I. INTRODUCTION

Many commentators blame credit rating agencies for helping to precipitate the 2007-2008 financial crisis by incorrectly rating subprime Residential Mortgage Backed Securities (RMBS) and Collateralized Debt Obligations (CDOs). But the rating agency role in the crisis is much broader than generally understood—extending to incorrect ratings for bond insurers and for US state and local governments. The interplay of incorrect RMBS, CDO, bond insurance and public finance ratings and their role in destabilizing the financial markets is thoroughly described.
The case alleges that bond insurers and credit rating agencies conspired against municipal bond issuers to extract excess rating and insurance fees. In exchange for a fee, rating agencies assign letter grades to bond issuers ranging from AAA to D in the case of Standard & Poor’s (S&P) and Fitch, or Aaa to C in the case of Moody’s. Before the financial crisis seven bond insurers received the highest rating: AAA/Aaa from S&P and Moody’s respectively.

State and local governments with lower ratings could purchase an insurance policy from one of these insurers providing a guarantee of interest and principal payments to investors. With this “insurance wrapper” or “credit enhancement,” the government could then use the insurer’s AAA/Aaa rating when marketing its bonds, thereby lowering the coupon (or interest rate) it would have to pay.

The Ambac Bond Insurance Case plaintiffs—a group of California cities, counties and other municipal bond market issuers—argue that rating agencies graded them using harsher criteria than those applied to bond insurers and other classes of bond issuers. As a result, the rating agencies created an artificial market for bond insurance—a financial product that may not have ever existed had ratings been more consistent.

For an antitrust case like this to succeed, plaintiffs also have to prove that the rating agencies and bond insurers actually conspired against government bond issuers. Since such conspiracies are often discussed in private they are hard to document. The complaint cites movement of personnel between rating agencies and bond insurers, and frequent

2. The Ambac Bond Insurance Cases are a set of antitrust lawsuits that alleged that Ambac Financial Group Inc., and other credit rating companies conspired to sell California’s local governments insurance they did not need. See AMBAC BOND INSURANCE CASES Register of Actions, SUPERIOR CT. OF CAL., COUNTY OF S. F., http://webaccess.sfc.org/Scripts/Magic94/mqrqspi94.dll?APPNAME=WEB&PRGNAM E=ValidateCaseNumberSHA1&ARGUMENTS=-ACJC08004555 (last visited Aug. 19, 2015) [hereinafter AMBAC CASES].

3. Id.


5. Id.

6. Id.


8. Id.

industry conferences at which these employees could meet to discuss the conspiracy.\textsuperscript{10}

While such circumstantial evidence may be insufficient to prove the antitrust claim, the case record provides a public service by presenting a comprehensive survey of rating agency errors and malfeasance as they related to a wide variety of asset classes and demonstrating how these problems adversely affected government bond issuers before, during and after the financial crisis.\textsuperscript{11} In this author’s view, problems identified in the complaint persist, resulting in unnecessary costs to taxpayers and reduced investment in infrastructure.

In this paper, I will use the Ambac Bond Insurance Case filings as a reference point to survey rating agency problems as they relate to government bond issuers. I will begin with an explanation of rating agencies’ role in the economy. Next, I will review the evidence documenting inconsistencies of ratings across asset classes, explain why these misalignments developed and show how they adversely impact cities, counties and states. Finally, I will suggest a systemic solution to the credit ratings problem.

II. ROLE OF CREDIT RATING AGENCIES

Given the criticism heaped upon the credit rating agencies, one may wonder whether they should simply be abolished, or at least ignored. Yet these organizations appear to fulfill a need, given their revenues and market value. For example, Moody’s 2014 revenue was about $3 billion\textsuperscript{12} and its market capitalization was $18 billion.\textsuperscript{13} While the company undoubtedly benefits from regulatory barriers to entry, it does not receive direct government subsidies nor is there a regulatory mandate to use its services – at least in the United States. Thus, capital market participants voluntarily pay this company and its competitors billions of dollars each year for their offerings.

These financial results are a reflection of the important role rating agencies play in the institutional credit markets. The question of whether credit rating agency activities play a socially useful role thus depends upon whether one believes that lending money at interest is an

\textsuperscript{10} AMBAC CASES, supra note 4.

\textsuperscript{11} Id.


appropriate activity and whether one believes that financial markets add value to society as a whole.

Progressive opposition to rating agencies and other financial players is sometimes rooted in a basic denial of the value of financial activity. For example, David Graeber, a leader of the Occupy Wall Street movement, wrote in *The Nation*:

> For decades now, we’ve been hearing about the “financialization of capitalism.” But this is always framed as an abstract process, almost akin to magic, whereby Wall Street no longer needs to extract most of its profits from the fruits of commerce or industry because it has figured out a way to produce wealth from sheer speculation. … Debt is how the rich extract wealth from the rest of us, at home and abroad. Internally, it has become a matter of manipulating the country’s legal structure to ensure that more and more people fall deeper and deeper into debt. … if I were to frame a demand today, it would be for as broad a cancellation of debt as possible.

Given these priors, I doubt whether Graeber could be convinced that rating agencies have any use. While a broad defense of modern finance is well beyond the scope of this paper, Nobel Laureate Robert Schiller provides an eloquent justification for a large and innovative financial services industry in his 2012 book *Finance and the Good Society.*

Strident critics of financial capitalism should also consider international comparisons. A particularly instructive contrast involves Cuba and Singapore, both of which underwent large systemic changes about fifty years ago. The former country largely eliminated its system of private finance, while the latter greatly increased its participation in global financial markets. In 1959, the two countries had similar levels of per capita income. Today, the average Singaporean is about seven times...
wealthier than the average Cuban and also enjoys a significantly longer life span.

An affluent society requires large investments in infrastructure, plants and equipment. We need schools, hospitals, roads, bridges, factories, etc. to have a comfortable life. Because these assets are so expensive and because they provide benefits across many years or decades, it often makes sense to finance their construction by borrowing. Most of us—both within the 1% and beyond—accumulate some savings or benefit from institutions like pension funds that effectively save on our behalf. The social purpose of the institutional credit markets is to efficiently link our savings with investment opportunities.

Typically, there are more investment opportunities available than savings to finance them. Consequently, society requires a mechanism to allocate savings among projects that are somehow deemed to be worthy. Opponents of financial capitalism might suggest that these allocation decisions be made by a political process. However, experience shows that the political allocation of capital is less efficient than capital allocation through financial markets.

The social role of rating agencies is to promote the efficient investment of capital. Investors need to estimate the relative risk of various investment opportunities, so that they can assess whether relative interest rates properly compensate them for potential defaults. Bonds financing investments deemed to be riskier will face higher interest rates and may thus be too costly to undertake. Credit ratings provide a quick way for investors to distinguish among different levels of risk.

Not only do credit rating agencies perform a socially important role, they often execute this function well. As shown in the rating agencies’

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20. Id.
25. Id. at 27.
26. Id. at 27-8.
27. Id. at 27.
regulatory disclosure, ratings and default rates are generally inversely correlated within any given asset class. For example, lower rated corporate bonds default more often than higher rated corporate bonds. Similarly, higher rated mortgage backed securities are more likely to pay all contractually promised principal and interest than those carrying lower ratings. This is precisely the kind of information investors need to make rational decisions when deploying their capital.

Finally, it is worth noting the additional social value of government bond ratings. These assessments often frame the public debate over fiscal policy. Downgrades can stimulate a discussion about the need for reform. In certain cases, these discussions lead to political action that increases the government’s fiscal sustainability. In other cases, criticism focuses on the rating agency issuing the downgrade—as S&P learned when it lowered the US government’s rating in 2011.  

Just as school performance metrics can promote educational reform, government financial performance metrics can promote fiscal reform. These measures are most beneficial when they are seen as objective and reliable. Given the amount of criticism rating agencies have received and the lack of transparency of their rating methodologies, government bond ratings are too easily dismissed as being biased.

III. RATINGS ACROSS ASSET CLASSES: WHERE THE AGENCIES OFTEN FAIL

As discussed in the previous section, credit rating agencies do a good job of ranking bonds by their degree of risk within a given asset class. Unfortunately, rating agencies are not as effective in normalizing their symbols across asset classes. In fact, they have sometimes even denied the necessity of doing so, as we will see below.

Cornaggia, Cornaggia and Hund evaluated default rates by major asset class by Moody’s rating. Their results are reproduced in the following table.

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High default percentages for Aaa and Aa bonds suggest more lenient rating standards. Overall, Cornaggia, Cornaggia and Hund find that government bond issuers (sovereign and municipal) are rated more harshly than corporate issuers (including financial corporations), which, in turn, are rated more harshly than structured finance securities. They further observe that rating severity is inversely proportional to rating fee levels. Rating agencies charge structured finance issuers the most and government bond issuers the least, with corporates in between.

These findings are corroborated by Micah Hauptman and Barbara Roper in a March 2014 SEC comment letter. Hauptman and Roper reviewed forms NRSRO filed by Moody’s, Standard & Poor’s and Fitch, observing large differences in default and downgrade behavior across asset classes. They conclude:

Ratings agencies are likely to grant more favorable ratings to issuers who are likely to seek significant current and future business. This phenomenon is likely reinforced when there are few issuers in a certain asset class, which is common in the structured finance arena, because those issuers will choose whichever NRSRO rates their securities most favorably, and

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31. See generally Moody’s Rating Symbols & Definitions, MOODY’S INV’R SERVICES 8, June 2009 (ratings are based off of Moody’s credit rating system, ranging from Aaa (highest) to C (lowest)).
32. Cornaggia, supra note 30, at 25.
33. Id. at 17.
34. See id. at 1.
36. Id. at 2.
because NRSROs won’t risk losing any business from an issuer with such market power.\textsuperscript{37}

Since the municipal bond market is fragmented among tens of thousands of relatively small issuers, a local government has far less ability to affect rating agency behavior than Goldman Sachs, JP Morgan and other major financial industry players that create structured finance instruments.

In a 2008 Congressional testimony,\textsuperscript{38} Moody’s Senior Managing Director Laura Levenstein stated:

Investors in corporate or structured securities typically have looked to Moody’s ratings for an opinion on whether a security or an issuer will meet its payment obligations. Historically, this type of analysis has not been as helpful to municipal investors. If municipal bonds were rated using our global ratings system, the great majority of our ratings likely would fall between just two rating categories: Aaa and Aa. This would eliminate the primary value that municipal investors have historically sought from ratings – namely, the ability to differentiate among various municipal securities. We have been told by investors that eliminating that differentiation would make the market less transparent, more opaque, and presumably, less efficient both for investors and issuers.\textsuperscript{39}

Levenstein asserts that Moody’s provided the harsher rating scale for municipal bonds because of investor demand.\textsuperscript{40} But I question whether Moody’s surveyed a good cross-section of municipal bond investors, which include large numbers of individuals—who rarely have any reason to contact a rating agency and who were probably unaware that rating agencies had separate standards for municipal bonds. Most likely, the universe of investors Levenstein and her colleagues consulted included a disproportionate number of bond insurers, who had a vested interest in perpetuating inconsistent rating methodologies.

If rating agencies were primarily concerned with providing greater differentiation among municipal bonds, they could have used a different

\textsuperscript{37} Id. at 25.
\textsuperscript{38} Laura Levenstein, Senior Managing Director, Moody’s Inv’rs Serv., Testimony before the Comm. on Fin. Servs.: Municipal Bond Turmoil: Impact on Cities, Towns, and States, H.R. REP. 110-835 (Mar. 12 2008).
\textsuperscript{39} Id.
\textsuperscript{40} Id.
set of symbols for these securities. They could have even assigned governments a fiscal score on a 0-100 scale.\footnote{41} Joseph Pimbley, an expert witness for the Ambac Bond Insurance Case plaintiffs, notes that rating agencies already use different scales for short-term debt and preferred stocks.\footnote{42} Pimbley continues:

Had the CRAs truly wished to rate municipal bonds with different meanings for the ratings, they would have created rating scales with distinct symbols and explained them clearly. A good faith attempt to explain to investors, issuers, regulators and other stakeholders that municipal and corporate ratings are entirely dissimilar and incomparable would have required at the very least the imposition of distinct rating symbols.\footnote{43}

**IV. More Granular Asset Class Comparison: US States v. Bond Insurers**

The table reproduced above compares rating performance across very broadly defined asset classes. These classes each contain a wide variety of debt securities that can be usefully grouped into subclasses. Comparisons at this level throw ratings inconsistencies into sharp relief.

Government credit issuers include sovereigns, US states and other sub-sovereigns, counties, cities, school districts and a variety of other entities. In the US, private hospitals, universities and other non-profits can work with public agencies to issue tax exempt municipal bonds—and are thus misleadingly classified as government bond issuers.

Within the broad category of government bond issuers, US states have performed exceptionally well.\footnote{44} In fact, the last time any state entered default status was 1933, when both Arkansas and Louisiana missed interest payments.\footnote{45} Louisiana’s problem—the result of a local bank failure—was quickly rectified.\footnote{46} Arkansas did not fully emerge


43. Id. at 7-8.


45. Id. at 23.

46. Id.
from default until 1941, when the Reconstruction Finance Corporation—a federal agency—purchased previously non-performing Arkansas bonds at par (meaning that private bondholders experienced no loss of principal).47

Thus, US states have reliably serviced their bonds for as long as most anyone can remember.48 Yet, most of their obligations do not receive the highest ratings from the major rating agencies. For example, rating histories published by the California State Treasurer49 show that all three major rating agencies have rated California below AAA/Aaa50 since the early 1990s.

Moody’s51 downgraded California from Aaa to Aa1 in February 1992.52 Since then the state’s rating has fallen as low as Baa1, which is seven notches below Moody’s highest rating.53 Currently, Moody’s assigns California a rating of Aa3, three notches below Aaa.54 Two states—Illinois and New Jersey—currently have lower ratings than California: A3 and A1 respectively.55

The performance of state bond ratings contrasts sharply with that of bond insurer ratings.56 The bond insurance business began with the

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47. Id.
48. See id. at 3-30.
50. Id. S&P and Fitch use a ratings scale that ranges from AAA to D; Moody’s ratings range from Aaa to C. The highest ratings on the S&P/Fitch scale are: AAA, AA+, AA, AA-, A+, A, A-, BBB+, BBB and BBB-. Id. The highest ratings on the Moody’s scale are Aaa, Aa1, Aa2, Aa3, A1, A2, A3, Baa1, Baa2 and Baa3. Id.
51. Most of the narrative below focuses on Moody’s ratings, since it is the oldest rating agency and has very comprehensive coverage. During the period covered by the Ambac Insurance Cases, rating agency behavior toward municipal and bond insurance issuers was similar.
52. See California’s General Obligation Credit Ratings, supra note 49.
53. California’s ratings have fallen below as low as Baa1 twice in July 2009 and December 2003. Id.
54. Id.
formation of Ambac in 1971. By 2008, Moody’s rated eight of the nine active bond insurers. These ratings are shown in the following table.

**TABLE 2**

<table>
<thead>
<tr>
<th>Company</th>
<th>Moody’s Rating</th>
<th>Default Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambac</td>
<td>Aaa</td>
<td>Chapter 11 Filing on Nov. 8,</td>
</tr>
<tr>
<td>Assured Guaranty</td>
<td>Aaa</td>
<td></td>
</tr>
<tr>
<td>CIFG</td>
<td>Aaa</td>
<td>Commutation on Jan. 21, 2009</td>
</tr>
<tr>
<td>FGIC</td>
<td>Aaa</td>
<td>Chapter 11 Filing on Aug. 4,</td>
</tr>
<tr>
<td>FSA</td>
<td>Aaa</td>
<td></td>
</tr>
<tr>
<td>MBIA</td>
<td>Aaa</td>
<td>Multiple commutations in late</td>
</tr>
<tr>
<td>Radian Asset</td>
<td>Aa3</td>
<td></td>
</tr>
<tr>
<td>XL Capital</td>
<td>Aaa</td>
<td>Commutation on July 17, 2009</td>
</tr>
</tbody>
</table>

Seven of the eight insurers were rated Aaa at the beginning of 2008. Five of these seven were forced to restructure their obligations by the end of 2010. In two cases, the insurers declared bankruptcy. In the other three cases, they entered “commutation agreements” with certain creditors under which some of the insurers’ obligations were liquidated for less than 100 cents on the dollar.

With the benefit of hindsight, it is clear that the ratings of states and bond insurers were highly inconsistent. Of course, rating agencies do not have the benefit of hindsight when publishing their assessments, so individual ratings cannot be guaranteed to be accurate. That said, the failure of a majority of Aaa entities within a given asset class should give cause for concern.

One fact that was obvious before the financial crisis was that bond insurers had a much shorter track record than US states. Lack of operating history for an organization or an industry should be seen as a source of credit risk. By the time the bond insurance industry began,
states already had three decades of pristine credit, but many states were rated below Aaa. By contrast, a new bond insurer could obtain a rating agency’s highest rating shortly after opening for business. For example, CIFG—one of the failed insurers—formed in 2001 and received top ratings from all three agencies by 2002.

Finally, criticism of Aaa bond insurer ratings pre-dates the financial crisis by several years. In her book, Confidence Game, Christine Richard documents the activist investor William Ackman’s efforts to convince rating agencies to downgrade bond insurer MBIA. Although Ackman clearly had a vested interest in the outcome—he was selling MBIA stock short—his research on the matter was quite thorough as can be seen from his 2002 report, Is MBIA Triple-A?

V. WHY BOND INSURERS FAILED

When Ambac and MBIA pioneered the municipal bond insurance business in the 1970s, their focus was on municipal bonds, which rarely defaulted. In fact, as described in the Ambac Bond Insurance Case complaint and in Confidence Game, these companies had a “zero-loss underwriting policy,” meaning that they expected all the bonds they insured to pay all contractually required principal and interest.

In the years prior to 2008 zero-loss underwriting generally worked for municipal securities. The reason that several bond insurers became insolvent after 2008 was that they diversified into structured finance securities.

As discussed earlier, structured finance securities are the most leniently rated of any of the broad asset classes when measured in terms


63. David Veno, supra note 62. CIFG was wholly owned by a French bank that had a long operating history, but this bank was not legally responsible for CIFG’s obligations. Id.


of default rates by rating category. Cornaggia, Cornaggia and Hund also found substantial variation between types of structured finance instruments as shown below.\textsuperscript{67}

\begin{table}[h]
\centering
\begin{tabular}{|c|c|c|c|c|c|c|c|}
\hline
 & ABS & & & & & & & \\
 & N & NR & & & \% & & & \\
 & N & N & DB & & & N & N & DB \\
\hline
Aaa & 30,815 & 21,651 & 20.22 & 5,195 & 0.12 & 13,621 & 0.00 & 46,396 & 3.73 \\
Aa & 7,311 & 28,71 & 26.76 & 2,043 & 0.14 & 8,074 & 0.00 & 8,876 & 3.38 \\
A & 9,203 & 29,20 & 31.26 & 2,145 & 2.70 & 2,315 & 0.00 & 4,535 & 4.76 \\
Baa & 8,204 & 51.46 & 54.06 & 2,901 & 3.22 & 365 & 0.00 & 4,476 & 4.76 \\
Bb & 2,171 & 71.58 & 76.43 & 1,589 & 8.56 & 113 & 0.00 & 1,375 & 39.36 \\
B & 516 & 71.32 & 26.21 & 1,152 & 22.40 & 92 & 0.00 & 607 & 34.60 \\
Caa & 231 & 67.53 & 179 & 81.81 & 1 & 0.00 & 143 & 0.00 \\
Ca & 132 & 66.67 & 115 & 90.43 & 114 & 0.00 & 199 & 0.00 \\
C & 305 & 69.51 & 199 & 0.00 & 199 & 0.00 & 199 & 0.00 \\
\hline
\end{tabular}
\caption{Table 3}
\end{table}

The best performing asset class is Pfandbrief (PF) bonds, which are German bank securities collateralized by mortgages or public sector loans.\textsuperscript{68} Highly-rated Commercial Mortgage Backed Securities (CMBS), bonds backed by mortgages on office buildings, hotels and shopping centers, also performed well.

The worst two performing AAA structured finance asset categories were Residential Mortgage Backed Securities (RMBS) and Collateralized Debt Obligations (CDOs).\textsuperscript{69} Unfortunately for the bond insurers, they began insuring these two types of structured finance assets in the run-up to the financial crisis.

Perhaps because rating agencies had overrated RMBS and CDO issues, they were especially slow to recognize the collapse in bond insurer creditworthiness. Both the stock market and the credit default

\textsuperscript{67} Cornaggia, supra note 30.


\textsuperscript{69} See \textit{Mortgage-Backed Securities, U.S. SEC. & EXCH. COMM’N. (July 23, 2010),} http://www.sec.gov/answers/mortgage_securities.htm. As noted by the name, Residential Mortgage Backed Securities (RMBS) are debt obligations that are backed by pools of mortgage loans on residential property. The securities represent claims on mortgagee’s principal and loan payments. \textit{Id.}; see also \textit{Collateralized Debt Obligation Overview, Khan Acad.}, https://www.khanacademy.org/economics-finance-domain/core-finance/derivative-securities/CDO-tutorial/v/collateralized-debt-obligation-overview (last visited Aug. 27, 2015); see also \textit{Collateralized Mortgage Obligations (CMOs), U.S. SEC. & EXCH. COMM’N. (Sept. 2, 2011),} http://www.sec.gov/answers/tcmos.htm. Collateralized Debt Obligations (CDOs) are derivative securities in which asset-backed securities are divided into various “tranches,” which distributes the cash flow from the asset-backed securities in sequence based on the seniority of tranches. Id. The tranches provide various yields based on their seniority and corresponding risk. \textit{Id.}
swap market reflected the new reality much earlier than did the rating agencies.

For example, Ambac’s stock fell from $96.08 per share in May 18, 2007 to $6.24 on January 17, 2008. The cost to insure Ambac Assurance five-year debt securities against default rose from 0.13% to 4.94% during the same period. This insurance cost—known in the market as the Credit Default Swap spread—is largely a function of the market’s default probability and recovery rate expectations. Assuming the market expected a 50% recovery rate in the event that Ambac Assurance became insolvent, the implicit default probability forecast was roughly 10%—consistent with a speculative grade Ba2 credit rating.

After the company announced a $5.4 billion write-down of its CDO exposure on January 16, 2008, Fitch downgraded Ambac Assurance from AAA to AA. S&P and Moody’s, placed the insurer on review for a possible downgrade, but did not actually lower their ratings until June 2008.

This forbearance toward a corporate bond issuer—maintaining an unjustifiably high rating long after the markets had identified a forthcoming insolvency—is reminiscent of the rating agencies’ stance on Enron and Worldcom during the 2001-2002 recession. It also contrasts sharply with the aggressive response that rating agencies take to municipal financial troubles. For example in October 2011, Moody’s downgraded Fresno, California by three notches—from Aa2 to A2—after learning the size of the city’s general fund deficit. Three years after this “super downgrade,” the city continues to perform on its obligations.

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70. Consolidated Am, Class Action Compl. supra note 69, at 14.
71. See Christine Richard, Ambac Insurance Loses AAA Ranking at Fitch Ratings, BLOOMBERG (Jan. 18, 2008), http://www.bloomberg.com/apps/news?pid=newsarchive&sid=ahF6qwzwOki0&refer=home (insuring the holding company’s debt rose from 0.22% on May 18, 2007 to 10.32% on January 17, 2008).
72. CDS Spread is roughly equal to the default probability * (1 – recovery rate).
73. See In re AMBAC Class Action Complaint, supra note 69, at 7.
safety costs.77 Moody’s followed with a further downgrade to BAAaa1 in March 2014.78 Once again, no default or bankruptcy declaration appears to be in the offing.

VI. HARM TO MUNICIPAL BOND ISSUERS

Lower bond ratings tend to be accompanied by higher interest rates. Thus, relatively harsh municipal bond ratings raise state and local government debt service costs. Governments have often ameliorated these extra costs by purchasing bond insurance—the value of which was exaggerated by rating misalignments across rating classes. In a 2008 Congressional testimony, California State Treasurer Bill Lockyer reported that the state had paid $102 million to bond insurers on $9.1 billion of general obligation bonds issued between 2002 and 2007.79

The interest rate differential between AAA and lower rated municipal bonds varies over time and with the term, i.e. the date on which the bond is redeemed. According to a 2013 report from Zacks Investment Research, interest rates on 20-year municipal bonds ranged from 4.03% for AAA-rated securities to 4.33% for AA-rated securities and 4.84% for A-rated securities.80

The extra interest cost in this case is a fraction of 1%—which may seem small, but can mount over the life of a bond issue. For example, the 0.81% difference between A and AAA issues cited by Zacks translates into a difference of $16.2 million in lifetime interest costs for a 20-year, $100 million bond.

The extra interest cost is also quite large in absolute terms when one considers the size of the municipal bond market. Given the $3.6 trillion in outstanding municipal bonds, excess interest costs attributable to harsh municipal bond ratings may amount to tens of billions of dollars annually.

While the annual cost of this effect is usually a small fraction of a municipality’s annual budget, ratings misalignments imposed much

larger costs on many state and local governments during the financial crisis. This spike in financing costs stemmed from the collapse of the Auction Rate Securities (ARS) market in February 2008.

The ARS crisis was largely eclipsed in the contemporaneous headlines and post mortems by many other extraordinary events during the financial crisis, but warrants further study. Auction Rate Securities are long-term bonds that can be purchased by investors who need short-term securities because their bonds are automatically resold via Dutch auction every 7 to 35 days. ARS were introduced in 1984; by 2008 over $325 billion of ARS were outstanding including about $166 billion issued by state and local governments.

Because short-term interest rates are normally lower than long-term rates, financing via ARS was attractive to many municipalities. However, purchasers of ARS, such as money market mutual funds, corporate treasurers and individual investors, were credit sensitive and typically demanded AAA-rated securities. Consequently, most municipal bond issuers required bond insurance to access this market.

The ARS market generally ran smoothly until the financial problems of bond insurers became widely known. As discussed earlier, Ambac wrote down $5.4 billion in assets and was downgraded by Fitch in January 2008. The following month, a large number of ARS auctions failed. A failure means that no investor bid for the bonds when it was time for them to change hands. In the event of an auction failure, the affected municipal bonds automatically reset to a penalty interest rate, which could be as high as 20%. Even if the auction did not fail, the successful bidder was often a speculator offering to purchase the bonds at a very high interest rate—sometimes just slightly below the penalty rate.

Rather than continuing to pay these high rates, many municipal bond issuers decided to refinance their ARS with more traditional instruments, thereby incurring issuance costs. These issuance costs included...

81. A Dutch auction starts with a high price that is then bid down. In the case of ARS, the auctions would start with high interest rates and finish when no participant was willing to take a lower interest rate.


underwriting and legal expenses as well as fees to credit rating agencies for assessing the new bonds.\textsuperscript{84}

Among the plaintiffs in the Ambac Bond Insurance cases, the City of Riverside and the County of San Mateo were especially hard-hit. Between 2004 and 2007, Riverside issued $408 million in ARS, paying $2.1 million in bond insurance premia upfront. The city estimates that it paid $3.5 million in extra interest due to the collapse of the ARS market and $9.3 million in issuance fees and marketing costs to replace the ARS.\textsuperscript{85} San Mateo County issued $155 million of ARS in 2003 to mature in 2036 paying Ambac an upfront premium of almost $2.5 million.\textsuperscript{86} In February 2008, auctions for the bonds failed. Thereafter, auction rates were significantly higher than expected. The County did not quantify additional interest cost in its declaration, but reported paying $1.3 million to refinance the bonds in September 2008.\textsuperscript{87}

\textbf{VII. EMERGENCE OF THE “DUAL RATING SYSTEM”}

Although we have seen multiple inconsistencies among ratings across asset classes, market participants focused on harsh municipal credit ratings often speak of the “dual rating system:” one for US municipal issuers and another system for all other asset classes.

Moody’s contends that the dual rating system can be traced back to 1920, shortly after the company began publishing its government bond manual. However, a review of contemporaneous materials shows this assertion to be misleading.

In the Ambac Bond Insurance Cases, counsel for Moody’s states that “Moody’s distinct scale for municipals goes back to at least 1920 and was known to the public decades before the Bond Insurers existed.”\textsuperscript{88}

\textsuperscript{84} Id.


\textsuperscript{86} Id. Since bond insurance premia are paid upfront and are calculated based on the contractual life of the bond, the need to refinance bonds deprived municipal issuers of some of the insurance that they had already paid for.


\textsuperscript{88} Moody’s Memorandum of Points and Authorities in Opposition to Plaintiff’s Anti-SLAPP Prong Two Brief as to the Credit Rating Agencies’ Motion to Strike, Contra Costa County v. AMBAC Financial Group, Inc., No. CJC 08 004555, (Super. Ct. of Cali. Mar. 12, 2013) (emphasis in original).
This assertion echoes a contention made by Moody’s Laura Levenstein in Congressional testimony referenced earlier. 89 Levenstein states:

John Moody, the founder of Moody’s Investors Service, first introduced a simple system for rating railroad bonds in 1909. This system was broadened a few years later to include all industrial bonds. When he later began rating state and local governments, he used a similar but distinct municipal rating system. The difference between the two rating systems was recognized explicitly in *Moody’s Government and Municipal Manual* published in 1920, and since that time we have continually published on it and talked to market participants about it. 90

In a footnote, she quotes from the Moody’s 1920 manual as follows:

…Municipal ratings ‘are necessarily based on a broader and more general foundation than are the ratings supplied for the ordinary corporation or railroad issues. … Thus, under all ordinary conditions, it can be accepted as a fact that a municipal obligation of a well established and growing city or town is substantially secure insofar as the strength of the principal is concerned. Qualifications in rating, therefore, are limited, and the variations between one type of municipal bond and another are not very great.’ 91

The manual in question—the third edition of a series that started in 1918—covered US municipalities, foreign cities and foreign sovereigns. The full passage from the 1920 Moody’s manual 92 reads as follows:

The ratings given in a volume of this character, however, are necessarily based on a broader and more general foundation than are the ratings supplied for the ordinary corporation or railroad issues. In the case of American municipalities the importance of an investment rating is not so great as in the case of the obligations of a private corporation. A municipal obligation is

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89. Levenstein, *supra* note 38.
90. *Id.*
91. *Id.*
issued under carefully framed laws and the risks are largely eliminated by the restrictions in these laws. Thus, under all ordinary conditions, it can be accepted as a fact that a municipal obligation of a well-established and growing city or town is substantially secure, insofar as the strength of the principal is concerned.

Qualifications in ratings, therefore, are limited, and the variations between one type of municipal bond and another type are not very great. This is especially true where the town or city has been long established and has shown a tendency toward substantial growth in wealth and population as the decades have gone by. The preference in ratings is thus naturally based to some extent on the size of the city, its geographical location, the character of its manufactures, the average tax rate and other facts of this nature.

In the case of foreign governments and municipalities, however, there are other factors to be considered. While great nations like Great Britain and France, even under present unsettled conditions, have retained their credit because of their great age and vast resources and also because of the civilization which they represent, yet there are other countries such as the newer and undeveloped ones of South America, and the dilapidated countries of the Balkan States and Turkey, which have for years been characterized by very poor or very fluctuating credit.93

This is simply an explanation of how a system of letter ratings was adopted to various types of government bond issuers. It is not an explanation of why US municipalities should be rated on a harsher scale than corporate bond issuers.

Indeed, subsequent experience shows that Moody’s did not rate municipalities more harshly than corporates prior to the Great Depression. According to statistics reported by George Hempel, 55.4% of rated US municipalities received Aaa ratings from Moody’s in 1929.94 During the Depression, Hempel reports that 127 issuers rated Aaa in 1929 defaulted, representing about 6% of the Aaa municipal universe. By

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93. Id. at 9.
94. GEORGE H. HEMPEL, UNIV. OF MICH. BUREAU OF BUS. RESEARCH, MEASURES OF MUNICIPAL BOND QUALITY (1967).
contrast, a recent Moody’s study shows an annual default rate of 0.000% for Aaa rated corporate bonds throughout the 1930s. Thus we see that, if anything, municipal bonds were rated more leniently than corporate bonds prior to the Depression, effectively rebutting Moody’s contentions about the origins of the dual rating scale.

That said, my research suggests that the dual ratings scale was not the result of a conspiracy. Instead, it appears to be the unintentional outcome of the credit ratings process, which is characterized by inertia as well as delays in implementing advanced research techniques.

During the Depression-era municipal default wave, Moody’s analysts reacted with sweeping downgrades of the entire municipal sector. By 1939, only 1.2% of rated municipal issuers received Aaa ratings. This low rating regime then became entrenched. In the years following World War II, very few defaults occurred, but, by 1963—when Hempel’s data ends—a mere 2.3% of rated municipalities carried the top Aaa rating. In 1949, Standard & Poor’s began rating municipal bonds. Hempel reports that its rating distribution was similar to Moody’s.

The best practice would have been for rating agencies to associate rating symbols with default rates. They could have then monitored the performance of issuers in each ratings category against these implied rates. Had they followed this procedure, the agencies would have realized that their municipal ratings were becoming excessively harsh. They could have then recalibrated the ratings to ensure that they had consistent meanings over time.

Although quantitative techniques like these are not very complex and were undoubtedly known to social science researchers in the mid-20th Century, they were not implemented by credit rating agencies until much later—and often in a reactive manner.

For example, Moody’s began to explicitly associate default probabilities with ratings in the 1990s when it started to rate structured finance instruments, such as mortgage backed securities and


96. Marc Joffe’s co-authored research for Kroll Bond Rating agency suggests that both the municipal and corporate default rates were higher than estimated by these other sources—about 10% and 3% respectively for the ten years after 1929. In either case, the Aaa municipal default rate greatly exceeded the Aaa corporate default rate. See Jerome S. Fons, Thomas Randazzo & Marc D. Joffe, Kroll Bond Rating Agency, An Analysis of Historical Municipal Bond Defaults 18 (Nov. 14, 2011), https://www.krollbondratings.com/show_report/44.

97. Hempel, supra note 94.
collateralized loan obligations. Structured finance securities are issued by special purpose entities, companies created specifically to hold the underlying collateral. Because these SPEs have no history, they had to be rated using a theoretical approach, which typically relied on models. Since these models calculated numerical default probabilities or expected loss rates, it was necessary to cross reference these quantities back to the letter grades rating agencies had been using for many decades. Consequently, Moody’s began publishing its “idealized default rates” to accommodate the new category of debt instrument.98

In 1999, Fitch entered the municipal bond market with a default study showing that municipal bond default rates had been lower than corporate default rates since 1979.99 The study found that the overall default rates for tax supported municipal issues were between the default rates on AA and AAA corporate bonds. The Fitch report continued as follows: “What does this mean in terms of how municipal bonds are rated? One conclusion may be that for some extremely low risk sectors, like state GO bonds where there have been no defaults since the Great Depression, bonds should rarely be rated below the ‘AA’ category.”100

The entry of a third rating agency into the municipal market and the greater use of quantitative techniques appear to have created an awareness in the industry that at least some types of municipal bonds were underrated. After Fitch published its findings, both Moody’s and S&P conducted similar default studies. In 2002, Moody’s concluded that “if municipalities were rated on a corporate scale, Moody’s would likely assign Aaa ratings to the vast majority of general obligation debt issued by fiscally sound, large municipal issuers.”101

100. Id. at 8.
VIII. LEGAL SOLUTIONS TO THE DUAL RATING ISSUE

Once the existence of the dual rating system was established and the harm it caused municipal auction rate securities issuers became manifest, the stage was set for both legislative and court action.

Congressional Democrats proposed HR 6308, the Municipal Bond Fairness Act in June 2008. The measure would have required rating agencies to apply the same rating scale to corporate and municipal ratings. Although it was reported out of the Financial Services Committee in September of that year, the bill never received a floor vote, perhaps due to the volume of other financial issues confronting the chamber as the financial crisis was reaching its peak.

Ultimately, the spirit of HR 6308 was incorporated into the 2010 Dodd Frank Wall Street Reform and Consumer Protection Act. Section 938 of that law directed the SEC to: “… require, by rule, each nationally recognized statistical rating organization to establish, maintain, and enforce written procedures and policies that … apply any [rating] symbol … in a manner that is consistent for all types of securities.”

In 2014, the SEC embedded this provision of Dodd Frank into rating agency regulations. SEC Rule 17g-8(b) reads as follows:

(b) Policies and procedures with respect to credit rating symbols, numbers, or scores. A nationally recognized statistical rating organization must establish, maintain, enforce, and document policies and procedures that are reasonably designed to:

(1) Assess the probability that an issuer of a security or money market instrument will default, fail to make timely payments, or otherwise not make payments to investors in accordance with the terms of the security or money market instrument.

(2) Clearly define each symbol, number, or score in the rating scale used by the nationally recognized statistical rating organization to denote a credit rating category and notches within a category for each class of credit ratings for which the nationally recognized statistical rating organization is registered (including subclasses within each class) and to include such

104. Id. at § 938.
(3) Apply any symbol, number, or score defined pursuant to paragraph (b)(2) of this section in a manner that is consistent for all types of obligors, securities, and money market instruments for which the symbol, number, or score is used. 105

In Connecticut, then Attorney General (now Senator) Richard Blumenthal filed suit against the rating agencies on behalf of the State and several municipalities. 106 In a July 30, 2008 press release 107 announcing the suit, Blumenthal’s office stated:

All three credit rating agencies systematically and intentionally gave lower credit ratings to bonds issued by states, municipalities and other public entities as compared to corporate and other forms of debt with similar or even worse rates of default, Blumenthal alleges.

As a result of these deceptive and unfairly low ratings, Connecticut’s cities, towns, school districts, and sewer and water districts have been forced to spend millions of taxpayer dollars to purchase bond insurance to improve their credit rating, or pay higher interest costs on their lower rated bonds.

We are holding the credit rating agencies accountable for a secret Wall Street tax on Main Street -- millions of dollars illegally exacted from Connecticut taxpayers,” Blumenthal said. “Connecticut’s cities and school districts have been forced to spend millions of dollars, unconscionably and unnecessarily, on bond insurance premiums and higher interest rates as a result of deceptive and deflated credit ratings. Their debt was rated much lower than it should have been because the rating agencies knew they would end up being bailed out by the taxpayers. These rating agencies have been charged with the responsibility of providing independent, objective evaluations of the creditworthiness of bonds and other debt obligations. Instead, they have been found to engage in a wide range of illegal and improper conduct that has harmed the public interest and led to losses and costs in the billions of dollars. We are seeking a significant financial penalty and injunctive relief to prevent these practices from continuing.”

107. Id.
lower than corporate debt despite their much lower risk of default and higher credit worthiness.  

The suit was settled in 2010. All three rating agency defendants provided the state with credits for future rating services, but made no admission of guilt. Moody’s and Fitch also announced recalibrations of their municipal bond ratings, with the declared intention of placing them on a par with corporate ratings. S&P did not perform a systematic recalibration, but upgraded over 5000 municipal bonds to bring their ratings more in line with corporate rating criteria.

Whether these adjustments were sufficient is open to question. According to data published in The Bond Buyer, Moody’s had ratings for 47 states in April 2010. Prior to the recalibration, Moody’s rated 9 of the 47 states Aaa. After the recalibration, 14 of the 47 rated states carried Moody’s highest rating.

S&P, which did not formally recalibrate, maintains ratings for all fifty states. In 2010, S&P rated 11 states AAA. In 2011, the number increased to 13. For an asset class that has not witnessed a new default since 1933, these adjustments seem incomplete.

IX. THE PROBLEM RETURNS

The discussion thus far has focused on events before and during the most recent financial crisis. That crisis effectively eliminated some of the financial excesses that occurred before 2007. For example, subprime mortgage backed CDOs performed so poorly and their defects are so widely understood, that there is little reason to expect this asset class to return. But harsh municipal bond ratings remain in place and the use of municipal bond insurance is growing once again.

108. Id.
112. Id.
According to a May 2014 report, Moody’s ratio of general obligation downgrades to upgrades since 2009 has exceeded 3:1. 114 In other words, for every general obligation bond Moody’s has upgraded between 2009 and 2013, it downgraded more than three other bonds. Contributing to the downgrade trend was the agency’s 2013 revision to its pension methodology. By applying lower discount rates to pension liabilities, Moody’s determined that 29 local governments should be reviewed for potential downgrades. 115 Despite this negative rating trend, the actual performance of municipal securities has improved. After three cities filed for bankruptcy in 2012, only one (Detroit) filed in 2013 and none filed in 2014. No county has filed for municipal bankruptcy protection since Jefferson County, Alabama’s 2011 filing. So, once again, it appears that ratings and actual municipal credit quality are diverging.

Meanwhile, in the first nine months of 2014, Assured Guaranty insured $8 billion in newly issued US municipal bonds compared to $6 billion during the first nine months of 2013. 116 In March 2014, S&P raised the ratings for Assured Guaranty’s municipal bond insurance subsidiaries to AA, placing the insurer in a position to wrap any municipal bond rated AA- or lower. In the following months, Illinois (S&P rated A-) sold municipal bonds insured by Assured Guaranty Mutual. In April and May 2014, the state insured a total of $60.02 million in general obligation bonds with AGM at a cost of $454,819. 117

More recently, Kroll Bond Rating Agency (KBRA) assigned AGM a rating of AA+, which is one step below that agency’s maximum AAA rating. 118 KBRA’s rating methodology for rating AGM and other bond insurers explicitly recognizes the inconsistencies of ratings across asset classes. In the methodology document, KBRA analysts state: “While

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adjustments to rating approaches have occurred to a certain degree, KBRA does not believe that municipal and corporate ratings are currently reconciled to the extent that future municipal default rates are likely to climb to corporate default rate levels across most municipal subsectors.119

KBRA’s quantitative methodology involves running a loss simulation on the insurer’s portfolio to assess the likelihood that future losses will consume all of the company’s capital.120 The simulation model bases the probability of any given bond defaulting on its rating. However, KBRA does not use the same set of rating-implied default probabilities for all classes of bonds. In an explicit recognition of rating disparities, KBRA applies a scaling factor to certain types of municipal securities.121 For tax supported bonds issued by US states, KBRA uses a default probability of just 25% of that implied by the rating.122 For example, if Illinois is rated single-A, and single-A is associated with a 1% default probability, KBRA’s model would use a 0.25% default probability for the Illinois bonds insured by AGM. It does not appear that KBRA applies a similar scaling factor to the insurer itself, and thus seems to embed the ratings inconsistency into its model.

Moody’s has resisted the trend toward higher ratings for Assured Guaranty. In a July 2014 credit opinion, Moody’s affirmed its A2 rating for Assured Guaranty Municipal, three notches below S&P’s assessment and four notches below that of KBRA.123 If Moody’s continues to rate AGM conservatively, i.e. at or below the level assigned to most municipalities, AGM’s growth may restricted or the insurer may stop paying Moody’s for its rating services.

While it is tempting to attribute downward pressure on municipal credit ratings to incentives to reinvigorate the bond insurance market, other factors may be at work. For example, political interests that wish to highlight pension underfunding may be applying pressure to credit rating agencies. If a state, city or county is downgraded over pension concerns, a political opportunity becomes available to reduce benefits or replace defined benefit plans with defined contribution plans.

After Moody’s three-notch downgrade of Chicago in July 2013, Naked Capitalism reported that the Civic Committee of the Commercial

120. Id. at 9.
121. Id. at 10.
122. Id. at 13.
Club of Chicago lobbied for the rating action. While it is undeniable that there is a limit beyond which pension costs become unsustainable, it is less clear that Chicago is approaching that threshold. In any case, the question of whether a bond issuer is reaching a point of unsustainability should be answered by empirical and statistical analysis, insulated from political considerations.

X. TOWARD A SOLUTION

Incumbent credit rating agencies continue to assign relatively low ratings to state and local governments for a variety of potential reasons: ongoing inertia, pressure from stakeholders that favor low municipal bond ratings, and perhaps a commercial interest in the resurrection of the bond insurance business.

The issues raised in this paper may not be fully resolved unless a new rating agency enters the market and gains acceptance. The new participant can gain credibility by offering greater transparency and providing greater access to the data used in its analysis. Ideally, users of a new rating system should be able to fully reproduce any given rating assessment.

Because so few cities, counties and states default, it should be relatively easy to identify financial metrics and levels that are common across episodes. A simple statistical model based on these attributes can then distinguish the relatively small number of at-risk governments from the much larger universe that can reasonably be expected to perform. My research suggests that the relevant attributes include general fund balance, surplus or deficit, revenue trend, debt service burden, and pension cost burden.

After implementing a statistical rating model, a new rating agency would periodically recalibrate the model and adjust factor weightings to keep up with evolving default behavior. By using an open source model, the rating agency could leverage input from academics and practitioners. These third parties may identify opportunities for improvement as they use the open source model for their own analysis. Keeping the process open limits the possibility of commercial interests biasing the model.


XI. CONCLUSION

Credit ratings serve an important role in capital markets. Although ratings usually do a good job of distinguishing between levels of risk within a given asset class, they often sew confusion when used to make comparisons across asset classes. The results have included exaggerated perceptions of the risk of state and local government bonds, and needless purchases of municipal bond insurance.

Bond insurers essentially arbitraged an artificial gap between municipal and corporate bond ratings to sell municipal bond insurers policies that did not provide the apparent margin of safety. Although they clearly benefited from an inefficiency in the credit rating system—at the expense of taxpayers and public employees—it is less clear that bond insurers’ extra profits stemmed from a conspiracy.

More likely, they benefited from a credit rating system plagued by opacity and inertia. Unless the rating system improves, more money will be redistributed from the general public to Wall Street, as evidenced by the State of Illinois’ recent purchases of municipal bond insurance from Assured Guaranty.

Instead, bond issuers and investors should demand ratings systems that are fully transparent and properly calibrated. By making credit rating processes easier to understand and reproduce, we can ensure that government bond ratings fully deliver their promised benefits.