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Unfinished Business: Despite Dodd-Frank, Credit Rating Agencies Remain the Financial System's Weakest Link

by Marc Joffe

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Executive Summary

The credit rating business began in the early 20th century when John Moody and his competitors started publishing letter grades in the corporate and municipal bond manuals they marketed to investors. By consolidating copious volumes of financial data and commentary in a single source, early rating agencies provided fixed income investors with a then unheard-of level of transparency. But while the ratings business began as a disruptive fintech innovation (more than 100 years before "fintech" became a word), decades of federal regulation have had the unintended consequence of stymying progress in the field of institutional credit risk analysis. Credit rating agencies are slow to embrace new analytical techniques that would create value for fixed income investors, while often competing for issuer business by lowering their credit standards.

For decades, consumer credit reporting firms have been using computer models to automatically rate individuals on a continuous numeric scale. By contrast, corporate credit rating agencies rely heavily on human analysts and continue to use opaque letter grades. This difference may be attributed to the fact that consumer credit reporting firms are

lightly regulated, while the traditional corporate credit ratings business model has been cemented into federal regulations since 1931.

For decades, consumer credit reporting firms have been using computer models to automatically rate individuals on a continuous numeric scale. By contrast, corporate credit rating agencies rely heavily on human analysts and continue to use opaque letter grades.

In the 1930s regulators were seeking a way to determine which companies should be included in or excluded from bank commercial lending portfolios. They decided to use the letter grades in rating manuals for this purpose. In 1975, regulators employed ratings for broker-dealer capital requirements, and by the end of the 20th century had embedded ratings in hundreds of securities, pension, banking, real estate, and insurance regulations. They also created a system for licensing and regulating rating firms, known in regulation as Nationally Recognized Statistical Rating Organizations (NRSROs)—an ironic moniker given the agencies' limited use of statistical techniques.

Bond issuers and rating agencies realized that ratings had become a device for determining whether many institutional investors could legally purchase particular fixed income securities. Because ratings now provided a regulatory license, they were especially valuable to issuers. Rating agencies monetized this regulatory power by charging issuers for ratings instead of selling them to investors.

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The unintended consequence was the phenomenon of "ratings shopping" in which issuers pitted rating agencies against one another to win rating mandates through lower standards. This was exacerbated by a less obvious unintended consequence of regulation, which is that it stunted the growth of alternative credit analysis providers who found it more difficult to sell their services to fixed income investors, given the availability of issuer-paid credit ratings at no out-of-pocket cost. In other words, companies that might have provided more accurate ratings were crowded out by the regulatory privileges created by NRSRO status.

Far from protecting investors, the regulatory privileges given to NRSROs made it more difficult for investors to understand the true risks of bonds, with far-reaching consequences. This became apparent during the great financial crisis, when it emerged that from the early 2000s NRSROs had assigned inflated ratings to thousands of Residential Mortgage Backed Securities (RMBS) as well as derivative instruments such as Collateralized Debt Obligations (CDOs). The lenient ratings attracted excessive mortgage finance capital that exacerbated a home price bubble—and a wider asset price bubble. It was the bursting of this bubble that triggered the Great Recession of 2007–2009.

Other notable rating agency failures in the aughts included the investment grade ratings they maintained on Enron and WorldCom until shortly before their respective bankruptcies; AAA ratings for bond insurers, most of whom experienced credit events during the Great Recession; and inflated ratings on aircraft receivable and manufactured housing securitizations.

The 2010 Dodd-Frank Act addressed the credit rating agency issue, but the benefits have been limited. On the positive side, Dodd-Frank mandated the removal of credit ratings from regulations—a process that unfortunately remains incomplete. On the downside, it stiffened NRSRO registration and reporting requirements, increasing the cost of entry for prospective entrants and thus limiting the prospects for new competition and much-needed industry disruption. Even today, three firms continue to dominate the credit rating market.

The Financial CHOICE Act, passed by the House in June 2017, relaxes some Dodd-Frank regulations, but leaves most of the regulatory framework in place. If and when the CHOICE Act is taken up in a House-Senate conference, lawmakers should consider further pro-competitive reforms, or, better yet, they should eliminate the system of NRSRO registration and regulation entirely.

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If the regulatory straitjacket was removed, credit analysts would be free to compete with one another on a level playing field. The results would likely be less pro-issuer bias and much greater use of information technology in the assignment and monitoring of credit ratings. The benefit would be a more effective credit rating industry—one better positioned to safeguard the economy against systemic disruptions like those that triggered the Great Recession.

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Introduction

The Dodd-Frank Act of 2010 and the proposed Financial CHOICE Act both aim to address the causes of the 2008 financial crisis. However, neither measure deals adequately with one set of Great Recession culprits: the "big three" credit rating agencies.

While those agencies—Moody's, Fitch, and Standard & Poor's—were widely criticized for their role in the financial crisis, the credit rating business has only changed marginally since the enactment of Dodd-Frank. Unfortunately, the current version of the Financial CHOICE Act eases some rating agency regulations mandated by Dodd-Frank *without* addressing a more fundamental question: namely, whether the federal government should be licensing and regulating rating agencies in the first place.

Unfortunately, the current version of the Financial CHOICE Act eases some rating agency regulations mandated by Dodd-Frank *without* addressing a more fundamental question: namely, whether the federal government should be licensing and regulating rating agencies in the first place.

Despite issuing faulty ratings that helped trigger the Great Recession, the big three credit rating agencies continue to grow. Rather than go out of business, they are reporting increasing revenue and profits (when settlement expenses are excluded).[1] Normally, when businesses fail to perform, we expect them to shrink or even close. That this fate has not befallen the big credit rating agencies is largely attributable to the fact that they don't operate in a competitive free market. Instead, the agencies are licensed and regulated by

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[1] For example, Moody's Corporation revenue rose each year from $2.7 billion in 2012 to $3.6 trillion in 2016. Net income rose from $690 million in 2012 to $941 million in 2015. Income would have exceeded $1.1 billion in 2016, but Moody's took an $864-million charge for its settlement with the Department of Justice and State Attorneys General reached in January 2017. See Moody's Corporation, "2016 Annual Report," http://s21.q4cdn.com/431035000/files/doc_financials/annual/2016/2016-Annual-Report-vFINAL.PDF. A significant portion of Moody's revenue is attributable to Moody's Analytics—a subsidiary that does not issue credit ratings but benefits from access to ratings data and from the Moody's brand.

the Securities and Exchange Commission, which maintains high barriers to new competition. This regulatory regime is the latest stage of the government's involvement in the rating business—a series of interventions dating back to the Great Depression.

Rating agencies assess the credit risk of bonds. With over $150 trillion of debt securities outstanding, proper assessment of their credit risk is essential to the global economy's well-being. Bond ratings and other risk estimates influence the pricing of debt instruments—that is, the interest rates they carry. If these instruments are mispriced, scarce investment capital will flow to the wrong places. For example, if risky instruments are assumed to be safe, their interest rates will be artificially low and they will be issued in excessive amounts.

An especially dramatic case of mispricing occurred in the market for subprime mortgage-backed securities in the mid-2000s. Rating agencies underestimated their risk, triggering greater-than-appropriate subprime mortgage volume and inflating the property bubble that burst in 2007 and 2008.

Because credit ratings are assessments of the likelihood of future events, they cannot be expected to be completely accurate. Unpredictable events are always possible. But when credit rating agencies use outdated, biased, or incomplete inputs for their assessments—as we now know they did in the run-up to the financial crisis—we can reasonably conclude that their credit opinions were flawed. Worse, the faulty ratings do not appear to be solely the result of honest mistakes; instead, rating agencies competed for bond issuer business by intentionally lowering their standards.

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Reliance on ratings agencies' assessments likely contributed to the asset price bubble and excessive liquidity in the period leading up to the financial crisis. While there were clearly many other factors involved, some conservative commentators have given short shrift to the role of the ratings agencies. A notable example is the American Enterprise Institute's Peter Wallison, who, in his dissenting statement to the Financial Crisis Inquiry Commission, attributed much of the crisis to the Community Reinvestment Act and

government-sponsored enterprises but paid no attention to the role of the credit ratings agencies.[2] In fact, however, hundreds of billions of dollars of private residential mortgage-backed securities and related derivative instruments such as collateralized debt obligations were overrated by the big three. These instruments were widely distributed across international financial markets, and triggered widespread distress when market participants recognized that they had been seriously misrated and mispriced.

Progressives have offered a more accurate critique of rating agency behavior, but their proposed solutions have serious flaws. Such proposals range from outright nationalization of credit ratings[3] to greater government control. Yet this ignores the fact that political bodies are subject to biases that hinder objective, and thus credible, analysis. This problem was exemplified by regulations on capital treatment of sovereign debt before the Eurozone crisis. Many regulators allowed banks to assign a zero risk weight to debt issued by Eurozone sovereigns,[4] meaning that banks were not required to carry any capital to absorb defaults on these debts. Defaults by the Greek government revealed the folly of this regulatory approach.

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Thus, the existing system of privately owned, for-profit credit rating agencies is a source of systemic risk in our economy, but greater government control could worsen the problem. A better solution, as described below, is to allow new competitors to disrupt the credit rating business—employing new business models and more-advanced rating methodologies to improve the quality of credit risk analysis. This disruption can proceed if and when the federal government removes the regulatory straitjacket of Nationally Recognized Statistical Rating Organization (NRSRO) certification, which locks in outmoded rating procedures and prices out new competitors.

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[2] Wallison, Peter. "Financial Crisis Inquiry Commission: Dissenting Statement." January 2011. https://fcic-static.law.stanford.edu/cdn_media/fcic-reports/fcic_final_report_wallison_dissent.pdf.

[3] See, for example, Chakrabortty, Aditya. "Time to take control of the credit rating agencies." *The Guardian*. January 16, 2012. https://www.theguardian.com/commentisfree/2012/jan/16/time-control-credit-ratings-agencies.

[4] Jones, Huw. "Global bank watchdog to review rule on zero-risk weighting for sovereign debt." *Reuters*. January 23, 2015. http://www.reuters.com/article/basel-sovereign-regulations-idUSL6N0V22ZO20150123.

Neither the 2010 Dodd-Frank Act nor the version of the Financial Choice Act that passed the House in 2017 takes this route. While Dodd-Frank started a useful process of writing NRSRO ratings out of regulations, it retained SEC NRSRO certification, perpetuating the belief that privately issued credit rating opinions carry a federal imprimatur. Dodd-Frank hoped to improve credit rating by increasing oversight, but, as shown later, the tighter regulation has had limited impact on the major incumbents while raising compliance costs and barriers to entry for current and prospective competitors. The Financial CHOICE Act would chip away at the Dodd-Frank regulations while perpetuating NRSRO registration, moving us back toward the pre-2008 status quo.

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This study reviews the origins and history of the credit rating industry, then outlines the case against the big three rating agencies, explaining why the credit rating industry's makeup remains problematic eight years after the end of the financial crisis. It also discusses emerging competitors to the NRSROs, and identifies the credit assessment methodologies that could potentially disrupt the industry and enhance the accuracy and reliability of credit analysis. It concludes with an examination of the policy reforms needed before this disruption can occur.

Part 1

The Development of the Credit Rating Industry

As with many regulatory frameworks, today's rating agency governance regime is the unintended consequence of decades-old policy choices. Today's "big three" rating agencies originated as private publishers in the early 20th century.

As with many regulatory frameworks, today's rating agency governance regime is the unintended consequence of decades-old policy choices.

1.1 Origins

In the 19th century, mercantile credit agencies pioneered the use of letter grades to reflect the relative quality of merchant borrowers. Mercantile agencies provided manufacturers and wholesalers with assessments of businesses that might purchase their goods on credit. These agencies formed in the wake of the Depression of 1837, which had taken a heavy toll on vendors who extended commercial credit. By 1860, two firms were publishing rating books that contained lists of commercial buyers with letter grades.[5] The firms—R.G. Dun and Company and J.M. Bradstreet & Sons—would later merge to form Dun & Bradstreet in 1933.[6]

In 1909, John Moody began publishing manuals containing information about railroads and the securities they issued. The manuals also included rating symbols for each security.

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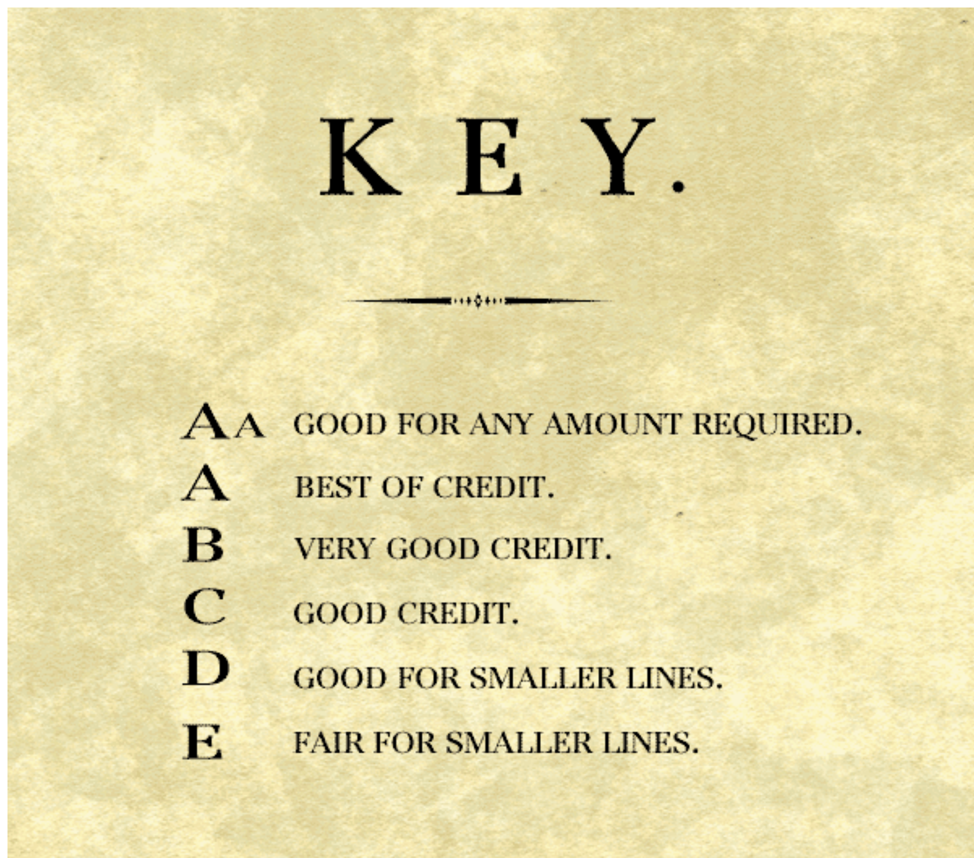
[5] Harold, Gilbert. *Bond Ratings as an Investment Guide.* New York: The Ronald Press Company, 1938. 7–8.

[6] Dun & Bradstreet. "Our History." http://www.dnb.com/about-us/company/history.html.

Moody later told researcher Gilbert Harold that he got the idea from the mercantile agencies and from bond rating systems that had arisen in Berlin and Vienna.[7]

Demand for Moody's railroad manuals was strong, and he soon added securities guides for industrial, utility, and government bonds. Competitors also began marketing their own manuals. Two of these firms, Poor's Publishing and Standard Statistics, which began issuing ratings in 1916 and 1922 respectively, later merged to form Standard & Poor's. Fitch Publishing Company, the predecessor of today's Fitch Ratings, began producing credit ratings in 1924.[8]

Figure 1: Ratings Key from Bradstreet's 1860 Rating Book



KEY.

AA	GOOD FOR ANY AMOUNT REQUIRED.
A	BEST OF CREDIT.
B	VERY GOOD CREDIT.
C	GOOD CREDIT.
D	GOOD FOR SMALLER LINES.
E	FAIR FOR SMALLER LINES.

A list of possible ratings assigned to commercial borrowers in Bradsteet's 1860 Ratings Book. This system of symbols is an ancestor to the one used by John Moody from 1909.

[7] Harold. *Bond Ratings as an Investment Guide*. 11.

[8] Ibid. 13.

1.2 Depression-Era Use of Ratings

Ratings first attracted regulatory attention during the Great Depression. In 1931, Comptroller of the Currency J. W. Pole announced that nationally chartered banks would not have to write down bonds in their portfolios if they were rated Baa/BBB or above. Banking regulators in several states followed this approach, while the Federal Reserve made more informal use of rating agency manuals.

In August 1935, President Roosevelt signed a Banking Act that made federal deposit insurance permanent and limited the liability of bank owners and managers. To guard against resulting moral hazards, the new law restricted banks to buying investment grade securities, as defined by the Office of the Comptroller of the Currency (OCC). The following year, Comptroller J.F.T. O'Connor furnished a definition that once again relied on rating agency symbols. The precise regulatory language (including an all-important footnote) was as follows:

> *By virtue of the authority vested in the Comptroller of the Currency by... Paragraph Seventh of Section 5136 of the Revised Statutes, the following regulation is promulgated as to further limitations and restrictions on the purchase and sale of investment securities for the bank's own account, supplemental to the specific limitations and restrictions of the statute.... The purchase of "investment securities" in which the investment characteristics are distinctly and predominantly speculative, or "investment securities" of a lower designated standard than those which are distinctly and predominantly speculative is prohibited.**
>
> **The terms employed herein may be found in recognized rating manuals, and where there is doubt as to the eligibility of a security for purchase, such eligibility must be supported by not less than two rating manuals Reference to the definitions of Moody's Ratings will show that bonds rated Baa, while carrying some speculative elements, are not considered by Moody's to be "distinctly or predominantly" speculative. It will further be seen that bonds rated below Baa are considered by Moody's to be "distinctly or predominantly" speculative. Our understanding is that this ruling does not apply to U.S. Government and municipal obligations.*[9]

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[9] This text is taken from Jerome Fons. "Tracing the Origins of 'Investment Grade'" https://papers.ssrn.com/sol3/papers.cfm?abstract_id=285162.Moody' Special Comment. January 2004. http://www.fonsrisksolutions.com/Documents/Investment%20Grade.pdf.

By defining "investment securities" so, the federal government implicitly delegated an important regulatory function to a group of relatively small firms.

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Although few of the consequences of the Comptroller's language could have been predicted at the time, that language was still met with some contemporary objections. In a January 1938 journal article,[10] Melchior Palyi sharply criticized rating agency performance, reporting that 70% of defaulting railroad bonds in 1924 carried investment grade ratings from Moody's. With respect to the company's 1937 bond manuals, Palyi concluded:

> *[The] 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 *[emphasis added].*[11]

[10] Palyi, Melchior. "Bank Portfolios and the Control of the Capital Market." *The Journal of Business of the University of Chicago*. 11(1). January 1938. 70–111.

[11] Ibid. 84.

Palyi's criticism of OCC reliance on credit ratings was equally sharp:

> *The meaning of the ratings device, as enforced, is the provision of an "objective" standard of discrimination between good and bad investments… The use of ratings, however, merely shifts the burden of the problem. Instead of providing objective standards, the ratings introduce a new arbitrary factor, namely, the unknown and undefined philosophy of the rating agencies.*[12]

1.3 A Switch to the Issuer Pays Model (1960s)

Despite such concerns, the decision to embed ratings in regulation did not cause any apparent problems in the decades following its implementation. This is likely due to the benign credit conditions that prevailed in the post-World War II economy. For example, there were only six defaults among rated municipal bonds between 1947 and 1968.[13] According to data published by Moody's, annual default rates on speculative grade bonds, which peaked at 16% in 1933, remained consistently below 2% between the end of World War II and the late 1960s.[14]

Initially, rating agencies earned their income by charging for their rating manuals, which were typically purchased by investors and libraries.

It was during this quiet period that rating agencies migrated to the issuer pays model, under which they charged corporations and governments issuing bonds for their rating services. Initially, rating agencies earned their income by charging for their rating manuals, which were typically purchased by investors and libraries. In 1937, one could purchase all four Moody's investment manuals—covering governments, industrials, railroads and utilities—for $144.[15]

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12 Ibid. 88.

13 Hempel, George. *The Postwar Quality of State and Local Debt.* Cambridge, MA: National Bureau of Economic Research, 1971. http://papers.nber.org/books/hemp71-1.

14 Moody's Investors Service. "Corporate Default and Recovery Rates, 1920–2008." February 2009. https://www.moodys.com/sites/products/DefaultResearch/2007400000578875.pdf.

15 Palyi. "Bank Portfolios and the Control of the Capital Market." 83.

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. S&P's rationale was that there was insufficient reader interest in smaller bond issues to justify the cost of analyzing them. In 1968, S&P began charging for all municipal bond ratings, arguing that, without issuer fees, it could not afford to keep up with the growth in municipal bond issuance.[16] The issuer-pays model then spread to other asset classes and competing agencies. By 1974, both S&P and Moody's were charging all issuers for ratings.[17]

In 1968, S&P began charging for all municipal bond ratings, arguing that, without issuer fees, it could not afford to keep up with the growth in municipal bond issuance.

Because the rating agencies were not standalone public firms at the time, the commercial considerations driving the transition from the investor-pays to issuer-pays model are not fully transparent. In 1962, Moody's had been acquired by Dun & Bradstreet. Standard & Poor's became part of McGraw Hill in 1966.[18] Perhaps these acquisitions created more pressure to increase profitability.

One theory attributes the business model change to the advent of 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.[19] These shorter publications were more vulnerable to faxing and photocopying—newly emergent technologies at the time. Duplication of credit analyses created a "free rider" problem for rating agencies, which they may have decided to resolve by turning to the issuer pays model.[20] Though some observers dispute this theory, it is indicative of a public goods issue facing contemporary rating agencies, one that has become more pronounced with the

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16 Testimony of Brenton W. Harries of Standard & Poor's Corporation, in U.S. Congress. "Financing Municipal Facilities: Hearings Before the Subcommittee on Economic Progress of the Joint Economic Committee, Ninetieth Congress, Second Session." Washington: Government Printing Office 1968. Vol. 11. 193.

17 Jiang, John, Mary Harris Stanford and Tuan Xie. "Does it matter who pays for bond ratings? Historical evidence." *Journal of Financial Economics* 105 (3). September 2012. 607–621. https://msu.edu/~jiangj/Jiang%20Stanford%20Xie%202012.pdf.

18 White, Lawrence J. "A Brief History of Credit Rating Agencies: How Financial Regulation Entrenched this Industry's Role in the Subprime Mortgage Debacle of 2007–2008." Mercatus on Policy no. 59. October 2009. https://www.mercatus.org/publication/brief-history-credit-rating-agencies-how-financial-regulation-entrenched-industrys-role.

19 Fons, Jerome S. "Rating Competition and Structured Finance." *Journal of Structured Finance* 14 (3). 2008. 7–15. http://www.iijournals.com/doi/abs/10.3905/JSF.2008.14.3.007.

20 Jiang et al. "Does it matter who pays for bond ratings?" 3.

development of the internet. With information so easy to duplicate, excluding free riders is a challenge for many kinds of content providers.

1.4 The SEC's Creation of the NRSRO Licensing System (1970s)

Benign post-war credit conditions ended with the 1970 bankruptcy of Penn Central Railroad. The company had financed itself primarily with commercial paper—short-term debt securities that were generally not covered by Moody's and S&P at the time. However, Penn Central's commercial paper was rated by the National Credit Office (NCO), which, like Moody's, was owned at the time by Dun & Bradstreet. NCO rated Penn Central's commercial paper "Prime"—the highest of its four grades—and did not lower its rating prior to the bankruptcy filing. An SEC inquiry into the Penn Central situation concluded:

> *This rating was provided without adequate investigation of the company's financial condition. It is clear that NCO continued to provide the highest rating at a time when the facts did not support such a rating.* [21]

Shortly after this failure, Dun & Bradstreet transferred control of NCO to Moody's. Standard & Poor's performed only somewhat better: it rated Penn Central BBB, its lowest investment grade rating, until a month before the bankruptcy filing.[22] But, despite these missteps, rating agencies would soon to receive more regulatory support.

In 1975, the SEC adopted Rule 15c3-1, which established net capital requirements for broker-dealers. The capital calculation required a haircut for non-investment grade assets held by broker-dealers, and relied on credit ratings to determine which investments were non-investment grade.[23] At the same time, the SEC granted the newly created status of "Nationally Recognized Statistical Rating Organization (NRSRO)" to Moody's, S&P, and Fitch.[24]

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21 Securities and Exchange Commission. "The Financial Collapse of the Penn Central Company." August 1972.10. https://fraser.stlouisfed.org/files/docs/historical/house/1972house_fincolpenncentral.pdf.

22 Ibid. 13.

23 Securities and Exchange Commission. "Concept Release: Nationally Recognized Statistical Rating Organizations." Release 33-7085, 34-34616. August 31, 1994. https://www.sec.gov/rules/concept/34-34616.pdf.

24 White, Lawrence J. "Credit Rating Agencies: An Overview." *Annual Review of Financial Economics* 5. November 2013. 93–122. http://www.annualreviews.org/doi/pdf/10.1146/annurev-financial-110112-120942.

From that point on, dozens of new laws and regulations incorporated references to NRSROs. In 1999, Frank Partnoy identified over 1000 references to rating agencies in securities, pension, banking, real estate, and insurance regulation. Rating agencies also influenced insurance regulations at the state level via the National Association of Insurance Commissioners (NAIC). Although NAIC maintained its own Securities Valuation Office (SVO) to monitor the financial condition of insurance companies on behalf of state regulators, Partnoy reported that SVO routinely relied upon ratings from NRSROs.[25]

"By using securities ratings as a tool of regulation governments fundamentally change the nature of the product agencies sell." —Thomas J. McGuire

The regulatory embrace of credit ratings met with skepticism from within the industry itself. In a 1995 speech to the Securities and Exchange Commission, Executive Vice President and Director of Moody's Corporate Department Thomas J. McGuire said:

> *By using securities ratings as a tool of regulation governments fundamentally change the nature of the product agencies sell. Issuers pay rating fees to purchase, not credibility with the investor community, but a license from a government.... And if the present trends of regulatory use of ratings are not arrested, the credibility and integrity of the rating system itself will inevitably be eroded.*[26]

1.5 The Expansion and Emergence of Alternative Providers (1970s–1990s)

The regulatory mandate alone was not sufficient to make rating agencies as large and profitable as they are today. A second factor has been the explosive growth in U.S. and international bond markets. According to Federal Reserve statistics, the par value of all outstanding debt securities rose from $714 billion at the beginning of 1970 to $15.6 trillion

[25] Frank Partnoy, "The Siskel and Ebert of Financial Markets? Two Thumbs Down for the Credit Rating Agencies," *Washington University Law Review* 7, no. 3 (1999): 619–715.

[26] Investment Company Institute, Comment Letter to Securities and Exchange Commission: Proposed Definition of Nationally Recognized Statistical Rating Organization (File No. S7-33-97). http://www.independentdirectorscouncil.org/policy/comments/ci.98_SEC_NRSRO_DEFIN_COM.print

at the end of 1999.[27] Even after adjusting for inflation, this represents a five-fold increase in volume.

The regulatory mandate alone was not sufficient to make rating agencies as large and profitable as they are today. A second factor has been the explosive growth in U.S. and international bond markets.

Debt markets grew in the late 20th century largely due to disintermediation.[28] While mortgages and other consumer loans were normally originated and held by banks or savings and loan associations in the 1960s, the securitization of consumer debt was common by the turn of the 21st century. Similarly, corporations became less reliant on banks as they made more use of capital markets during this period. As debt migrated away from banks, the work once undertaken by internal credit analysts at banks increasingly shifted toward rating agencies.

But the incumbent rating agencies failed to keep up with evolving best practices in the credit assessment space—most notably the use of default probability models, such as Edward Altman's Z score[29] and Robert Merton's option-based corporate bankruptcy model.[30] Rather than leverage computer technologies to calculate quantitative outputs—like default probability and expected loss—credit rating agencies continued to use imprecisely defined letter grades from the 19th century. And instead of adopting advanced modeling techniques like simulation and logistic regression, agencies continued to rely on an outmoded credit committee process under which rating actions were verbally debated by credit analysts.

It is revealing to observe the ways in which the credit rating industry and the consumer credit scoring business diverged sharply during the late 20th century. Both can trace their

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27 Federal Reserve Bank of St. Louis. "Federal Reserve Economic Data: All Sectors; Total Debt Securities; Liability." https://fred.stlouisfed.org/series/ASTDSL.

28 Disintermediation was caused by a variety of factors including Regulation Q—a regulatorily imposed limit on bank interest rates. As inflation drove up interest rates in the 1960s and 1970s, regulators did not raise Regulation Q ceilings fast enough to keep up. As a result, depositors moved savings from banks to a new class of money market funds. For more on this, see Céline Choulet and Yelena Shulyatyeva. "History and major causes of US banking disintermediation." BNP Paribas. January 2016. http://economic-research.bnpparibas.com/pdf/en-US/History-major-causes-US-banking-disintermediation-1/29/2016,27450.

29 Altman, Edward I. "Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy." *The Journal of Finance* 23. (4). September 1968. 589–609.

30 Merton, Robert C. "On the Pricing of Corporate Debt: The Risk Structure of Interest Rates." *The Journal of Finance* 29. (2). May 1974. 449–470.

roots back to the credit books produced by R.G. Dun and Company and J.M. Bradstreet & Sons in the late 19th century. And both initially produced credit ratings based the work of human analysts, which meant they were labor-intensive and subject to bias. Yet while credit rating agencies stuck to this model, consumer credit scoring shifted toward computer-based techniques, beginning with the founding of Fair, Isaac Company in 1956. In 1989, the nation's three principal credit reporting agencies—Equifax, Experian, and Transunion—embraced Fair Isaac's FICO scores as the industry standard for assessing consumer credit.[31]

Regulatory reviews of credit reporting services only began in 2012, when the Consumer Financial Reporting Bureau used its authority under Dodd-Frank to begin periodic examination of these firms.

Consumer credit firms are not regulated in the same way as bond rating agencies. There is no equivalent to an NRSRO certification, which means that entry into the business is not directly restricted by government. The industry *has* been subject to the Fair Credit Reporting Act since 1970, but that law is primarily intended to protect consumers from invasions of privacy, discrimination, and inaccurate reporting. Regulatory reviews of credit reporting services only began in 2012, when the Consumer Financial Reporting Bureau used its authority under Dodd-Frank to begin periodic examination of these firms.[32] Although the Equifax security breach is a serious concern, it does not relate to the firm's credit analytics nor was it prevented by CFPB oversight.

In the bond analysis world, by contrast, regulation cemented the position of incumbents using traditional procedures. Some non-NRSRO credit assessment providers emerged, employing newer techniques and marketing their products to investors. But these new entrants often struggled to gain market penetration, given the availability of free ratings from the NRSROs. What's more, those that did succeed were often purchased by NRSROs, thereby eliminating them as a competitive threat.[33] For example, Moody's purchased

[31] Trainor, Sean. "The Long, Twisted History of Your Credit Score." *Time*. July 22, 2015. http://time.com/3961676/history-credit-scores/.

[32] Consumer Financial Protection Bureau. "CFPB to Supervise Credit Reporting." July 16, 2012. https://www.consumerfinance.gov/about-us/newsroom/consumer-financial-protection-bureau-to-superivse-credit-reporting/.

[33] There are, nevertheless, several independent non-NRSRO firms that provide credit scores or tools that enable clients to calculate them. These are described in the section on alternate providers.

KMV—a firm that successfully commercialized Merton's corporate bankruptcy model—for $210 million in 2002.[34]

When structured finance securities became popular in the late 1990s and early 2000s, incumbent NRSROs did use computer models to assess such instruments. But they generally failed to use state-of-the-art modeling techniques,[35] and employed biased modeling assumptions that resulted in higher-than-appropriate ratings (as discussed in the next section).

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34 Moody's Corporation. "Form 8-K/A." June 26, 2002. https://www.sec.gov/Archives/edgar/data/1059556/000095012302006504/y61698e8vkza.htm.

35 For example, McNeil, et al called Moody's Binomial Expansion Technique used for CDO modeling "simplistic." See Alexander J. McNeil, Rüdiger Frey and Paul Embrechts. *Quantitative Risk Management: Concepts, Techniques and Tools*. Princeton: Princeton University Press. 2015. 449.

Part 2

Recent History and Criticisms

By the late 1990s, many financial industry participants were aware of weaknesses in NRSRO ratings. Frank Partnoy catalogued many of these concerns in a 1999 law review article that presciently called upon regulators to reduce their reliance on credit ratings.[36] He surveyed evidence showing that rating changes had little informational value—because they typically followed movements in bond prices—and noted that rating agencies had failed to adequately warn investors before the bankruptcies of Orange County, California, in 1994 and of subprime auto lenders Mercury Finance and Jayhawk Acceptance in 1997. Partnoy concluded:

> *Credit rating agencies have not survived for six decades because they produce credible and accurate information. They have not maintained good reputations based on the informational content of their credit ratings. Instead, the credit rating agencies have thrived, profited, and become exceedingly powerful because they have begun selling regulatory licenses, i.e., the right to be in compliance with regulation. Credit ratings therefore are an excellent example of how not to privatize a regulatory function.*[37]

By the late 1990s, many financial industry participants were aware of weaknesses in NRSRO ratings.

Also, a 1999 study published by Fitch identified an inconsistency between corporate and municipal bond ratings. Fitch analysts found that default rates for municipal bonds were much lower than those for equivalently rated corporate bonds.[38]

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[36] Partnoy. “The Siskel and Ebert of Financial Markets?”

[37] Ibid. 711.

[38] Litvack, David. “Municipal Default Risk.” Fitch IBCA. 1999. https://www.fitchratings.com/creditdesk/reports/report_frame.cfm?rpt_id=58094.

Although the inadequacies of credit ratings were known within the financial industry by the 1990s, the problem first came to the attention of lawmakers and regulators in 2001, when Enron filed for bankruptcy. Despite news of accounting irregularities and a collapse in its stock price, Enron's credit ratings remained investment grade until just four days prior to its bankruptcy filing.[39] After peaking at $90 in the summer of 2000, Enron's stock steadily declined, ultimately falling below $10 in early November of 2001.[40] The stock price decline was accompanied by a drumbeat of negative news developments, including the announcement of an SEC inquiry and the ouster of the company's CFO in October. In early November, Enron restated earnings to account for $586 million in previously unreported losses.[41] Yet, both Moody's and S&P continued to assign investment grade ratings to the company until November 28.

Despite news of accounting irregularities and a collapse in its stock price, Enron's credit ratings remained investment grade until just four days prior to its bankruptcy filing.

Other ratings failures occurred the following year. Worldcom, which like Enron was forced into bankruptcy by an accounting fraud, carried investment grade ratings from Moody's and S&P until two months prior to its July 2002 bankruptcy filing.[42] As with Enron, the agencies maintained investment grade ratings on the company despite the announcement of an SEC investigation, a high-level resignation (the CEO in this case), and a precipitous stock price decline.[43]

Another notable failure involved National Century Financial Enterprises (NCFE), which purchased insurance claims from hospitals, nursing homes, and other health care providers. NCFE funded its purchases by issuing bonds backed by the insurance

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39 Egan, Sean. "Comments to SEC for Hearing on Credit Rating Agencies." November 19, 2002. https://www.sec.gov/news/extra/credrate/eganjones2.htm. Egan's comments allege other failures by the major rating agencies including late downgrades of Global Crossing and AT&T Canada, as well as two California utilities (Pacific Gas & Electric and Southern California Edison) that defaulted during California's electricity crisis.

40 Linder, Douglas O. "Famous Trials: Enron Historical Stock Price Chart." http://www.famous-trials.com/images/ftrials/Enron/documents/enronstockchart.pdf.

41 "Timeline: A Chronology of Enron Corp." *The New York Times*. January 18, 2006. http://www.nytimes.com/2006/01/18/business/worldbusiness/timeline-a-chronology-of-enron-corp.html.

42 "Worldcom Company Timeline." *Washington Post*. March 15, 2005. http://www.washingtonpost.com/wp-dyn/articles/A49156-2002Jun26.html.

43 Securities and Exchange Commission. "Report of Investigation by the Special Investigative Committee of the Board of Directors of Worldcom Inc." March 31, 2003. https://www.sec.gov/Archives/edgar/data/723527/000093176303001862/dex991.htm.

receivables, but company management mishandled proceeds and defrauded investors.[44] Moody's rated many of the company's receivable-backed bonds Aaa until October 25, 2002. Within less than one month, the firm declared bankruptcy and Moody's had lowered its ratings on these bonds to Caa3.[45] Moody's maintained its Aaa rating in the face of clear warning signs, such as the late filing of NCFE's audited financial statements.[46]

Congress responded to mounting criticism of the credit rating industry with the Credit Rating Reform Act of 2006. But the additional SEC oversight of NRSROs mandated by this Act failed to prevent rating agency errors in assessing RMBS (residential mortgage-backed securities), CDOs (collateralized debt obligations), CPDOs (collateralized proportional debt obligations), and municipal bond insurers during the run-up to the financial crisis.

2.1 Structured Finance: CDOs and RMBS

The fact that rating agencies deliberately inflated ratings on Residential Mortgage Backed Securities (RMBS) and Collateralized Debt Obligations (CDOs) is now beyond dispute. In its settlement with the Department of Justice and State Attorneys General, Standard & Poor's agreed to a statement of facts[47] which included the following:

> *In 2004 and 2005, S&P was in the process of updating CDO Evaluator, one of the models used by S&P to rate Collateralized Debt Obligations ("CDOs") to arrive at what would become CDO Evaluator Version 3.0 ("E3"). The initial update efforts, throughout 2004, were directed in part by the then head of S&P's Global CDO group, whose experience was that the risk of losing transaction revenue was a factor that affected updates of CDO Evaluator. He set as goals for the update efforts: (a) small impacts to non-investment grade ("NIG") cash CDO deals to minimize any negative impact of the updates on this segment of S&P's ratings business; and (b) 2-3 notch improvements for investment grade deals to improve S&P's market share with respect*

44 U.S. Department of Justice. "Former National Century Financial Enterprises CEO Sentenced to 30 Years in Prison, Co-Owner Sentenced to 25 Years in Prison for Conspiracy, Fraud and Money Laundering." March 27, 2009. https://www.justice.gov/opa/pr/former-national-century-financial-enterprises-ceo-sentenced-30-years-prison-co-owner.

45 Moody's Corporation. "Rating Action: Moody's Downgrades Notes Issued By National Century-Sponsored Programs, NPF VI and NPF XII." November 22, 2002. https://www.moodys.com/research/MOODYS-DOWNGRADES-NOTES-ISSUED-BY-NATIONAL-CENTURY-SPONSORED-PROGRAMS-NPF--PR_61959.

46 O'Harrow, Robert, Jr. and Bill Brubaker. "How National Century Fell Through the Cracks." *Washington Post*. February 13, 2003.

47 U.S. Department of Justice. "S&P Statement of Facts." February 3, 2015. https://www.justice.gov/file/338706/download.

to investment grade synthetic CDOs. In accordance with these goals, during the initial update efforts, he and, according to him the then Managing Director in charge of the Cash CDO group, pushed back against updates to CDO Evaluator proposed by one of S&P's senior analysts because they believed these changes would have had a significant negative effect on S&P's market share and ratings business. In accordance with these goals, on May 27, 2004, the then head of S&P's Global CDO Group sent the head of S&P's Research and Criteria Group, the Managing Director in charge of the Synthetic CDO Group, and others an email directing the CDO Group to begin testing with customers a default matrix he had developed. According to the then head of S&P's Global CDO Group, the decision to test this default matrix was "in part based upon business decisions, considerations." Ultimately, this default matrix was not adopted, and work on updating CDO Evaluator to arrive at what would become E3 continued.[48]

Further, S&P "agreed to formally retract an allegation that the United States' lawsuit was filed in retaliation for the defendant's decisions with regard to the credit of the United States."[49] In defending itself against the DOJ lawsuit, Standard & Poor's had claimed that the government singled the company out for downgrading U.S. Treasury bonds from AAA to AA+ in 2011.[50]

In the closing days of the Obama administration, Moody's also settled with the Department of Justice, stipulating to a statement of facts[51] that included the following:

Commencing in April 2004, Moody's did not follow its published IEL targets in rating many Aaa tranches of CDOs. On March 18, 2004, an internal memorandum forwarded to Moody's Structured Finance executives stated that Moody's "may not be able to compete in synthetics [i.e., synthetic CDOs] with current Aaa standard," noting that it originally had been made more conservative compared to the "historical corporate Aaa default rates."[52]

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48 Ibid. 2.

49 U.S. Department of Justice. "Justice Department and State Partners Secure $1.375 Billion Settlement with S&P for Defrauding Investors in the Lead Up to the Financial Crisis." February 3, 2015. https://www.justice.gov/opa/pr/justice-department-and-state-partners-secure-1375-billion-settlement-sp-defrauding-investors.

50 This author was originally sympathetic with that claim, but S&P's recantation would seem to settle the matter.

51 U.S. Department of Justice. "Moody's Statement of Facts." January 13, 2017. https://www.justice.gov/opa/press-release/file/926556/download.

52 Ibid. 6.

An insider might interpret the above to mean "we decided to lower our standards to remain competitive with S&P in the issuance of ratings on CDOs." But, because Moody's observed better discipline in its written internal communications than S&P did, it was harder for DOJ to prove the case that the company was intentionally inflating its ratings. This may explain why the Moody's settlement was concluded almost two years after the Standard & Poor's settlement, as well as the fact that Moody's was forced to pay a much smaller penalty—$864 million as opposed to $1.375 billion for S&P.[53]

While these settlements give evidence that rating agencies systematically inflated their ratings, the two DOJ lawsuits are problematic from a free market perspective (as are attempts to narrow or eliminate the First Amendment defense used by credit rating agencies).

While these settlements give evidence that rating agencies systematically inflated their ratings, the two DOJ lawsuits are problematic from a free market perspective (as are attempts to narrow or eliminate the First Amendment defense used by credit rating agencies). Because rating agencies were not hired or paid by investors, it is hard to argue that investors were defrauded—if the concept of fraud is properly understood. An inflated rating is analogous to a fake review on Yelp. A restaurant owner may persuade his friend to write a glowing five-star review, even though the friend doesn't really love the food or service. Because Yelp users didn't contract with the friend or with Yelp for this opinion, they follow it at their own risk: they don't have a fraud claim. The counter-argument that losing millions on a bad bond is a lot worse than having a disappointing meal is not convincing; the question of whether an action is fraudulent has nothing to do with the magnitude of its impact.[54]

But regardless of whether one believes that mis-rating of RMBS and CDOs should have been actionable, the fact pattern is clear: while competing for business from structured finance issuers, rating agencies lowered their standards, contributing to asset mispricing and a bubble in home values. The artificially high ratings meant that mortgage-backed

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[53] Reuters. Moody's $864m penalty for ratings in run-up to 2008 financial crisis. *The Guardian*. January 14, 2017. https://www.theguardian.com/business/2017/jan/14/moodys-864m-penalty-for-ratings-in-run-up-to-2008-financial-crisis

[54] If rating agencies were hired and paid by investors, they would likely insist upon contractual language releasing them from liability in the event of rating errors. In the software industry, a "provider's liability is usually limited to the amount of fees paid to the vendor or a fraction thereof" according to Stephen Pinson, "Negotiating Software Contracts - Successfully Negotiating a Limitation of Liability." *Lexology*. March 3, 2016. http://www.lexology.com/library/detail.aspx?g=059049da-4170-40bc-9baa-7a84d72b52bf

bonds could be issued at lower interest rates, thereby increasing the volume of these bonds and thus the amount of money available for mortgage loans.

...while competing for business from structured finance issuers, rating agencies lowered their standards, contributing to asset mispricing and a bubble in home values.

Mark Froeba, a former senior vice president at Moody's, described the company's reaction to competitive pressure in the structured finance market as follows:

> *Moody's senior managers never set out to make sure that Moody's rating answers were always wrong. Instead, they put in place a new culture that would not tolerate for long any answer that hurt Moody's bottom line. Such an answer became, almost by definition, the wrong answer, whatever its analytical merit. As long as market share and revenue were at issue, Moody's best answer could never be much better than its competitors' worst answers. But arriving at an accurate answer was never objectionable, so long as that answer did not threaten market share and revenue. For this reason, there are some structured finance securities where Moody's ratings continue to be accurate and of high quality. This is not evidence of rating integrity; it is simply evidence that, for these types of securities, Moody's was not exposed to rating competition. Wherever Moody's encountered material market share pressure (rating competition), we can expect to see that its ratings become indistinguishable from the ratings of its competitors.*[55]

It is reasonable to ask why rating agencies competitively inflated ratings for structured finance instruments while not doing the same with corporate and municipal bonds.

It is reasonable to ask why rating agencies competitively inflated ratings for structured finance instruments while not doing the same with corporate and municipal bonds. Rating agency management must balance the short-term revenue benefits from lowering standards to the long-term impact on the firm's reputation and thus its ability to attract future business. For structured instruments, this balance favors the short-term considerations for a couple of reasons. First, ratings fees on structured securities, as a

[55] Testimony of Mark Froeba before the Financial Crisis Inquiry Commission. June 2, 2010. https://fcic-static.law.stanford.edu/cdn_media/fcic-testimony/2010-0602-Froeba.pdf.

percentage of par value, are higher.[56] Second, the structured asset market is dominated by a relatively small number of issuers: losing one issuer by insisting on maintaining a high rating standard could result in the loss of a very large amount of future business. By contrast, no single corporate or municipal issuer has a large share of overall issuance in their respective rating sectors.[57]

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As Alice Rivlin and John Soroushian correctly note in a recent Brookings Institution study, the pressure for inflated ratings didn't only come from issuers: some investors wanted them as well. Since banks were required to hold less capital against higher rated instruments, bank portfolio managers preferred lenient ratings for relatively high yielding assets. Among non-bank asset managers, investment mandates had a similar effect: if, for example, pension funds had guidelines restricting the range of assets that managers could select by NRSRO ratings, fund managers preferred higher ratings.[58]

Investors not only preferred high initial ratings, but they also disliked downgrades. Depending on an asset manager's investment guidelines, downgrades may force the sale of affected assets or at least trigger an internal review that could result in a selling decision. Since most fixed income assets (aside from Treasuries) are illiquid, it is hard to get favorable secondary market pricing. This is especially true after an asset has been downgraded. For many fixed income managers, the ideal scenario is to buy an asset at origination, hold it to maturity and not have to deal with downgrades in between.[59]

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[56] See, for example, Standard & Poor's Corporation. "U.S. Ratings Fee Disclosure." January 2017. http://www.standardandpoors.com/usratingsfees.

[57] Joffe, Marc and Anthony Randazzo. "Restoring Trust in Mortgage Backed Securities." Reason Foundation Policy Study #402. May 3, 2012. http://reason.org/files/study_restoring_trust_in_mbs_final.pdf.

[58] Rivlin, Alice and John Soroushian. "Credit rating agency reform is incomplete." Brookings Institution. March 6, 2017. https://www.brookings.edu/research/credit-rating-agency-reform-is-incomplete/.

[59] This is known to the author from experience in fixed income markets. He has not seen this issue discussed in scholarly literature.

2.2 Other Structured Finance Categories

While RMBS and CDO ratings received the most attention in the wake of the financial crisis, ratings failures occurred in other structured asset classes, and more issues of this sort may manifest themselves in the next economic downturn.

In the early 2000s, a large proportion of manufactured housing and aircraft receivable securitization deals suffered multi-notch downgrades and defaults. The debacle in manufactured home deals is particularly telling because it foreshadowed the subprime crisis. Such homes are mainly purchased by consumers with relatively low income and relatively low net worth. During the 1990s, manufactured-housing lenders reduced their lending standards, triggering high default and repossession rates in the early 2000s.[60]

The debacle in manufactured home deals is particularly telling because it foreshadowed the subprime crisis.

Rating agencies continued to assign top ratings to senior tranches of manufactured home securitizations throughout the late 1990s and early 2000s. Mezzanine tranches (those in the middle of the capital structure) received investment grade ratings. By late 2004, defaults occurred in 107 deals (or 43% of the deals then outstanding).[61] Although the number of investment grade securities impaired by these defaults is not known, Fannie Mae reported a 41% loss on its portfolio of investment grade manufactured housing ABS at the time.[62]

One such deal was Oakwood Mortgage Investors Trust 2001-D (OMI 2001-D). In September 2001, Moody's assigned Aaa ratings to the deal's senior certificates, with total par of $158 million. It assigned lower investment grade ratings to another $46 million of subordinated tranches. Only the most junior certificates received a speculative grade rating of Ba2.[63] By

60 Consumer Finance Protection Board. "Manufactured-housing consumer finance in the United States." September 2014. http://files.consumerfinance.gov/f/201409_cfpb_report_manufactured-housing.pdf.

61 Adelson, Mark. "ABS Credit Migrations 2004." Nomura Fixed Income Research. http://www.markadelson.com/pubs/ABS_Credit_Migrations_2004.pdf.

62 Consumer Finance Protection Board. 2014. 29.

63 Moody's Investor Service. "Rating Action: Moody's Rates Oakwood's 2001-D Manufactured Housing Deal." September 7, 2001. https://www.moodys.com/research/MOODYS-RATES-OAKWOODS-2001-D-MANUFACTURED-HOUSING-DEAL--PR_48614.

the end of 2004, however, Moody's had downgraded all classes of OMI 2001-D to B1 or lower, deep into junk territory.[64] By 2009, all ratings had declined to Ca or lower, or had been withdrawn (likely because the certificates had been written down to zero).[65]

Another problematic asset class was Constant Proportion Debt Obligations (CPDOs), a highly leveraged securitization vehicle in which proceeds were invested in Credit Default Swap (CDS) portfolios. In 2006, ABN Amro was able to secure S&P ratings of AAA for CPDO notes paying 200 basis points over LIBOR. Since top-rated notes typically paid around 20 basis points over LIBOR at the time, the CPDO seemed to be an incredible feat of financial engineering—earning it *Risk Magazine*'s "Deal of the Year."[66]

CPDOs "worked" as long as CDS spreads were relatively stable, which they had been between 2004 and 2006. But as spreads became more volatile in late 2007 and 2008, these deals collapsed.

CPDOs "worked" as long as CDS spreads were relatively stable, which they had been between 2004 and 2006. But as spreads became more volatile in late 2007 and 2008, these deals collapsed. In late 2008, S&P downgraded notes of ABN Amro's original CPDO, SURF, to D and then withdrew the rating as the deal was unwound—with investors receiving ten cents on the dollar.[67]

Another AAA-rated ABN Amro CPDO triggered litigation in Australia. Local councils in the state of New South Wales lost 65% of their investments in Rembrandt 2006-2 and 2006-3. They alleged that S&P and ABN Amro conspired to mislead them about the safety of the CPDO securities. Evidence showed that the AAA rating could only be achieved by using a low spread volatility assumption in the ratings model. Although an S&P analyst originally proposed to use a volatility parameter of 35%, ABN Amro persuaded the agency to use a

64 Moody's Investor Service. "Rating Action: Moody's Downgrades the Ratings on Oakwood's MH Asset Backed Certificates." December 21, 2004. https://www.moodys.com/research/MOODYS-DOWNGRADES-THE-RATINGS-ON-OAKWOODS-MH-ASSET-BACKED-CERTIFICATES--PR_90946.

65 Moody's Investors Service. "OMI Trust 2001-D Ratings." https://www.moodys.com/credit-ratings/OMI-Trust-Series-2001-D-credit-rating-400016968.

66 Gordy, Michael B. and Sren Willemann. "Constant Proportion Debt Securities: A Post-Mortem Analysis of Rating Models." Finance and Economics Discussion Series. Divisions of Research & Statistics and Monetary Affairs. Federal Reserve Board. https://www.federalreserve.gov/pubs/feds/2010/201005/201005pap.pdf.

67 Jones, Sam. "Requiem for the CPDO." FT Alphaville. October 17, 2008. https://ftalphaville.ft.com/2008/10/17/17193/requiem-for-the-cpdo/.

15% assumption. A trial court ruled that S&P and ABN Amro were liable for their misleading conduct, and a federal appeals court upheld that decision.[68]

Misconduct related to CPDOs was not limited to S&P: if anything, Moody's conduct was even more egregious.

Misconduct related to CPDOs was not limited to S&P: if anything, Moody's conduct was even more egregious. After the firm began assigning Aaa ratings to CPDOs, employees uncovered a bug in the computer model used to determine the ratings. When this bug was fixed, system-generated ratings fell by four notches. But rather than admit the error and adjust the public ratings, Moody's staff covered up the issue and maintained the ratings. After the scandal was revealed by *The Financial Times*, Moody's disciplined several employees and the head of its Global Structured Finance division resigned.[69]

On July 6, 2007, Moody's assigned a rating of Aaa to ELM BV Series 103 TYGER notes, a CPDO paying 100 basis points over Euribor and structured by UBS.[70] Within less than five months, Moody's downgraded the certificates to its lowest rating of C,[71] and the certificates were liquidated at a steep loss to bondholders.[72]

2.3 Municipal Bond Insurance vs. Municipal Bond Issuers

The focus on structured finance ratings obscured another credit rating scandal that played out during the financial crisis. Rating agencies inadvertently created the municipal bond insurance business, which imploded during the Great Recession, imposing large costs on local taxpayers.

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68 Sahore, Aarushi. "Case Note: ABN Amro Bank NV v Bathurst Regional Council: Credit Rating Agencies and Liability to Investors." *Sydney Law Review* 37 (2015). 437–454. https://sydney.edu.au/law/slr/slr_37/slr37_3/SLRv37n3Sahore.pdf.

69 Jones, Sam and Gillian Tett. "CPDO saga highlights Moody's woes." *The Financial Times*. July 2, 2008.

70 Moody's Corporation. "Moody's assigns a Aaa long term rating to the Series 103 TYGER Notes issued by ELM B.V." July 6, 2007. https://www.moodys.com/research/Moodys-assigns-a-Aaa-long-term-rating-to-the-Series--PR_137280.

71 Moody's Corporation. "Moody's downgrades one series of financial CPDO and places on review for possible downgrade five other series." November 23, 2007. https://www.moodys.com/research/Moodys-downgrades-one-series-of-financial-CPDO-and-places-on--PR_144974.

72 Parker, Edmund and Marcin Perzanowski. "Constant proportion debt obligations: what went wrong and what is the future for leveraged credit?" November 2008. https://www.mayerbrown.com/files/Publication/a72651ee.../ART_CPDO.PDF.

In 1929, Moody's assigned Aaa ratings to 55% of rated municipal issuers,[73] but in the 1930s there was a wave of municipal bond defaults. Almost half of Aaa-rated municipal issuers defaulted during the Depression. Moody's analysts reacted by sharply downgrading the whole sector. By 1939, the proportion of Aaa-rated municipal bond issuers had fallen to 1%.[74]

As discussed earlier, defaults on rated municipal bonds became very infrequent after World War II, but ratings did not adjust accordingly. By 1969, the proportion of Moody's-rated municipal bonds carrying the top Aaa rating was still only 3%. [75]

As a result, municipal bond ratings became misaligned with corporate bond ratings—a fact that did not become widely known until Fitch's 1999 study referenced earlier.[76] By the late 1960s, a municipality rated A or AA was as safe as or safer than a corporation rated AAA.

By the late 1960s, a municipality rated A or AA was as safe as or safer than a corporation rated AAA.

This misalignment created an arbitrage opportunity that gave birth to the municipal bond insurance business. Jack Butler, a municipal bond portfolio manager, realized that he could create a profitable insurance company if it could obtain a AAA rating. The company would make money by charging upfront premiums to municipal issuers in exchange for insurance policies that would allow their bonds to carry the insurer's AAA rating. Since municipal bonds rarely defaulted and normally provided a full recovery in the event of default, the insurance company would pay few if any claims. Butler hired municipal bond researcher George Hempel to calculate required capital levels and then founded MBIA, one of two companies to pioneer municipal bond insurance in the 1970s.[77] Standard & Poor's

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73 Hempel, George. "The Postwar Quality of Municipal Bonds." Ph.D. Dissertation. University of Michigan, 1964.

74 Hempel, George. *The Postwar Quality of State and Local Debt.* Cambridge, MA: National Bureau of Economic Research, 1971. http://papers.nber.org/books/hemp71-1.

75 Hempel reports S&P municipal rating distributions for 1956 and 1963 only. They were similar to Moody's.

76 Litvack, David. "Municipal Default Risk." Fitch IBCA. 1999. https://www.fitchratings.com/creditdesk/reports/report_frame.cfm?rpt_id=58094.

77 Richard, Christine. *Confidence Game: How Hedge Fund Manager Bill Ackman Called Wall Street's Bluff.* Hoboken, NJ: John Wiley and Sons, 2010.

gave MBIA its AAA rating in 1973, and upgraded its competitor, Ambac, to AAA in 1978. Moody's gave both firms Aaa ratings in 1984.[78]

By the time the 2008 financial crisis arrived, over half of all newly issued municipal bonds carried insurance and seven Aaa-rated municipal insurers were writing policies. By the end of 2010, five of these companies had a default event, while the other two had been downgraded.

By the time the 2008 financial crisis arrived, over half of all newly issued municipal bonds carried insurance and seven Aaa-rated municipal insurers were writing policies. By the end of 2010, five of these companies had a default event, while the other two had been downgraded.[79] The insurers failed because they had thin capital layers and had diversified into insuring risky structured finance assets. As early as 2002, hedge fund manager Bill Ackman had warned that MBIA was overrated.[80]

When municipal bond investors realized that the bond insurers were not as safe as their Aaa ratings implied, the municipal bond market faced disruption. The biggest problem came in the Auction Rate Security (ARS) market, in which insured municipal bonds were repriced and resold every four weeks. ARS allowed long-term municipal issuers to access money market investors who needed liquid portfolios with minimal credit risk. In early 2008, these investors abandoned the auction rate market. Periodic auctions began failing, with the consequence that the municipal bond's coupons reset to a penalty rate that could be as high as 20%. After paying penalty rates for some time, many municipalities decided to refinance, replacing their ARS with traditional fixed rate municipal bonds. The cost of paying the penalty rates, and of refinancing during the adverse market conditions of 2008, blew a hole in the budgets of many cities and counties.[81]

Later in 2008, Richard Blumenthal, at that time the attorney general of Connecticut, sued the big three credit rating agencies for harshly rating municipal issuers in his state. In a

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78 Kriz, Kenneth and Marc Joffe. "Municipal Bond Insurance after the Financial Crisis: Can It Help Reduce Borrowing Costs for Local Governments?" Mercatus Center. April 2017. https://www.mercatus.org/system/files/mercatus-kriz-joffe-municipal-bond-insurance-v1a.pdf.

79 Joffe, Marc. "Public Disservice: The Negative Impact of Credit Ratings on US Municipal Bond Issuers." *The Journal of Law in Society* 17 (1). Fall 2015. 121–148. http://law.wayne.edu/journal-of-law-society/public_disservice_joffefinal_.pdf.

80 Ackman, Bill. "Is MBIA AAA?" December 9, 2002. http://www.briem.com/files/Ackman_MBIA_12092002.pdf.

81 Joffe. "Public Disservice."

press release announcing the suit,[82] Blumenthal claimed that "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." In 2011, the rating agencies settled the suit by agreeing to change their rating procedures and giving the state credits for future rating services, but without admitting any wrongdoing.[83]

Later in 2008, Richard Blumenthal, at that time the attorney general of Connecticut, sued the big three credit rating agencies for harshly rating municipal issuers in his state.

2.4 Insufficient Monitoring

Under the issuer pays model, rating agencies make the lion's share of their income when bonds are issued. Although they have imposed monitoring fees for some classes of instruments, these often meet with resistance from issuers. Because monitoring is not a major revenue driver, rating agencies have been reluctant to invest in it. This often results in a failure to adjust ratings in a timely manner, as credit-relevant information becomes available.[84]

With respect to the surveillance of RMBS and CDO securities at the time of the financial crisis, the U.S. Senate Permanent Subcommittee on Investigations reported[85] the following:

> *Resource shortages impacted the ability of the credit rating agencies to conduct surveillance on outstanding rated RMBS and CDO securities to evaluate their credit risk. … In the case of RMBS and CDO securities, the Subcommittee investigation found evidence that these surveillance groups may have lacked the resources to properly*

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82 Connecticut Attorney General's Office. "Attorney General Sues Credit Rating Agencies For Illegally Giving Municipalities Lower Ratings, Costing Taxpayers Millions." July 30, 2008. http://webcache.googleusercontent.com/search?q=cache:mH-xV_Tps1QJ:www.ct.gov/ag/cwp/view.asp%3Fa%3D2795%26q%3D420390+&cd=1&hl=en&ct=clnk&gl=us.

83 Melia, Michael. "Connecticut settles lawsuits with credit rating firms." Associated Press. October 14, 2011. http://archive.boston.com/business/articles/2011/10/14/conn_settles_lawsuits_with_credit_rating_firms/.

84 Bonsall, Samuel, Kevin Koharki and Monica Neamtiu. "The Effectiveness of Credit Rating Agency Monitoring: Evidence from Asset Securitizations." *The Accounting Review* 90 (5) September 2015. 1779–1810.

85 U.S. Senate Permanent Committee on Investigations. "Wall Street and the Financial Crisis: Anatomy of a Financial Collapse." April 13, 2011. 307. https://www.hsgac.senate.gov/download/report-psi-staff-report-wall-street-and-the-financial-crisis-anatomy-of-a-financial-collapse.

monitor the thousands of rated products. At Moody's, for example, a 2007 email message disclosed that about 26 surveillance analysts were responsible for tracking over 13,000 rated CDO securities.

In 2012, Japan's security regulator sanctioned S&P for its inadequate monitoring of synthetic CDOs.[86] It found that S&P did not effectively track credit events on, and notional amounts of, reference obligations related to assets in the securitization pool. As a result, "the Company incorrectly maintained until October 2010 a credit rating of a [Synthetic CDO] product that should have been downgraded in January and further in February of that year."

One consequence of insufficient monitoring is the occurrence of "super-downgrades," characterized by rating changes of three or more notches in a single rating action. If bonds are regularly monitored, it would be reasonable to expect gradual rating changes unless a very serious event occurs. But large rating changes have often been quite frequent. In August 2011, *The Wall Street Journal* reported that rating agencies had made 196 super-downgrades over the previous 13-month period. In one case, S&P downgraded Manassas Park, Virginia, by five notches from AA- to BBB.[87]

In August 2011, *The Wall Street Journal* reported that rating agencies had made 196 super-downgrades over the previous 13-month period.

Gene Phillips finds that uneven monitoring practices have continued long after the passage of Dodd-Frank. In 2015, Phillips reports that Moody's upgraded more than three RMBS securities for every one that it downgraded, while S&P downgraded slightly more RMBS securities than it upgraded.[88] Such a wide variation suggests that at least one agency is getting it wrong.

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[86] Japan Securities and Exchange Surveillance Commission. "Japan's Financial Services Agency: Administrative Action Against Standard & Poor's Ratings Japan K.K." Mondovisione (English text). December 14, 2012. http://www.mondovisione.com/media-and-resources/news/japans-financial-services-agency-administrative-action-against-standard-and-poor/.

[87] Newman, Jeanette and Michael Aneiro. "Downgrades Felt at Local Level." *The Wall Street Journal*. August 18, 2011.

[88] Phillips, Gene. "Overcoming Inefficiencies in the Pricing of Structured Finance Instruments." *Journal of Structured Finance*. 22 (3). Fall 2016. 8–20. http://www.iijournals.com/doi/abs/10.3905/jsf.2016.22.3.008.

2.5 Other Post-Crisis Concerns

Rating agencies have faced numerous criticisms since the financial crisis, but the attacks have most often come from self-interested parties, and are not necessarily cases of malpractice. The highest profile case was S&P's 2011 decision to downgrade the U.S. Treasury's credit rating to AA+. While this action produced blistering criticism from the Obama administration and its supporters, it is not on a par with the incidents cited above. Indeed, in this author's view, it was the correct decision.[89] Similar arguments could be made regarding Eurozone sovereign rating actions before and during the debt crisis that enveloped the "PIGS" nations of Portugal, Ireland, Greece, and Spain. Downgrades were either premature or late, and either excessive or insufficient, depending upon the political perspective of the critic.

Overly conservative ratings may fly under the radar for decades, while overly lenient ratings only become manifest once large-scale defaults begin to occur. We will likely have to wait until the next recession to know for certain whether the industry has improved.

But we have yet to see a repeat of the widespread and obvious rating errors that occurred during the financial crisis. This is partially attributable to stronger oversight from the SEC and other regulators (the SEC's activities post Dodd-Frank are discussed below), as well as an effort on the part of the rating agencies themselves to rebuild reputational capital. But the larger factor is that we have not yet had another downturn. When credit conditions are benign, rating errors are not obvious. Overly conservative ratings may fly under the radar for decades, while overly lenient ratings only become manifest once large-scale defaults begin to occur. We will likely have to wait until the next recession to know for certain whether the industry has improved.

That said, observers have identified ratings practices that may prove problematic once the next downturn arrives. One area of concern is Commercial Mortgage-Backed Securities (CMBS), which are backed by mortgages on office buildings, hotels, shopping malls, and other commercial properties. CMBS did not perform as poorly as subprime RMBS during the crisis, but could pose greater problems in the next downturn.

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89 Joffe, Marc. "S&P Settles: Now How About that US Bond Rating?" *Expected Loss*. February 3, 2015. http://expectedloss.blogspot.com/2015/02/s-settles-now-how-about-that-us-bond.html.

CMBS did not perform as poorly as subprime RMBS during the crisis, but could pose greater problems in the next downturn.

Although there was no CMBS crisis in 2007–2010, rating agencies did relax their standards in the mid-2000s when they supported the creation of "junior AAA tranches." Normally, the AAA tranche has the most seniority in a securitization deal. If the underlying collateral suffers defaults, losses are absorbed by the more junior securities. A junior AAA is one level below the senior AAA in a deal's capital structure, and is thus more vulnerable to poor collateral performance. Investors have incurred losses on junior AAA tranches of two CMBS deals.[90] The vast majority of junior AAA CMBS bonds have been downgraded, many into junk rating categories.[91]

The recent weakening of brick-and-mortar retail is putting downward pressure on the credit quality of CMBS collateralized by shopping mall loans.[92] In some cases, rating agencies assigned AAA/Aaa ratings to CMBS backed by a mortgage on a single shopping mall[93]—those securities will be at risk during the next downturn. Store closures are occurring due to the growth of online retail, a 20-year trend known to rating agencies when they assigned the top ratings.

A second ongoing rating concern involves swap contracts that are often embedded in structured finance deals. In many cases, structured bonds pay floating rate coupons while the underlying loans that have been securitized pay fixed interest rates. This mismatch is addressed by adding a very complex type of interest rate swap—one that is unique to the structured product sector—to the deal. If the swap provider becomes insolvent, the embedded swap may be terminated. In the event that a structured deal has a claim on a swap provider, the claim can suddenly become worthless. In the converse event that a structured deal owes money under the swap, the deal may suddenly have to pay a large amount to the swap provider. Either situation deprives bondholders of expected principal and interest payments. Bill Harrington, formerly a senior credit officer at Moody's, argues

90 These are CSFB Commercial Mortgage Pass-Through Certificates Series 2005-C2 and Bear Stearns Commercial Mortgage Securities Trust 2007-PWR15. See Marc Joffe, "SEC Shines a Light on Inflated CMBS Ratings." *Expected Loss*. January 25, 2015. http://expectedloss.blogspot.de/2015/01/sec-shines-light-on-inflated-cmbs.html.

91 "Few Junior-AAA CMBS Keep Original Ratings." *Commercial Real Estate News*. August 9, 2010. http://www.crenews.com/top_stories_subscriber/few-junior-aaa-cmbs-keep-original-ratings.html.

92 Peterson, Hayley. "The retail apocalypse is having a terrifying impact on one corner of Wall Street." *Business Insider*. April 10, 2017. http://www.businessinsider.com/mall-investors-battered-by-stores-shutting-hurting-cmbs-market-2017-4.

93 Joffe. "SEC Shines a Light on Inflated CMBS Ratings."

that rating agencies do not properly consider this risk when assigning ratings.[94] If a financial firm that participates in a large number of swaps collapses during the next recession—as Lehman did and AIG almost did during the last recession—there could be a cascade of losses impacting holders of AAA-rated structured securities.

If a financial firm that participates in a large number of swaps collapses during the next recession—as Lehman did and AIG almost did during the last recession—there could be a cascade of losses impacting holders of AAA-rated structured securities.

2.6 The Impact of Dodd-Frank

Dodd-Frank added extra compliance responsibilities for credit rating agencies and enhanced the SEC's enforcement capabilities. But the overall effect has been to reinforce the oligopoly of Moody's, Fitch and Standard & Poor's as well as their issuer-paid business model.

A late draft of the Dodd-Frank legislation included a provision written by Senator Al Franken (D-MN) that would have altered the rating agency business model in the structured finance rating market. The so-called Franken Amendment would have created a board, overseen by the Securities and Exchange Commission, whose purpose would have been to assign credit rating agencies to deals.[95] While deal issuers would still have paid for ratings under this proposal, they would have no longer selected which rating agency to use, thereby ending the practice of "ratings shopping," or choosing the most lenient agency. Although the Franken Amendment passed in the Senate, it was not included in the final version of Dodd-Frank. Instead, the law ordered the SEC to study the issue of credit rating agency independence. The SEC study, published in November 2013, did not recommend major market reforms.[96]

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94 Harrington, William J. Comments to the Commodity Futures Trading Commission Re: RN 3038-AD54: "Capital Requirements for Swap Dealers and Major Swap Participants." May 4, 2017. https://comments.cftc.gov/PublicComments/ViewComment.aspx?id=61196. Additional research on this topic is available on Harrington's LinkedIn page: https://www.linkedin.com/in/williamjharrington/.

95 Senator Al Franken. Credit Rating Agency Reform. (n.d.) https://www.franken.senate.gov/?p=issue&id=280.

96 Securities and Exchange Commission. Report to Congress on Credit Rating Agency Independence Study November 2013. https://www.sec.gov/news/studies/2013/credit-rating-agency-independence-study-2013.pdf

Dodd-Frank added extra compliance responsibilities for credit rating agencies and enhanced the SEC's enforcement capabilities. But the overall effect has been to reinforce the oligopoly of Moody's, Fitch and Standard & Poor's as well as their issuer-paid business model.

Dodd-Frank implementation has also not resolved inconsistencies in the use of rating symbols across asset classes, like those discussed earlier in the section on Municipal Bond Insurance vs. Municipal Bond Issuers. Section 938 instructs the SEC to require rating agencies to "apply any symbol described in paragraph (2) in a manner that is consistent for all types of securities and money market instruments for which the symbol is used." Although this language has been incorporated in SEC regulations,[97] the Commission has yet to sanction a rating agency for applying its symbols inconsistently.

Section 932 of Dodd-Frank established an Office of Credit Ratings with the SEC. This office conducts the enhanced oversight mandated by Dodd-Frank and issues annual reports covering rating agency compliance and other industry matters. Among the compliance issues cited in the Office's 2016 report[98] were the following:

> *A larger NRSRO's ratings of a certain type of ABS transactions did not adhere to its policies and procedures concerning surveillance and data quality. Specifically, analytical personnel did not review information concerning these securities as frequently as required by this NRSRO's surveillance policies and procedures, which resulted in these ratings not being updated in a timely manner.... At a smaller NRSRO, several rating files did not contain complete and accurate rating committee minutes, conflict of interest attestations, document checklists, and internal emails concerning the ratings.*

The report contains about 25 pages of such findings, suggesting that rating agencies are having difficulty meeting regulatory requirements. But, because the descriptions of irregularities don't cite specific rating agencies or securities, their value to investors is limited.

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97 Securities and Exchange Commission. Release No. 34-72936. "Final Rule – Nationally Recognized Statistical Rating Organizations." August 27, 2014. https://www.sec.gov/rules/final/2014/34-72936.pdf

98 Securities and Exchange Commission. "2016 Summary Report of Commission Staff's Examinations of Each Nationally Recognized Statistical Rating Organization." December 2016. https://www.sec.gov/ocr/reportspubs/special-studies/nrsro-summary-report-2016.pdf

Part 3

NRSRO Certification as a Barrier to Entry

3.1 The Cost of Obtaining and Maintaining NRSRO Certification

In theory, an organization can apply for NRSRO status without incurring a large financial expenditure. Applying requires completion of SEC Form NRSRO and its attachments. The same form must be completed annually to maintain certification. The SEC estimates that the ten existing NRSROs require 2,527 hours and $4,000 to complete their forms. This implies that a new rating agency could expect to spend one-tenth of that time and money—252.7 hours and $400—to obtain initial certification. Assuming that staff time costs $100 per hour, the cost of becoming an NRSRO would appear to be $25,670, which may not sound like a tremendous burden for a new financial firm, but it is important to realize that acceptance of the NRSRO application is not assured.

Further, the SEC estimates may be misleading. A new applicant may, for example, decide to retain legal counsel to advise on wording in the application and to address SEC follow up inquiries. In this case, an outside counsel experienced with financial regulation might bill several hundred hours of time at a steep hourly rate. One applicant told this author on background that it incurred over $1 million in costs to apply for NRSRO status—mostly in the form of legal fees.

Maintaining NRSRO status also requires costly changes to a firm's workflow. James Gellert, president of RapidRatings—a credit analytics firm that chose not to apply for NRSRO status—told *The Economist* that his company's operating costs would double if it became

an NRSRO.[99] Compliance involves not only the annual filings of Form NRSRO, but also exhaustively documenting ratings methodologies and monitoring both current and former rating analysts to ensure that they do not have any conflicts of interest.

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Rule 17g lists a variety of tasks rating agencies must carry out to maintain NRSRO status. Among these are the following:

- Provide an extensive disclosure form for each new rating or rating change. This disclosure must include assumptions, limitations, information on the rating's uncertainty, level of third-party involvement in the rating process, description of the data used, potential conflicts of interest, explanation of the rating's potential volatility, and information on the sensitivity of the rating to underlying assumptions (Rule 17g-7(a)).
- Make and retain records for each rating showing the name of the analyst(s) who determined the rating, the name of the manager who approved it, and the rationale for assigning the rating if it was materially different than that implied by the agency's quantitative model. For asset-backed securities, the agency must also document how the underlying instruments in the asset pool were assessed—for example, what rating was used if the security was not publicly rated by the agency (Rule 17g2-a).
- Produce detailed ratings histories published monthly in XBRL format (Rule 17g-7(b)).
- Maintain a website containing additional information for asset-backed securities that the NRSRO rates on an issuer-paid basis. This site, which must be password-protected and made available only to other NRSROs, must contain all issuer disclosures used to initially rate and monitor these securities (Rule 17g-5).
- Establish standards of training, experience, and competence for rating analysts. Agencies must test analysts on a periodic basis and may not issue a rating unless one

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[99] "Undue Credit." *The Economist*. May 28, 2015, http://www.economist.com/news/finance-and-economics/21652364-regulation-helping-very-firms-it-designed-tame-undue-credit.

of the analysts involved in its determination has at least three years' experience (Rule 17g-9).

- File annual updates to form NRSRO, attaching audited financial statements, unaudited revenue breakdowns, total and median analyst compensation data, rating action counts by asset class, and management's assessment of the firm's internal controls (Rule 17g-3).

3.2 Non-Financial Barriers

The Credit Rating Agency Reform Act of 2006[100] formalized the NRSRO registration procedure, establishing detailed requirements for certification. One of these requirements is especially onerous. A company requesting registration as an NRSRO must present at least ten letters from Qualified Institutional Buyers (QIBs) attesting to the fact that they have used the company's ratings for at least three years prior to the NRSRO application. A QIB is an institutional investor managing at least $100 million.[101]

Thus, a new credit ratings startup must operate for three years before it can apply for NRSRO certification—competing against established firms that provide ratings to investors for free.

Thus, a new credit ratings startup must operate for three years before it can apply for NRSRO certification—competing against established firms that provide ratings to investors for free. During this three-year period, the startup's credit assessments will have questionable value because they lack the SEC's NRSRO certification. The applicant must then convince ten of its regular clients to make attestations on its behalf to the SEC. Since the SEC has extensive enforcement powers, financial market participants are naturally wary of it. As a result, it is not surprising that QIBs can be reluctant to provide support letters as a favor to a new credit rating agency. Although the 2006 Act releases QIBs from any legal liability relating to their support letters, placing oneself on the SEC's radar screen unnecessarily may not seem like a good business decision.

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[100] Credit Rating Agency Reform Act of 2006. Public Law 109–291.

[101] 17 CFR 230.144A – Private resales of securities to institutions. https://www.law.cornell.edu/cfr/text/17/230.144A.

In *The New York Times*, Gretchen Morgenson reported on one aspiring NRSRO that has been frustrated by the QIB letter requirement.[102] R&R Consulting, cofounded by two former Moody's analysts in 2000, applied for NRSRO status in 2011 but was not certified due to SEC concerns over the letters the company provided. According to Morgenson's account, one letter was rejected because it came from a German investor who did not have access to a U.S. notary. Another letter was not accepted because the client stated that it used R&R for valuation rather than rating services. Since the valuation of a fixed income security is largely dependent on the asset's credit risk, a proper valuation implicitly requires a credit opinion, so if a client was satisfied with R&R's valuations, it was effectively happy with the company's credit research.

3.3 SEC Rejection of Dagong Global Credit Rating's Application

In December 2009, Dagong Global Credit Rating Company applied to the SEC for NRSRO designation. At the time Dagong was one of three large rating agencies in China, and the only one that did not have a large investment from a U.S. rating agency. Dagong had been operating for 15 years, was licensed by the Chinese Securities Regulatory Commission, and had more than two dozen offices throughout China.

Rather than grant Dagong's application, the SEC instead initiated proceedings to determine whether the registration should be denied in April 2010. Potential grounds for denial were: (1) because Dagong was not rating U.S. entities at the time of the application, it "lacked a sufficient connection with U.S. interstate commerce to … invoke the regulatory and oversight authority of the Commission"; and (2) concerns that Dagong could not meet certain conditions of Section 17 of the Exchange Act of 1934.[103] That section established recordkeeping requirements for SEC regulated brokers, dealers, and exchanges. Its requirements were extended to NRSROs by the 2006 Credit Rating Agency Reform Act.[104]

In September 2010, the SEC formally denied Dagong's registration citing Section 17 concerns. Section 17 requires registrants "to (1) allow Commission staff to conduct on-site

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102 Morgenson, Gretchen. "On the waiting list at the debt-rating club." *The New York Times*. February 9, 2013. BU1. http://www.nytimes.com/2013/02/10/business/credit-rating-club-is-tough-to-get-into.html.

103 Securities and Exchange Commission. Release No. 61906. April 14, 2010. https://www.sec.gov/litigation/admin/2010/34-61906.pdf.

104 Public Law 109-291 Section 5 (September 29, 2006).

reviews of the firm's books and records; (2) produce to Commission staff copies of the firm's books and records; and (3) furnish such reports as Commission staff deems necessary." These requirements appeared to conflict with Chinese securities regulations, and SEC staff was not satisfied with representations it received from Dagong and the Chinese regulator about the firm's ability to comply. Dagong's records would have to be reviewed by Chinese authorities to ensure that they did not contain "state secrets" before being translated and submitted to the SEC. Having rejected Dagong on the recordkeeping issue, the SEC withheld judgment on its interstate commerce concern, leaving it as a potential barrier to future non-U.S. applicants.[105]

Dagong's case highlights a number of excesses in the NRSRO certification regime. Tight supervision of a registrant's books and records may make sense for institutions that handle customer accounts, but rating agencies only offer credit opinions; they don't manage money. It also seems unnecessary for SEC regulators to have access to English language copies of documents related to ratings of securities not marketed in the United States.

…the unadjudicated interstate commerce reservation would seem to create a barrier against other foreign rating agencies attempting to establish themselves in the United States.

Finally, the unadjudicated interstate commerce reservation would seem to create a barrier against other foreign rating agencies attempting to establish themselves in the United States. An SEC spokesperson told *The Wall Street Journal* that foreign companies had made it through the registration process, with Canada's DBRS and Fimalac, the French owner of Fitch, cited as examples.[106] But both these firms had extensive U.S. operations prior to the implementation of the formal NRSRO application process.[107]

The SEC rejection of Dagong's application seems especially ironic in light of two more recent events. In May 2017, the Trump administration and the government of China agreed on a 100-Day Economic Cooperation Plan. Under point five of the plan. China agreed "to allow wholly foreign-owned financial services firms in China to provide credit rating

[105] Securities and Exchange Commission. Release No. 62968. September 22, 2010. https://www.sec.gov/litigation/admin/2010/34-62968.pdf.

[106] Shaw, Joy C. "Dagong Fires Back at SEC." *The Wall Street Journal.* September 27, 2010. C3.

[107] Another foreign rating agency, Japan's Rating and Investment Information, Inc. (R&I) withdrew its NRSRO registration in 2011, but Japan Credit Ratings remains registered. H.R. Credit Ratings de Mexico successfully completed the NRSRO registration process in 2013.

services" by July 16.[108] The agreement effectively gives Moody's, S&P, and Fitch access to the China market, without the need to work through subsidiaries that have partial domestic ownership. The agreement does not contain any offsetting provision giving Chinese firms access to the U.S. market.

China's new rating of A1 is four notches below the firm's Aaa sovereign rating for the United States—despite the fact that China has a lower central government debt/GDP ratio than the United States and is experiencing faster economic growth.

Two weeks later, Moody's downgraded China's sovereign credit rating.[109] China's new rating of A1 is four notches below the firm's Aaa sovereign rating for the United States—despite the fact that China has a lower central government debt/GDP ratio than the United States and is experiencing faster economic growth. Both nations control their own currencies and could thus be expected to "print money" to avoid a default.

In contrast to Moody's, Dagong rates China much more highly than the United States. The company gives China's bonds a local currency rating of AA+ and a foreign currency rating of AAA[110], while it rates the United States at A-,[111] a difference of five to six notches in the opposite direction. This sharp discrepancy suggests that one or both agencies have allowed their sovereign ratings to become politicized. It should be left to investors to determine whether either agency's opinion is credible, without the U.S. regulators placing their thumbs on the scale.

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[108] U.S. Department of Commerce. "FACT SHEET: Initial Actions of the U.S.-China Economic Cooperation 100-Day Plan." May 11, 2017. https://www.commerce.gov/news/fact-sheets/2017/05/fact-sheet-initial-actions-us-china-economic-cooperation-100-day-plan.

[109] Moody's Investors Service. "Rating Action: Moody's downgrades China's rating to A1 from Aa3 and changes outlook to stable from negative." May 24, 2017. https://www.moodys.com/research/Moodys-downgrades-Chinas-rating-to-A1-from-Aa3-and-changes--PR_366139.

[110] Dagong Global Credit Rating Group. "Dagong Maintains the Sovereign Credit Ratings of the People's Republic of China at AA+ and AAA with Stable Outlook." May 26, 2017. http://en.dagongcrg.com/index.php?m=content&c=index&a=show&catid=88&id=3.

[111] Dagong Global Credit Rating Group. "Dagong Maintains the Sovereign Credit Ratings of the United States of America at A-, with a Stable Outlook." May 22, 2017. http://en.dagongcrg.com/index.php?m=content&c=index&a=show&catid=88&id=374.

Part 4

Alternative Providers, Business Models, and Regulatory Approaches

Government licensing of NRSROs does not prevent others from expressing credit opinions, nor does it require investors and regulators to rely exclusively upon NRSRO assessments. Although certification disadvantages non-NRSRO alternatives, they have nevertheless developed to some extent. Their existence offers some idea of how a credit ratings industry without certification might operate, and provides some confidence that the credit rating business would not collapse in the absence of the big three issuer-paid firms. This section surveys alternative providers and methods of credit risk assessments.

4.1 Not-for-Profit Ratings

In the world of consumer products, the not-for-profit Consumers Union has set the standard for how a private, non-commercial bond rating agency might operate. Consumers Union funds itself through donations, as well as subscriptions to its flagship magazine *Consumer Reports* and its online services. The organization has operated for over 80 years and realized $247 million of revenue in 2016.[112]

In the world of consumer products, the not-for-profit Consumers Union has set the standard for how a private, non-commercial bond rating agency might operate.

[112] Consumers Union. Annual Reports. http://consumersunion.org/about/annual-report/.

During the 2016 presidential campaign, Senator Bernie Sanders recommended converting rating agencies into "non-profit institutions, independent from Wall Street." Sanders' proposal did not address how the non-profit rating agency activities would be funded.[113] And therein lies a potential problem: subsidizing credit assessments for institutional investors is unlikely to rank high on the list of causes that energize potential donors.

One possible exception involves government credit ratings—both sovereign and municipal. These ratings may be perceived as a public good worthy of charitable support. There have been a few initiatives in this space over the last few years. In 2012, the Bertelsmann Foundation proposed the establishment of an International Non-Profit Credit Rating Agency (INCRA) and subsequently published rating studies for six sovereign governments.[114] Bertelsmann had hoped to raise a $400-million endowment to fund INCRA's activities on an ongoing basis, with major support coming from the G20, IMF, and World Bank.[115] After the Eurozone sovereign debt crisis eased in late 2012, however, the desire for sovereign ratings alternatives subsided, and with it went the likelihood of endowing INCRA, which has not published any updates since 2015.

Another not-for-profit ratings effort that has focused on sovereigns is Wikirating. This organization was founded by two Swiss IT specialists in 2010. Wikirating used a polling method to "crowdsource" ratings and implemented a scoring system based on an index of sovereign fiscal and economic indicators.

Another not-for-profit ratings effort that has focused on sovereigns is Wikirating. This organization was founded by two Swiss IT specialists in 2010. Wikirating used a polling method to "crowdsource" ratings and implemented a scoring system based on an index of sovereign fiscal and economic indicators.[116] As of 2017, Wikirating's website remains active, but its ratings are not being updated.

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[113] Walsh, Ben. "Why Bernie Sanders Wants to Make Credit Rating Agencies into Nonprofits." *Huffington Post*. January 7, 2016. http://www.huffingtonpost.com/entry/bernie-sanders-credit-rating-agencies_us_568d2826e4b0a2b6fb6e0bff.

[114] Bertelsmann Foundation. INCRA. various publications 2012–2015. http://www.bfna.org/category/publication-type/incra.

[115] Cash, Daniel. "Analysis of the International Non-Profit Credit Rating Agency Project." Oxford Business Law Blog. August 7, 2016. https://www.law.ox.ac.uk/business-law-blog/blog/2016/08/analysis-international-non-profit-credit-rating-agency-project.

[116] See Wikirating (http://www.wikirating.org/wiki/Main_Page). This author is a member of the organization's Experts Board.

In the United States, a number of not-for-profits have assigned composite fiscal scores to states. These include the Mercatus Center[117] and Truth in Accounting.[118] Neither group claims that its scores are an alternative to ratings, but investors could use them for that purpose. This author has leveraged think tank funding to create a fiscal scoring system for U.S. cities and counties,[119] and has used it to create fiscal rankings.[120] In 2012, this author also used a simulation model to estimate default probabilities for Canadian provinces.[121]

One other not-for-profit rating initiative is worth examining: National University of Singapore's Credit Risk Initiative. See the discussion in section 4.4, Academic and Open Source Methodologies.

4.2 Analytics Firms

In recent decades, several firms have applied technology to the task of calculating default probabilities or financial health scores and then selling their calculations to investors. Since their approaches rely on computer algorithms, these firms recalculate scores on a regular basis as new data become available, thereby avoiding the monitoring issues that afflict NRSROs.

In recent decades, several firms have applied technology to the task of calculating default probabilities or financial health scores and then selling their calculations to investors.

The most successful such firm, KMV, commercialized Robert Merton's default probability model in the 1990s. Initially, the firm calculated corporate default probabilities on a monthly basis, later moving to daily updates as technology improved. The main inputs to

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117 Mercatus Center. "Ranking the States by Fiscal Condition." https://www.mercatus.org/statefiscalrankings.

118 Truth in Accounting. "Financial State of the States Reports." http://www.truthinaccounting.org/news/detail/financial-state-of-the-states-reports.

119 Joffe, Marc. "Doubly Bound: The Cost of Credit Ratings." Haas Institute at UC Berkeley Research Report. April 11, 2017. http://haasinstitute.berkeley.edu/doubly-bound-cost-credit-ratings.

120 Joffe, Marc. "California City and County Fiscal Strength Index – 2017 Update." California Policy Center. February 8, 2017. http://californiapolicycenter.org/california-city-county-fiscal-strength-index-2017-update/; and Marc Joffe. "How Strong are Your City's Finances? 116 US Cities Ranked." *The Fiscal Times*. January 9, 2017.

121 Joffe, Marc. "Provincial Solvency and Federal Obligations." Macdonald-Laurier Institute. October 2012. http://www.macdonaldlaurier.ca/files/pdf/Provincial-Solvency-October-2012.pdf.

KMV's model were market capitalization and stock price volatility. KMV aggressively marketed its model to banks and asset management firms as a more up-to-date alternative to credit ratings.

As noted earlier, Moody's Corporation purchased KMV in 2002 for $210 million. Because Moody's, S&P, and Fitch generate so much cash, they have been able to purchase many emerging competitors, thereby preventing them from altering the structure of the credit assessments business.

Kamakura Corporation is a competitor to KMV that remained independent. This firm uses a different modeling technique—known in the industry as a reduced form model—but also relies on a company's market capitalization as a major driver of its default probability estimates.[122] Kamakura is thus able to recalculate its default probability estimates daily. The firm has also introduced a non-public firm model (one that does not rely on stock prices) and a sovereign default probability model over the last decade.

RapidRatings calculates financial health ratings on a 0–100 scale for public and private firms using a large set of accounting ratios. RapidRatings categorizes its scores into five buckets ranging from Very Low Risk to Very High Risk. In its most recent Default Analysis, it reported that 94% of U.S. companies that defaulted in 2016 had financial health ratings in its "High Risk" or "Very High Risk" categories at the time of default.[123]

At least two firms calculate credit scores for municipal bond issuers. NewOak, a financial advisory firm, launched its MuniScore product in May 2017. This tool assigns scores to state and local governments on a 0–10 scale based on income, leverage, liquidity, operating environment, and socio-economic factors.[124] A startup firm, Munitrend, calculates municipal credit scores on a 0–100 scale using accounting variables from audited financial statements and economic data sets.[125]

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[122] https://www.kris-online.com/

[123] Rapid Ratings. "2016 Default Analysis." February 1, 2017. http://blog.rapidratings.com/default-frequency-in2016-highest-since-2009-fhr-catches-94-0.

[124] https://twitter.com/muniscore

[125] https://www.munitrend.com/

A startup firm, Munitrend, calculates municipal credit scores on a 0–100 scale using accounting variables from audited financial statements and economic data sets.

Non-NRSRO evaluators and analytics providers in the structured finance sector include Intex Solutions, Trepp, Credit Spectrum, and PF2 Securities. Other firms that provided credit data and analytics for asset-backed securities, such as Imake Consulting and Lewtan Technologies, were acquired by large NRSROs.

4.3 Internal Credit Analysts

Banks and other lenders do not rely entirely on credit rating agencies when assessing commercial credit. According to the Bureau of Labor Statistics, 72,930 individuals were employed in the United States as credit analysts in 2016. Of these, 37,040 worked at firms engaged in "Depository Credit Intermediation" and "Nondepository Credit Intermediation." BLS defines a credit analyst as someone who "analyze[s] credit data and financial statements of individuals or firms to determine the degree of risk involved in extending credit or lending money."[126]

Banks with at least $250 billion in consolidated assets normally determine their own capital requirements using internally developed credit ratings.

Banks with at least $250 billion in consolidated assets normally determine their own capital requirements using internally developed credit ratings. The internal ratings-based approach (IRB) was introduced by the Bank for International Settlements under its Basel 2 framework. The original Basel accord required banks to apply fixed, regulatorily determined risk weights to all of their assets, but in 2001 the Basel Committee proposed new rules giving more sophisticated banks greater flexibility.[127] They could calculate their own risk weights based on their estimates of each asset's credit risk, if regulators approved

[126] Bureau of Labor Statistics. "Occupational Employment and Wages: Credit Analysts," May 2016. https://www.bls.gov/oes/current/oes132041.htm.

[127] Bank for International Settlements. "Consultative Document: The Internal Ratings-Based Approach." January 2001. https://www.bis.org/publ/bcbsca05.pdf.

of their estimation methods. Rules implementing the IRB approach were implemented by the Federal Reserve in 2007 and remain in force.[128] Because IRB offers the potential to lower capital requirements, and thus make more intensive use of their capital, banks have an incentive to develop internal ratings systems that achieve regulatory approval.

It is worth noting, however, that the use of internal ratings for regulatory purposes creates perverse incentives. Financial institutions hoping to maximize profits through more-intensive use of their capital are biased toward assigning ratings associated with lower risk weights. The result could be a subversion of the institution's internal rating system, rendering it unable to protect the organization from taking on excessive credit risk. As we saw earlier, regulators first turned to credit ratings in the 1930s because they did not trust bank internal assessments. Although banks have advanced in their understanding of credit risk, the same conflict of interest remains.[129]

So while financial institutions already have the capability to assess credit without third parties, regulation may limit their incentive to use these skills properly.

Financial institutions hoping to maximize profits through more-intensive use of their capital are biased toward assigning ratings associated with lower risk weights. The result could be a subversion of the institution's internal rating system, rendering it unable to protect the organization from taking on excessive credit risk.

4.4 Academic and Open Source Methodologies

Finance and accounting academics have long been interested in corporate credit analysis. As we saw in the historical overview above, academics began proposing corporate

[128] Federal Reserve Board. "Basel II Capital Accord." November 2, 2007. https://www.federalreserve.gov/generalinfo/basel2/FinalRule_BaselII/.

[129] Jonathan Macey offers a more general warning about incorporating private assessment processes into regulation. Macey argues that absorbing private analytical techniques into regulation has the effect of "ossifying, as well as weakening and even corrupting the efficacy of the private sector institutions and techniques that have been assimilated." Jonathan R. Macey, "The Regulator Effect in Financial Regulation," 98 *Cornell L. Rev*. 591 (2013). http://scholarship.law.cornell.edu/clr/vol98/iss3/2.

bankruptcy risk models in the 1960s. This research agenda has continued over the past half century, yielding dozens of peer reviewed papers.[130]

In most cases, academic investigators create models and then move on to other projects. However, one academic organization—the Credit Research Initiative at the National University of Singapore—continuously maintains its own credit models. According to its website:

> *The CRI uses scientific methods to provide credit ratings for exchange-listed companies around the world. Up to date, the CRI has developed a number of data products, including the Probability of Default (PD), Actuarial Spread (AS), and the Corporate Vulnerability Index (CVI) that are updated daily with newly collected information. The rating data are available for around 65,000 firms in 121 economies and are accessible through this website free of charge.*

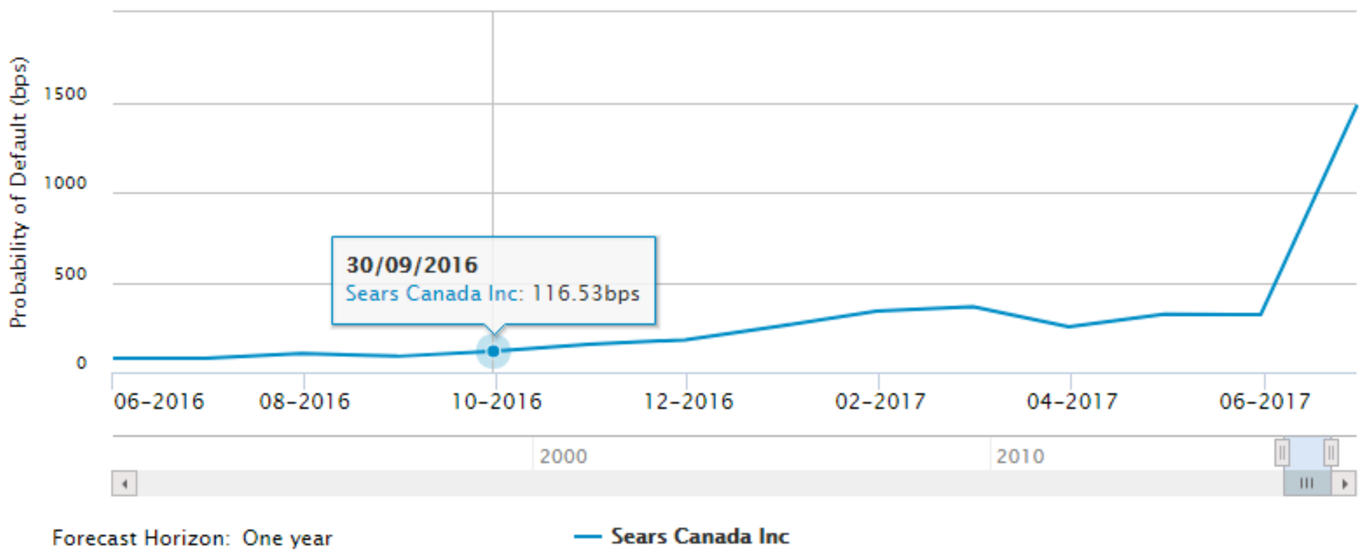
As a result of CRI's efforts, anyone can see default probability estimates for tens of thousands of publicly listed companies for free.

As a result of CRI's efforts, anyone can see default probability estimates for tens of thousands of publicly listed companies for free.

Academic research into sovereign, municipal and structured finance credit risk is much less mature, and this author is not aware of academic efforts analogous to CRI that rate bonds in these asset classes.

[130] Recent papers that include large numbers of citations to this literature include: Jian Pin and Qingxian Xiao, "A reduced-form model for pricing defaultable bonds and credit default swaps with stochastic recovery." *Applied Stochastic Models in Business and Industry* 32 (5) September/October 2016. 725–739; and Deron Liang, Chia-Chi Lu, Chih-Fong Tsai, and Guan-An Shih. "Financial ratios and corporate governance indicators in bankruptcy prediction: A comprehensive study." *European Journal of Operational Research* 252 (2) 2016. 561–72.

Figure 2: NUS CRI Default Probability Estimates for Sears Canada Rose Ahead of the Firm's June 22, 2017 Bankruptcy Filing



Source: https://rmicri.org/en/data/companyalldata/49935/0/

4.5 Government Assessments

The introduction to this analysis mentioned that regulators allowed banks to use a zero risk weight for OECD sovereigns. This rule was implicitly based on the notion that OECD sovereign debt was risk-free. Although that notion turned out to be faulty, it is nonetheless an example of how regulations embed regulator assessments of obligor risk.

Dodd-Frank instructed regulators to remove all references to credit ratings from financial regulations. Some regulators have finished this process. An Office of Financial Research brief found that regulators have used a variety of methods for replacing credit ratings.[131] One approach is to allow the regulated entity to make its own creditworthiness determinations, which are then reviewed by agency staff. Another approach is to require that regulated entities use assessments from third parties other than rating agencies. The last approach involves writing a credit model into regulations. Examples include the

131 Soroushian, John. "Credit Ratings in Financial Regulation: What's Changed Since the Dodd-Frank Act?" Office of Financial Research Brief Series. April 21, 2016. https://financialresearch.gov/briefs/files/OFRbr_2016-04_Credit-Ratings.pdf.

"Simplified Supervisory Formula Approach" (SSFA) and the "Gross Up Approach" used by federal bank regulators for setting capital requirements on securitized assets.

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SSFA involves a fairly complex calculation that requires two pages of regulatory language to explain.[132] The FDIC has simplified matters by publishing an Excel workbook that can perform the calculation.[133]

Aside from considering instrument and obligor attributes, regulatory methodologies could leverage credit spreads, which represent a market view of credit risk. If an instrument in an institution's portfolio has recently traded at a yield well above the risk-free rate, at least two market participants have concluded that the instrument is risky and might thus attract a higher risk weighting for capital adequacy purposes.[134]

The development of not-for-profit and academic rating alternatives will offer more opportunities to embed advanced calculations into ratings.

The development of not-for-profit and academic rating alternatives will offer more opportunities to embed advanced calculations into ratings. To the extent that these market entrants provide methodologies that include full, public documentation, their methodologies can be incorporated directly into regulation. Alternatively, an academic or not-for-profit credit assessment provider could be named as a third-party evaluator of creditworthiness.

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[132] Code of Federal Regulations. 12 CFR 3.43 – Simplified supervisory formula approach (SSFA) and the gross-up approach. https://www.law.cornell.edu/cfr/text/12/3.43.

[133] Federal Deposit Insurance Corporation. "SSFA Securitization Tool." https://www.fdic.gov/regulations/capital/SSFA-Job-Aid.xls.

[134] Giuliano Ianotta and George Pennacchi make a similar argument with respect to setting FDIC insurance premiums. Ianotta, Giuliano and George Pennacchi. "Bank Regulation, Credit Ratings and Systematic Risk." FDIC Bank Research Conference. October 2012. https://www.fdic.gov/bank/analytical/cfr/bank-research-conference/annual-12th/pennacchi.pdf.

Part 5

Policy Recommendations: Lowering Barriers to Entry

#1 Complete the Removal of Ratings from Regulation

Although Section 939A of the Dodd-Frank Act mandated removal of credit ratings from regulation, that process is incomplete—more than six years after the legislation became law. For example, although the SEC rewrote its Rule 2A-7 governing money market mutual funds to remove NRSRO ratings as the determinant of security eligibility, it still requires funds to include NRSRO ratings on monthly portfolio reports on Form N-MFP. Item C.10 of this form includes the following language:

> *Security rating(s) considered. Provide each rating assigned by any NRSRO that the fund's board of directors (or its delegate) considered in determining that the security presents minimal credit risks (together with the name of the assigning NRSRO).*[135]

Inclusion of this item signals to money fund managers that regulators are still looking at the NRSRO ratings of securities in their portfolios. Frank Partnoy lists some other cases in which federal regulators continue to rely on ratings:

> *The 2016 Federal Reserve banking rules governing the Term Asset-Backed Securities Loan Facility (TALF) provided that credit collateral requirements are based, in part, on whether collateral "[i]s registered with the Securities and Exchange Commission as a Nationally Recognized Statistical Rating Organization for issuers of asset-backed securities." The Federal Communications Commission adopted new rules in 2016 that included a cutoff for letter of credit requirements based on whether the relevant entity*

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[135] Securities and Exchange Commission. "Form N-MFP." https://www.sec.gov/files/formn-mfp.pdf.

> *had "maintain[ed] a credit rating of BBB- or better from Standard & Poor's (or the equivalent from a nationally-recognized credit rating agency)." Federal transportation regulations governing applications for financial assistance state that "[w]here an Applicant has received a recent credit rating from one or more nationally recognized rating agencies, that rating will be used to estimate the credit risk."*[136]

Congress could use its oversight power to insist upon the complete removal of NRSRO ratings from all regulations with no backsliding. Further, vague creditworthiness standards that could be interpreted to embrace NRSRO ratings should also be tightened up. As discussed earlier, logical replacements include regulatory formulas and open source methodologies developed by non-profits and academics.

#2 Eliminate the NRSRO Certification

The quickest way to finally write NRSROs out of financial regulations is to eliminate NRSRO status entirely. This study has provided strong evidence that the financial world would not stop in the absence of government-anointed ratings authorities.

Internal credit analysts and alternative providers, both commercial and non-profit, would continue and likely expand their operations to fill the market void. Further, the big three and other NRSROs would likely remain in business, given the large amount of cash and brand equity they have accumulated. In a more competitive marketplace, these incumbents would have a stronger incentive to invest their cash in methodology improvements.

So, the credit assessment marketplace would remain intact and would likely become more dynamic as alternative providers competed on a level regulatory playing field against the much larger—but stodgier—NRSRO incumbents.

With the elimination of NRSRO certification, Congress and regulators should also remove all the regulation and liability attendant to NRSRO status. A bad credit rating should be

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[136] Partnoy, Frank. "What's (Still) Wrong with Credit Ratings." University of San Diego School of Law Legal Studies. Research Paper Number 17-285. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2969086.

regarded in the same light as a bad stock recommendation. Because these opinions will no longer have an official seal of approval, it should be clear that it is the consumer's responsibility to assess their validity.

Rating agencies should also be able to defend themselves on First Amendment grounds. Their credit research and opinions should be seen in the same light as newspaper articles and editorials. Unless they are libelous, they should not be actionable. Incompetent and commercially biased ratings, like those assigned to CPDOs, would be the financial equivalent of fake news: objectionable but not illegal.

#3 Reduce the Cost of Acquiring Input Data

Non-profit and commercial alternatives to rating agencies often run an algorithm over a set of credit-relevant data. For example, corporate credit analysis typically relies on some combination of financial statement values and market capitalization data.

Much of this source data is reported to or produced by government entities. Making this data more readily and easily accessible would lower the cost of entry for alternative credit assessment providers.

For example, corporations first filed quarterly and annual reports in paper format, then as text files. Due to a lack of standard formatting, these reports were difficult to process. In 2008, the SEC began requiring U.S. public companies to file their reports in a "machine readable" format known as XBRL (eXtensible Business Reporting Language). It is relatively easy for an analytics firm to parse these files and create its own database of corporate financial disclosures without having to pay royalties to a data aggregator such as Bloomberg or Thompson Reuters. However, due to flaws in the XBRL implementation, XBRL files are not as easy to analyze and not as accurate as they should be. The SEC has been working with the industry to improve XBRL reporting and should continue to do so.[137]

[137] Joffe, Marc. "Open Data for Financial Reporting: Costs, Benefits, and Future." The Data Foundation. September 2017. http://www.datafoundation.org/xbrl-report-2017/.

Legislation now before Congress would require all financial regulators to follow the SEC's lead, and convert financial regulatory filings to machine readable formats.[138] One type of filing that would be affected is audited financial statements produced by state and local governments. These audits are now provided as PDF files and are difficult to process. Converting the government financial audits to XBRL or another self-documenting file format would lower the cost of performing credit analysis on municipal bond issuers. The federal government could further ease data collection by using consistent state and local government identifiers across the Census Bureau, Bureau of Economic Analysis, and Bureau of Labor Statistics.

[138] HR 1530 – Financial Transparency Act of 2017. (https://www.congress.gov/bill/115th-congress/house-bill/1530).

Conclusion

Federal involvement in the credit rating business dates back to 1931. Originally seen by regulators as a neutral referee of bond asset eligibility and capital treatment, rating agencies came to be regarded as a financial utility requiring strict oversight.

The unintended consequence has been to distort the rating agency business model and then freeze it into place. In contrast to the more lightly regulated consumer credit business, the bond rating business has failed to fully automate—relying on an outmoded committee process. Instead of moving to continuous-scale numerical systems, rating agencies continue to use confusing alphanumeric symbols with inconsistent meanings across asset classes. Finally, rather than fund themselves through investor fees—and thereby align their commercial interests with the best quality product—agencies have chosen the more lucrative approach of charging issuers, even though they want the highest possible ratings in all cases. NRSROs implemented this business model because regulation gave them a license to do so.

For all the criticism it has faced, Dodd-Frank started us down the path away from a distorted credit ratings market by mandating the removal of ratings from regulations.

For all the criticism it has faced, Dodd-Frank started us down the path away from a distorted credit ratings market by mandating the removal of ratings from regulations. Unfortunately, that legislation also perpetuated a licensing system that reinforces the belief by market participants that the opinions of a handful of incumbents have official status.

The Financial CHOICE Act passed by the House of Representatives leaves this system largely in place, relaxing a few requirements and litigation risks now faced by the incumbents. By continuing to hinder the creative destruction that only a fully competitive ratings market can provide, the CHOICE Act will continue to retard the evolution of ratings technologies.

As a result, institutional investors will continue to receive third-party credit assessments of dubious value. While some larger players may be able to insulate themselves from low-quality credit rating information by employing their own risk analysts, many will continue to be ill-served. The result will be the continued mispricing of assets and the creation of new assets that do not make sense on a risk/return basis—when risk is properly measured.

The fact that we have not seen major fixed income price volatility or widespread defaults is not proof that the rating system has fixed itself. We will only know how robust credit ratings now are when the next downturn arrives.

The fact that we have not seen major fixed income price volatility or widespread defaults is not proof that the rating system has fixed itself. We will only know how robust credit ratings now are when the next downturn arrives. In all likelihood, that downturn will be more severe than it needs to be unless Congress and regulators open up the rating market to disruptors and their new techniques.

Today, the credit rating business remains a critical point of vulnerability in the financial ecosystem. Allowing competition to improve credit ratings is one way that policymakers can leverage market forces to reduce the financial sector’s continuing fragility.

About the Author

Marc Joffe is a senior policy analyst at Reason Foundation. Before pursuing a second career in policy research, Marc worked in financial and IT roles for several financial institutions including HSBC, CIBC and Moody's Analytics—where he was a senior director until 2011. His research has been published by the California State Treasurer's Office, the Mercatus Center at George Mason University, the Haas Institute for a Fair and Inclusive Society at UC Berkeley and the Macdonald-Laurier Institute among others. His op-eds have appeared in *The Fiscal Times*, *RealClearMarkets, Bloomberg View* and the *Guardian* as well as in numerous local outlets. Immediately before joining Reason, Marc was the director of policy research at the California Policy Center. He has a BA and an MBA from New York University and an MPA from San Francisco State University.

Disclaimer: Marc has consulted for or offered consulting services to several NRSROs and alternative credit assessment providers mentioned in this study.

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