

The Credit Rating Agencies:
Understanding Their Central Role in the Subprime Debacle of 2007-2008

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Abstract

The three major credit rating agencies -- Moody's, Standard & Poor's, and Fitch -- played a central role in the subprime mortgage debacle of 2007-2008. That centrality was not accidental. Seven decades of financial regulation propelled these rating agencies into the center of the bond information market, by elevating their judgments about the creditworthiness of bonds so that those judgments attained the force of law. The Securities and Exchange Commission exacerbated this problem by erecting a barrier to entry into the credit rating business in 1975. Understanding this history is crucial for any reasoned debate about the future course of public policy with respect to the rating agencies.

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Introduction

The U.S. subprime residential mortgage debacle of 2007-2008, and the world financial crisis that has followed, will surely be seen as a defining event for the U.S. economy -- and for much of the world economy as well -- for many decades in the future. Among the central players in that debacle were the three large U.S.-based credit rating agencies: Moody's, Standard & Poor's (S&P), and Fitch.

These three agencies' initially favorable ratings were crucial for the successful sale of the bonds that were securitized from subprime residential mortgages and other debt obligations. The sale of these bonds, in turn, were an important underpinning for the U.S. housing boom of 1998-2006 -- with a self-reinforcing price-rise bubble. When house prices ceased rising in mid 2006 and then began to decline, the default rates on the mortgages underlying these bonds rose sharply, and those initial ratings proved to be excessively optimistic -- especially for the bonds that were based on mortgages that were originated in 2005 and 2006. The mortgage bonds collapsed, bringing down the U.S. financial system and many other countries' financial systems as well.

The role of the major rating agencies has received a considerable amount of attention in Congressional hearings and in the media. Less attention has been paid to the specifics of the regulatory structure that propelled these companies to the center of the U.S. bond markets. But an understanding of that structure is essential for any reasoned debate about the future course of public

policy with respect to the rating agencies.¹

Background

A central concern of any lender -- including investors in bonds -- is whether a potential or actual borrower is likely to repay the loan (including any specified interest). Lenders therefore usually spend considerable amounts of time and effort in gathering information about the creditworthiness of prospective borrowers and also in gathering information about the actions of borrowers after loans have been made.

The credit rating agencies offer judgments -- they prefer the word "opinions"² -- about the credit quality of bonds that are issued by corporations, governments (including U.S. state and local governments, as well as "sovereign" issuers abroad), and (most recently) mortgage securitizers. These judgments come in the form of ratings, which are usually a letter grade. The best known scale is that used by S&P and some other rating agencies: AAA, AA, A, BBB, BB, etc., with pluses and minuses as well.³ Credit rating agencies are thus one potential source of such information for bond investors; *but they are far from the only potential source.*

The history of the credit rating agencies and their interactions with financial regulators is crucial for an understanding of how the agencies attained their current central position in the market for bond information.

¹ Overviews of the credit rating industry can be found in, e.g., Cantor and Packer (1995), Partnoy (1999, 2002), Richardson and White (2009), Sylla (2002), and White (2002, 2002-2003, 2006, 2007).

² The rating agencies favor that term because it allows them to claim that they are "publishers" and thus enjoy the protections of the First Amendment of the U.S. Constitution (e.g., when the agencies are sued by investors and issuers who claim that they have been injured by the actions of the agencies).

³ For short-term obligations, such as commercial paper, a separate set of ratings is used.

Some history

John Moody published the first publicly available bond ratings (mostly concerning railroad bonds) in 1909. Moody's firm⁴ was followed by Poor's Publishing Company in 1916, the Standard Statistics Company in 1922,⁵ and the Fitch Publishing Company in 1924.⁶ These firms' bond ratings were sold to bond investors, in thick rating manuals. In the language of modern corporate strategy, their "business model" was one of "investor pays." In an era before the Securities and Exchange Commission (SEC) was created (in 1934) and began requiring corporations to issue standardized financial statements, Moody and the firms that subsequently entered were clearly meeting a market demand for their information services.

A major change in the relationship between the credit rating agencies and the U.S. bond markets occurred in the 1930s. Eager to encourage banks to invest only in safe bonds, bank regulators issued a set of regulations that culminated in a 1936 decree that prohibited banks from investing in "speculative investment securities" as determined by "recognized rating manuals". These "speculative" securities were bonds that were below "investment grade." Thus, banks were restricted to holding only bonds that were "investment grade" (e.g., bonds that were rated BBB or better on the S&P scale).⁷

This regulatory action importantly changed the dynamic of the bond information market.

⁴ Dun & Bradstreet bought Moody's firm in 1962; subsequently, in 2000, Dun & Bradstreet spun off Moody's as a free-standing corporation.

⁵ Poor's and Standard merged in 1941, to form S&P; S&P was absorbed by McGraw-Hill in 1966.

⁶ Fitch merged with IBCA (a British firm) in 1997, and the combined firm was subsequently bought by FIMILAC, a French business services conglomerate.

⁷ This rule still applies to banks today. This rule did not apply to savings institutions until 1989. Its application to savings institutions in 1989 forced them to sell substantial holdings of "junk bonds" (i.e., below investment grade) at the time, causing a major slump in the junk bond market.

Banks were no longer free to act on information about bonds from any source that they deemed reliable (albeit within constraints imposed by oversight by bank regulators). They were instead forced to use the judgments of the publishers of the "recognized rating manuals" (i.e., Moody's, Poor's, Standard, and Fitch). Further, since banks were important participants in the bond markets, perforce other participants would want to pay attention to the bond raters' pronouncements as well.

On the regulatory side of this process, rather than the bank regulators' using their own internal resources to form judgments about the safety of the bonds held by banks (which the bank regulators continued to do with respect to the other kinds of loans made by banks), the regulators had effectively delegated -- "outsourced" (again using the language of modern corporate strategy) -- to the rating agencies their safety judgments about bonds that were suitable for banks' portfolios. Equivalently, *the creditworthiness judgments of these third-party raters had attained the force of law.*

In the following decades, the insurance regulators of the 48 (and eventually 50) states followed a similar path: The state regulators wanted their regulated insurance companies to have adequate capital (in essence, net worth) that was commensurate with the riskiness of the companies' investments. To achieve this goal, the regulators established minimum capital requirements that were *geared to the ratings on the bonds* in which the insurance companies invested -- the ratings, of course, coming from that same small group of rating agencies. Once again, an important set of regulators had delegated their safety decisions to the credit rating agencies. And in the 1970s, federal pension regulators pursued a similar strategy.

These additional delegations of safety judgments to the rating agencies meant that the latter's centrality for bond market information was further strengthened.

The SEC crystallized the rating agencies' centrality in 1975. In that year the SEC decided to set minimum capital requirements for broker-dealers (i.e., securities firms). Following the pattern of the other financial regulators, it wanted those capital requirements to be sensitive to the riskiness of

the broker-dealers' asset portfolios and hence wanted to use bond ratings as the indicators of risk. But it worried that references to "recognized rating manuals" were too vague and that a "bogus" rating firm might arise that would promise "AAA" ratings to those companies that would suitably reward it and "DDD" ratings to those that would not; and if a broker-dealer chose to claim that those ratings were "recognized", the SEC might have difficulties challenging this assertion.

To deal with this problem, the SEC created a wholly new category -- "nationally recognized statistical rating organization" (NRSRO) -- and immediately "grandfathered" Moody's, S&P, and Fitch into the category. The SEC declared that only the ratings of NRSROs were valid for the determination of the broker-dealers' capital requirements. The other financial regulators soon adopted the SEC's NRSRO category and the rating agencies within it as the relevant sources of the ratings that were required for evaluations of the bond portfolios of their regulated financial institutions.⁸

Over the next 25 years the SEC designated only four additional firms as NRSROs;⁹ but mergers among the entrants and with Fitch caused the number of NRSROs to fall back to the original three by year-end 2000. In essence, the SEC had become a significant barrier to entry into the bond rating business, because the NRSRO designation was clearly important for any potential entrant. Without the NRSRO designation, any would-be bond rater would likely be ignored by most financial institutions; and, since the financial institutions would ignore the would-be bond rater, so would bond issuers.¹⁰

⁸ Also, in the early 1990s, the SEC again made use of the NRSROs' ratings when it established safety requirements for the short-term bonds (e.g., commercial paper) that are held by money market mutual funds.

⁹ The SEC bestowed the NRSRO designation on Duff & Phelps in 1982, on McCarthy, Crisanti & Maffei in 1983, on IBCA in 1991, and on Thomson BankWatch in 1992.

¹⁰ The SEC's barriers were not absolute. A few smaller rating firms -- notably KMV, Egan-Jones, and Lace Financial -- were able to survive, despite the absence of NRSRO designations. KMV was absorbed by Moody's in 2000.

In addition, the SEC was remarkably opaque in its designation process. It never established criteria for a firm to be designated as a NRSRO, never established a formal application and review process, and never provided any justification or explanation for why it "anointed" some firms with the designation and refused to do so for others.

One other piece of history is important: In the early 1970s the basic business model of the large rating agencies changed. In place of the "investor pays" model that had been established by John Moody in 1909, the agencies converted to an "issuer pays" model, whereby the entity that is issuing the bonds also pays the rating firm to rate the bonds.

The reasons for this change of business model have not been established definitively. Among the candidates are:

-- a) The rating firms feared that their sales of rating manuals would suffer from the consequences of the high-speed photocopy machine (which was just entering widespread use), which would allow too many investors to free-ride by obtaining photocopies from their friends;

-- b) The bankruptcy of the Penn-Central Railroad in 1970 shocked the bond markets and made issuers more conscious of the need to assure bond investors that they (the issuers) really were low risk, and they were willing to pay the credit rating firms for the opportunity to have the latter vouch for them (but that same shock should have also made investors more willing to pay to find out which bonds were really safer, and which were not);

-- c) The bond rating firms may have belatedly realized that the financial regulations described above meant that bond issuers needed the "blessing" of one or more NRSROs in order to get their bonds into the portfolios of financial institutions, and the issuers should be willing to pay for the privilege; and

-- d) The bond rating business, like many information industries, involves a "two-sided market", where payments can come from one or both sides of the market; in such markets, which

side actually pays can be quite idiosyncratic.¹¹

Regardless of the reason, the change to the "issuer pays" business model opened the door to potential conflicts of interest: A rating agency might shade its rating upward so as to keep the issuer happy and forestall the issuer's taking its rating business to a different rating agency.¹²

Recent events of the current decade

The NRSRO system was one of the less-well-known features of federal financial regulation, and it might have remained in that semi-secretive state had the Enron bankruptcy of November 2001 not occurred. In the wake of the Enron bankruptcy, however, the media and then Congressional staffers noticed that the three major rating agencies had maintained "investment grade" ratings on Enron's bonds until five days before that company declared bankruptcy. This notoriety led to the Congress's "discovery" of the NRSRO system and to Congressional hearings in which the SEC and the rating agencies were repeatedly asked how the latter could have been so slow to recognize Enron's weakened financial condition.¹³

¹¹ Other examples of "two-sided" information markets include newspapers and magazines, where business models range from "subscription revenues only" (e.g., Consumer Reports) to "a mix of subscription revenues plus advertising revenues" (most newspapers and magazines) to "advertising revenues only" (e.g., The Village Voice, some metropolitan "giveaway" daily newspapers, and some suburban weekly "shoppers").

¹² Skreta and Veldkamp (2008) develop a model in which it is primarily the ability of issuers to choose among potential raters that leads to overly optimistic ratings, even if the raters are all trying honestly to estimate the creditworthiness of the issuers. In their model, the raters can only make *estimates* of the creditworthiness of the issuers, which means that their estimates will have errors. If the estimates are (on average) correct and the errors are distributed symmetrically (i.e., the raters are honest but less than perfect), but the issuers can choose which rating to purchase, the issuers will systematically choose the most optimistic. In an important sense, it is the issuers' ability to select the rater that creates the conflict of interest.

¹³ The rating agencies were similarly slow to recognize the weakened financial condition of WorldCom, and were subsequently grilled about that as well.

The Sarbanes-Oxley Act of 2002 included a provision that required the SEC to send a report to Congress on the credit rating industry and the NRSRO system. The SEC duly did so; but the report simply raised a series of questions rather than directly addressing the issues of the SEC as a barrier to entry and the enhanced role of the three incumbent credit rating agencies, which (as explained above) was due to the financial regulators' delegations of safety judgments (and which the SEC's NRSRO framework had strengthened).

In early 2003 the SEC designated a fourth NRSRO (Dominion Bond Rating Services, a Canadian credit rating firm), and in early 2005 the SEC designated a fifth NRSRO (A.M. Best, an insurance company rating specialist). The SEC's procedures remained opaque, however, and there were still no announced criteria for the designation of a NRSRO.

Tiring of the SEC's persistence as a barrier to entry (and also the SEC's opacity in procedure), the Congress passed the Credit Rating Agency Reform Act (CRARA), which was signed into law in September 2006. The Act specifically instructed the SEC to cease being a barrier to entry, specified the criteria that the SEC should use in designating new NRSROs, insisted on transparency and due process in the SEC's decisions with respect to NRSRO designations, and provided the SEC with limited powers to oversee the incumbent NRSROs -- but specifically forbade the SEC from influencing the ratings or the business models of the NRSROs.

In response to the legislation, the SEC designated three new NRSROs in 2007 (Japan Credit Rating Agency; Rating and Information, Inc. [of Japan]; and Egan-Jones) and another two NRSROs in 2008 (Lace Financial, and Realpoint). The total number of NRSROs is currently (as of early 2009) ten.

Finally, in response to the growing criticism (in the media and in Congressional hearings) of the three large bond raters' errors in their initial, excessively optimistic ratings of the complex mortgage-related securities (especially for the securities that were issued and rated in 2005 and 2006) and their subsequent tardiness in downgrading those securities, the SEC in December 2008

promulgated regulations that placed mild restrictions on the conflicts of interest that can arise under the rating agencies' "issuer pays" business model and that required greater transparency in the construction of ratings.¹⁴ As of early 2009, political pressures to do more -- possibly even to ban legislatively the "issuer pays" model -- remain strong.

An assessment

It is clear that the three dominant credit rating firms have received a considerable boost from financial regulators. Starting in the 1930s, financial regulators insisted that the credit rating firms be the central source of information about the creditworthiness of bonds in U.S. financial markets. Reinforcing this centrality was the SEC's creation of the NRSRO category in 1975 and the SEC's subsequent protective barrier around the incumbent NRSROs, which effectively ensured the dominance of Moody's, S&P, and Fitch. Further, the industry's change to the "issuer pays" business model in the early 1970s meant that potential problems of conflict of interest were likely to arise, sooner or later. Finally, the major agencies' tardiness in changing their ratings -- best exemplified by the Enron incident mentioned above¹⁵ -- has been an additional source of periodic concern.¹⁶

¹⁴ See <http://www.sec.gov/news/press/2008/2008-284.htm> and <http://www.sec.gov/rules/final/2009/34-59342fr.pdf>

¹⁵ Most recently, the major rating agencies still had "investment grade" ratings on Lehman Brothers' commercial paper on the day that Lehman declared bankruptcy in September 2008.

¹⁶ This delay in changing ratings has been a deliberate strategy by the major rating agencies. They profess to try to provide a long-term perspective -- to "rate through the cycle" -- rather than providing an up-to-the-minute assessment. But this means that these rating agencies will always be slow to identify a secular trend (of deterioration or of improvements) in a bond's creditworthiness, since there will always be a delay in perceiving that any particular movement isn't just the initial part of a reversible cycle but instead is the beginning of a sustained decline or improvement. It may be that this sluggishness is a response to the desires of their investor clients to avoid frequent (and costly) adjustments in their portfolios; see, e.g., Altman and Rijken (2004, 2006); those adjustments, however, might well be mandated by the regulatory requirements discussed above. It may also be the case that the agencies' ratings changes are sluggish (especially downward) so as not to anger issuers (which is another aspect of the potential conflict-of-interest problem). And the absence of

The regulatory boosts that the major rating agencies received, starting in the 1930s, were certainly not the only reason for the persistent fewness in the credit rating industry. The market for bond information is one where economies of scale, the advantages of experience, and brand name reputation are important features. The credit rating industry was never going to be a commodity business of thousands (or even just hundreds) of small-scale producers, akin to wheat farming or textiles. Nevertheless, the regulatory history recounted above surely contributed heavily to the dominance of the three major rating agencies. The SEC's belated efforts to allow wider entry during the current decade were too little and too late. The advantages of the "big three's" incumbency could not quickly be overcome by the entrants (three of which were headquartered outside the U.S., one of which was a U.S. insurance company specialist, and three of which were small U.S. firms).

It is not surprising that a tight, protected oligopoly might become lazy and complacent. The "issuer pays" model opened the door to potential abuses. Though this potential problem had been present in the industry since the early 1970s, the relative transparency of the corporations and governments whose debt was being rated apparently kept the problem in check. Also, there were thousands of corporate and government bond issuers, so the threat of any single issuer (if it was displeased by an agency's rating) to take its business to a different rating agency was not potent.

The complexity and opaqueness of the mortgage-related securities that required ratings in the current decade, however, created new opportunities and apparently irresistible temptations.¹⁷ Further, the rating agencies were much more involved in the creation of these mortgage-related securities: The agencies' decisions as to what kinds of mortgages (and other kinds of debt) would

frequent changes also allows the agencies to maintain smaller staffs. Except for the regulatory mandates, however, the agencies' sluggishness would be inconsequential, since the credit default swap (CDS) market provides real-time market-based judgments about the credit quality of bonds.

¹⁷ The Skreta and Veldkamp (2008) model predicts that greater complexity of the bonds to be rated would lead to a greater range of errors among (even honest) raters and thus to the ability of the issuers to select raters that were even more optimistic.

earn what levels of ratings for what sizes of "tranches" (or slices) of these securities were crucial for determining the levels of profitability of these securitizations for their issuers. Finally, unlike the market for rating corporate and government debt, the market for rating mortgage-related securities involved only a handful of investment banks as securitizers with high volumes. An investment bank that was displeased with an agency's rating on any specific security had a more powerful threat -- to move all of its securitization business to a different rating agency -- than would any individual corporate or government issuer.

Fueling the subprime debacle

The U.S. housing boom that began in the late 1990s and ran through mid 2006 was fueled, to a substantial extent, by subprime mortgage lending.¹⁸ In turn, the securitization of the subprime mortgage loans, in collateralized debt obligations (CDOs) and other mortgage-related securities, importantly encouraged the subprime lending.¹⁹ And crucial for the securitization were the favorable ratings that were bestowed on these mortgage-related securities.

Favorable ratings were important for at least two reasons. First, as has been discussed above, ratings had the force of law with respect to regulated financial institutions' abilities and incentives (via capital requirements) to invest in bonds.²⁰ More favorable ratings on larger fractions

¹⁸ The debacle is discussed extensively in Gorton (2008), Acharya and Richardson (2009), Coval et al. (2009), and Mayer et al. (2009).

¹⁹ This importance extended to the development of other financing structures, such as "structured investment vehicles" (SIVs), whereby a financial institution might sponsor the creation of an entity that bought tranches of the CDOs and financed their purchase through the issuance of short-term "asset-backed" commercial paper (ABCP). If the CDO tranches in a SIV were highly rated, then the ABCP could also be highly rated. (Interest rate risk and liquidity risk were apparently ignored in the ratings.)

²⁰ For banks and savings institutions, in addition to the absolute prohibition on holding bonds that were below investment grade, there was a further important impact of ratings: Mortgage-backed securities (MBS) – including CDOs -- that were issued by non-governmental entities and

of the tranches that flowed from any given package of mortgage securities thus meant that these larger fractions could more readily be bought by regulated financial institutions. Second, the generally favorable reputations that the credit rating agencies had established in their corporate and government bond ratings meant that many bond purchasers – regulated and non-regulated – were inclined to trust the agencies' ratings on the mortgage-related, even (or, perhaps, especially) if the market yields on the mortgage-related securities were higher than on comparably rated corporate bonds.

Driving all of this, of course, was the profit model of the securitizers (packagers) of the mortgages: For any given package of underlying mortgages (with their contractually specified yields) to be securitized, the securitizers made higher profits if they attained higher ratings on a larger percentage of the tranches of securities that were issued against those mortgages. This was so because the higher rated tranches would carry lower interest rates that needed to be paid to the purchasers of/investors in those tranches, leaving a greater spread for the securitizers. It is not surprising, then, that the securitizers would be prepared to pressure the rating agencies, including threats to choose a different agency, to deliver those favorable ratings.

A counter-factual musing

It is worth "musing" about what the bond information industry's structure might look like today if financial regulators hadn't succumbed (starting in the 1930s) to the temptation to outsource their safety decisions and thus to allowing the credit rating agencies' judgments attain the force of law. Suppose, instead, that financial regulators had persisted in their goals of having safe bonds in the portfolios of their regulated institutions (or that, as in the case of insurance companies and broker-dealers, an institution's capital requirement would be geared to the riskiness of the bonds that

rated AA or better qualified for the same reduced capital requirements (1.6% of asset value) as applied to the MBS issued by Fannie Mae and Freddie Mac the instead of the higher (4%) capital requirements that applied to mortgages and lower rated mortgage securities.

it held) but that those safety judgments remained the responsibility of the regulated institution, with oversight by the regulator.²¹

In this counter-factual world, banks (and insurance companies, etc.) would have a far wider choice as to where and from whom they could seek advice as to the safety of bonds that they might hold in their portfolios. Some institutions might choose to do the necessary research on bonds themselves, or rely primarily on the information yielded by the credit default swap market. Or they might turn to outside advisors that they considered to be reliable -- based on the track record of the advisor, the business model of the advisor (including the possibilities of conflicts of interest), the other activities of the advisor (which might pose potential conflicts), and anything else that the institution considered relevant. Such advisors might include the credit rating agencies. But the category of advisors might also expand to include investment banks (if they could erect credible "Chinese walls") or industry analysts or upstart advisory firms that are currently unknown.

The end-result -- the safety of the institution's bond portfolio -- would continue to be subject to review by the institution's regulator.²² That review might also include a review of the institution's choice of bond-information advisor (or the choice to do the research in-house) -- although that choice is (at best) a secondary matter, since the safety of the bond portfolio itself (regardless of where the information comes from) is the primary goal of the regulator. Nevertheless, it seems highly likely that the bond information market would be opened to new ideas -- about ratings business models, methodologies, and technologies -- and to new entry in ways that have not actually been possible since the 1930s.

²¹ This oversight would be an appropriate aspect of the safety-and-soundness regulation of such institutions. For a justification of safety-and-soundness regulation for these kinds of institutions, see White (1991).

²² Again, this is necessary because the regulator has the goal that the regulated institution should maintain a safe bond portfolio (or have appropriate capital for the risks).

It is also worth asking whether, in this counter-factual world, the "issuer pays" business model could survive. The answer rests on whether bond buyers are able to ascertain which advisors do provide reliable advice (as does any model short of relying on government regulation to ensure accurate ratings). If the bond buyers can so ascertain,²³ then they would be willing to pay higher prices (and thus accept lower interest yields) on the bonds of any given underlying quality that are "rated" by these reliable advisors. In turn, issuers -- even in an "issuer pays" framework -- would seek to hire these recognized-to-be-reliable advisers, since the issuers would thereby be able to pay lower interest rates on the bonds that they issue.

That the "issuer pays" business model could survive in this counter-factual world is no guarantee that it would survive. That outcome would be determined by the competitive process.

Conclusion

Whither the credit rating industry? The central role that the three major credit rating agencies played in the subprime debacle has brought extensive public attention to the industry and its practices. The Securities and Exchange Commission has already (in December 2008) taken modest steps to expand its regulation of the industry. Further regulatory efforts by the SEC and/or the Congress would not be surprising.

The centrality of these three rating agencies in the bond information market, however, has been forced by financial regulation that stretches back to the 1930s. Any prospective policies should be grounded on an understanding of that history and its implications.

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²³ This seems a reasonable assumption, since the bond market is, for the most part, one where financial institutions are the major buying and selling entities. It is not a market where "widows and orphans" are likely to be major participants.

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