industry experience to estimate the annual subscription fee charged by Intex Solutions as the company does not have a published price list.
- <sup>50</sup> The 10bp spread is based on a review of several 2006 RMBS deals on the Bloomberg terminal. The comparison to LIBOR is not totally fair for two offsetting reasons: On the one hand, investors may not have been able to find safe instruments paying LIBOR; some highly rated banks were able to obtain financing at rates below LIBOR. On the other hand, a floating-rate bond or deposit based on LIBOR does not have the prepayment risk associated with mortgage-backed securities. A more appropriate comparison may thus be between AAA private-label RMBS and “agency” bonds issued by the GSEs or Ginnie Mae. Rates on these default-risk-free

instruments appear to have been virtually identical to AAA RMBS in 2006, implying no return to performing credit analysis on the underlying mortgage pool and on performing cashflow-waterfall scenario analysis.

- <sup>51</sup> SEC Release Nos. 33-9117; 34-61858; File No. S7-08-10, starting at page 205.
- <sup>52</sup> Text of SEC rule 17g-5 may be found in the *Securities Lawyer's Deskbook* published by The University of Cincinnati College of Law at <http://taft.law.uc.edu/CCL/34ActRIs/rule17g-5.html>.
- <sup>53</sup> Marc Joffe & Anthony Randazzo, “How Government Props Up Big Finance,” *RealClearMarkets.com*, [http://www.realclearmarkets.com/articles/2011/11/22/how\\_government\\_props\\_up\\_big\\_finance\\_99381.html](http://www.realclearmarkets.com/articles/2011/11/22/how_government_props_up_big_finance_99381.html).
- <sup>54</sup> “Risk-Based Capital Guidelines: Market Risk; Alternatives to Credit Ratings for Debt and Securitization Positions” 76 FR 79380, <https://federalregister.gov/a/2011-32073>.
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- <sup>56</sup> This idea was originally proposed by Andrew Davidson and Anthony B. Sanders in a paper titled “Securitization after the fall” (prepared for the Second Annual UCI Mid - Winter Symposium on Urban Research, February 2009), <http://merage.uci.edu/ResearchAndCenters/CRE/Resources/Documents/Davidson-Sanders.pdf>.
- <sup>57</sup> Admittedly, renting was more common back then. While a complete discussion is beyond the scope of this paper, it is worth noting that increased home ownership rates—one of the main alleged benefits of government housing finance intervention—has a serious downside. Underwater homeowners can become tethered to their houses and thus unable to relocate in search of new job opportunities. Increased rates of home ownership might thus be responsible for higher rates of structural unemployment.
- <sup>58</sup> 1932 price from *Historical Statistics of the United States, Millennium Edition*; current prices from National Association of Realtors. Washington, D.C. was the only market reported in the Historical Statistics volume; national averages were not computed at that time. Home prices actually peaked in the mid-1920s and had fallen substantially before the Depression started.
- <sup>59</sup> Peter Wallison, Alex J. Pollock, & Edward J. Pinto, *Taking the Government Out of Housing Finance: Principles for Reforming the Housing Finance Market* (Washington, DC: American Enterprise Institute, 2011), <http://www.aei.org/files/2011/03/24/AEI-White-Paper-FINAL-3-22-11.pdf>.
- <sup>60</sup> Dwight Jaffee, “Reforming the U.S. Mortgage Market Through Private Market Incentives” (Fisher Center Working Papers, Fisher Center for Real Estate and Urban Economics, Institute of Business and Economic Research, UC Berkeley, 2011), <http://escholarship.org/uc/item/4x0357n0>.
- <sup>61</sup> Cardiff Garcia, “US Covered Bond Conundrum,” *FT Alphaville blog*, March 23, 2011, <http://ftalphaville.ft.com/blog/2011/03/23/521856/us-covered-bond-conundrums/>.
- <sup>62</sup> *Ibid.*
- <sup>63</sup> In March 2011, Representatives Scott Garrett (R-NJ) and Carolyn Maloney (D-NY) introduced H.R. 940 United States Covered Bond Act of 2011.

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<http://www.govtrack.us/congress/bills/112/hr940/text>. (At the time of publication, this legislation was reported by the Committee but still pending in the House of Representatives with no clear estimate for when it might be passed. This paper's support of legislation in general enabling a robust covered-bonds market does not necessarily endorse or oppose the specific provisions in this Act.)



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