

Markets

The Credit Rating Agencies

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This feature explores the operation of individual markets. Patterns of behavior in markets for specific goods and services offer lessons about the determinants and effects of supply and demand, market structure, strategic behavior, and government regulation. Suggestions for future columns and comments on past ones should be sent to James R. Hines Jr., *c/o Journal of Economic Perspectives*, Department of Economics, University of Michigan, 611 Tappan St., Ann Arbor, Michigan 48109-1220.

Introduction

In 1909, John Moody published the first publicly available bond ratings, focused entirely on railroad bonds. Moody's firm was followed by Poor's Publishing Company in 1916, the Standard Statistics Company in 1922, and the Fitch Publishing Company in 1924. These firms' bond ratings were sold to bond investors in thick manuals. These firms evolved over time. Dun & Bradstreet bought Moody's in 1962, but then subsequently spun it off in 2000 as a free-standing corporation. Poor's and Standard merged in 1941; Standard & Poor's was then absorbed by McGraw-Hill in 1966. Fitch merged with IBCA (a British firm, which was a subsidiary of FIMILAC, a French business services conglomerate) in 1997. At the end of the year 2000, at about the time that the market for structured securities that were based on subprime residential mortgages began growing rapidly, the issuers of these securities had only these three credit-rating agencies to whom they could turn to obtain their all-important ratings: Moody's, Standard & Poor's (S&P), and Fitch.

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Favorable ratings from these three credit agencies were crucial for the successful sale of the securities based on subprime residential mortgages and other debt obligations. The sales of these bonds, in turn, were an important underpinning for the financing of the self-reinforcing price-rise bubble in the U.S. housing market. When house prices ceased rising in mid 2006 and then began to decline, the default rates on the mortgages underlying these securities rose sharply, and those initial ratings proved to be excessively optimistic. The price declines and uncertainty surrounding these widely-held securities then helped to turn a drop in housing prices into a widespread crisis in the U.S. and global financial systems.

This paper will explore how the financial regulatory structure propelled these three credit rating agencies to the center of the U.S. bond markets—and thereby virtually guaranteed that when these rating agencies did make mistakes, those mistakes would have serious consequences for the financial sector. We begin by looking at some relevant history of the industry, including the series of events that led financial regulators to outsource their judgments to the credit rating agencies (by requiring financial institutions to use the specific bond creditworthiness information that was provided by the major rating agencies) and when the credit rating agencies shifted their business model from “investor pays” to “issuer pays.”¹ We then look at how the credit rating industry evolved, and how its interaction with regulatory authorities served as a barrier to entry. We then show how these ingredients combined to contribute to the subprime mortgage debacle and associated financial crisis. Finally, we consider two possible routes for public policy with respect to the credit rating industry: One route would tighten the regulation of the rating agencies, while the other route would reduce the required centrality of the rating agencies and thereby open up the bond information process in way that has not been possible since the 1930s.

A History of Outsourcing Regulatory Judgment

A central concern of any lender—including the lenders/investors in bonds—is whether a potential or actual borrower is likely to repay the loan. Along with collecting their own information about borrowers, and imposing requirements like collateral, co-signers, and restrictive covenants in bond indentures or lending agreements, those who lend money may also seek outside advice about creditworthiness. The purpose of credit rating agencies is to help pierce the fog of asymmetric information by offering judgments—they prefer the word “opinions”²—about

¹ Overviews of the credit rating industry can be found in, for example, Cantor and Packer (1995), Langohr and Langohr (2008), Partnoy (1999, 2002), Richardson and White (2009), Sinclair (2005), Sylla (2002), and White (2002a, 2002b, 2006, 2007, 2009).

² The rating agencies favor that term “opinion” because it supports their claim that they are “publishers.” One implication is that the credit rating agencies thus enjoy the protections of the First Amendment of the U.S. Constitution when they are sued by investors and by issuers who claim that they have been injured by the actions of the agencies.

the credit quality of bonds that are issued by corporations, U.S. state and local governments, “sovereign” government issuers of bonds abroad, and (most recently) mortgage securitizers.

In the early years of Moody’s, Standard, Poor’s, and Fitch, they earned revenue by selling their assessments of creditworthiness to investors. This occurred in the era before the Securities and Exchange Commission (SEC) was created in 1934 and began requiring corporations to issue standardized financial statements. These judgments come in the form of “ratings,” which are usually a letter grade. The best-known scale is that used by Standard & Poor’s and some other rating agencies: AAA, AA, A, BBB, BB, and so on, with pluses and minuses as well.

However, a major change in the relationship between the credit rating agencies and the U.S. bond markets occurred in the 1930s. Bank regulators were eager to encourage banks to invest only in safe bonds. They 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.” “Speculative” securities (which nowadays would be called “junk bonds”) were below “investment grade.” Thus, banks were restricted to holding only bonds that were “investment grade”—in modern ratings, this would be equivalent to bonds that were rated BBB– or better on the Standard & Poor’s scale. With these regulations in place, banks were no longer free to act on information about bonds from any source that they deemed reliable (albeit within oversight by bank regulators). They were instead forced to use the judgments of the publishers of the “recognized rating manuals”—which were *only* Moody’s, Poor’s, Standard, and Fitch. *Essentially, 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. State insurance 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 the same small group of rating agencies. Once again, an important set of regulators had delegated their safety decisions to the credit rating agencies. In the 1970s, federal pension regulators pursued a similar strategy.³

The Securities and Exchange Commission crystallized the centrality of the three rating agencies in 1975, when it decided to modify its minimum capital requirements for broker-dealers, who include major investment banks and securities firms. Following the pattern of the other financial regulators, the SEC 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

³ Other countries have also incorporated ratings into their regulation of financial institutions, though not as extensively as in the United States. For an overview, see Sinclair (2005, pp. 47–49), Langohr and Langohr (2008, pp. 431–34), and Joint Forum (2009). The “New Basel Capital Accord” (often described as “Basel II”), which is being adopted internationally (albeit with modifications due to the financial crisis), uses ratings on the debt held by banks as one of three possible frameworks for determining those banks’ capital requirements.

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.

To deal with this potential problem, the Securities and Exchange Commission created a new category—“nationally recognized statistical rating organization” (NRSRO)—and immediately grandfathered Moody’s, Standard & Poor’s, 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. Other financial regulators soon adopted the NRSRO category and the rating agencies within it. In the early 1990s, the SEC again made use of the NRSROs’ ratings when it established safety requirements for the commercial paper (short-term debt) held by money market mutual funds.

Taken together, these regulatory rules meant that the judgments of credit rating agencies became of central importance in bond markets. Banks and many other financial institutions could satisfy the safety requirements of their regulators by just heeding the ratings, rather than their own evaluations of the risks of the bonds. Because these regulated financial institutions were such important participants in the bond market, other players in the market—both buyers and sellers—needed to pay particular attention to the bond raters’ pronouncements as well. The irony of the regulators’ reliance on the judgments of credit rating agencies is powerfully revealed by a line in Standard & Poor’s standard disclaimer at the bottom of its credit ratings: “[A]ny user of the information contained herein should not rely on any credit rating or other opinion contained herein in making any investment decision.” (Moody’s ratings have a similar disclaimer.)

From Investor Pays to Issuer Pays

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 credit rating agencies converted to an “issuer pays” model, whereby the entity 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. Several candidates have been proposed.

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

Second, the bankruptcy of the Penn-Central Railroad in 1970 shocked the bond markets and made debt 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 (Fridson, 1999). However, this argument cuts both ways, because the same shock should have

also made investors more willing to pay to find out which bonds were really safer, and which were not.

Third, the bond rating firms may have belatedly realized that the financial regulations described above meant that bond issuers needed their bonds to have the “blessing” of one or more rating agencies in order to get those bonds into the portfolios of financial institutions, and the issuers should be willing to pay for the privilege.

Fourth, 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 (as discussed in this journal by Rysman, 2009). For example, in the two-sided markets of newspapers and magazines, business models range from “subscription revenues only” (like *Consumer Reports*) to “a mix of subscription revenues plus advertising revenues” (most newspapers and magazines) to “advertising revenues only” (like *The Village Voice*, some metropolitan “giveaway” daily newspapers, and some suburban weekly “shoppers”). Information markets for the quality of bonds have a similar feature, in that the information can be paid for by issuers of debt, buyers of debt, or some mix of the two⁴—and the actual outcome may sometimes shift in idiosyncratic ways.

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.⁵

However, the rating agencies’ concerns about their long-run reputations apparently kept the actual conflicts in check for the first three decades of experience with the new business model (Smith and Walter, 2002; Caouette, Altman, Narayanan, and Nimmo, 2008, chap. 6). There were two important and related characteristics of the bond issuing market that helped: First, there were thousands of corporate and government bond issuers, so that the threat by any single issuer (if it was displeased by an agency’s rating) to take its business to a different rating agency was not potent. Second, the corporations and governments whose “plain vanilla” debt was being rated were relatively transparent, so that an obviously incorrect rating would quickly be spotted by others and would thus potentially tarnish the rater’s reputation.

⁴Or the information might be given away as a “loss leader” to attract customers to other paying services of the information provider. For example, in December 2009, Morningstar, Inc. (which is primarily a mutual fund information company) began issuing corporate bond ratings with no fees directly charged to anyone.

⁵Skreta and Veldkamp (2009) develop a model in which the ability of issuers to choose among potential raters 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 (that is, 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. (This model thus has the same mechanism that underlies the operation of the “winner’s curse” in auction markets.) In an important sense, it is the issuers’ ability to select the rater that creates the conflict of interest.

Indeed, the major complaint about the rating agencies during this era was not that they were too compliant to issuers' wishes but that they were too tough and too powerful. This view was epitomized by the *New York Times* columnist Thomas L. Friedman's remarks in a PBS "News Hour" interview on February 13, 1996: "There are two superpowers in the world today in my opinion. There's the United States, and there's Moody's Bond Rating Service. The United States can destroy you by dropping bombs, and Moody's can destroy you by downgrading your bonds. And believe me, it's not clear sometimes who's more powerful." In October 1995, a Colorado school district sued Moody's, claiming that the rating agency deliberately underrated the school district's bonds, in retaliation for the district's decision not to solicit a rating from Moody's;⁶ and other issuers apparently were also fearful of arbitrarily low ratings (Partnoy, 2002, p. 79; Fridson, 2002, p. 82; Sinclair, 2005, pp. 152–54, 172).

How the Credit Rating Industry Evolved and Barriers to Entry

Although there appear to be roughly 150 local and international credit rating agencies worldwide (Basel Committee on Banking Supervision, 2000; Langohr and Langohr, 2008, p. 384), Moody's, Standard & Poor's, and Fitch are clearly the dominant entities. All three operate on a worldwide basis, with offices on six continents; each has ratings outstanding on tens of trillions of dollars of securities. Only Moody's is a free-standing company, so the most information is known about that firm: Its 2008 annual report listed the company's total revenues at \$1.8 billion, its net revenues at \$458 million, and its total assets at year-end at \$1.8 billion (Moody's, 2009). Fifty-two percent of its total revenue came from the United States; as recently as 2006 that fraction was two-thirds. Sixty-nine percent of the company's revenues comes from ratings; the rest comes from related services. At year-end 2008, the company had approximately 3,900 employees, with slightly more than half located in the United States.

Because Standard & Poor's and Fitch's ratings operations are components of larger enterprises that report on a consolidated basis, comparable revenue and asset figures are not possible. But Standard & Poor's rating operations are roughly the same size as Moody's, while Fitch is somewhat smaller. Table 1 provides a set of roughly comparable data on each company's analytical employees and numbers of issues rated. All three companies employ about the same numbers of analysts; however, Moody's and Standard & Poor's rate appreciably more corporate and asset-backed securities than does Fitch. The market shares (based on revenues or issues rated) of the three firms are commonly estimated to be approximately 40, 40, and 15 percent

⁶ The suit was eventually dismissed. See *Jefferson County School District No. R-1 v. Moody's Investor's Services, Inc.*, 175 F.3d 848 (1999). After the suit was filed, the U.S. Department of Justice's Antitrust Division opened an investigation to determine whether Moody's alleged threats of low unsolicited ratings constituted an illegal exercise of market power; the investigation was eventually closed, with no charges filed (Partnoy, 2002, p. 79).

Table 1

Data from Form NRSRO for 2009 for Moody's, Standard & Poor's, and Fitch

	Moody's	Standard & Poor's	Fitch
Number of analyst employees:			
Credit analysts	1,126	1,081	1,057.5
Credit analyst supervisors	126	228	305
Number of bond issues rated of:			
Financial institutions	84,773	47,300	83,649
Insurance companies	6,277	6,600	4,797
Corporate issuers	31,126	26,900	14,757
Asset-backed securities	109,281	198,200	77,480
Government securities	192,953	976,000	491,264

Sources: Form NRSRO 2009, for each company, as found on each company's website.

Note: Table 1 provides a set of roughly comparable data on each company's analytical employees and numbers of issues rated. The large numbers of bonds that are rated partly derive from the fact that many bonds represent multiple issues from the same issuer, which usually involve little marginal effort from the rating agency.

for Moody's, Standard & Poor's, and Fitch, respectively (Smith and Walter, 2002, p. 290; Caouette, Altman, Narayanan, and Nimmo, 2008, p. 82).

During the 25 years that followed the Securities and Exchange Commission's 1975 creation of the "nationally recognized statistical rating organization" category, the SEC designated only four additional firms as NRSROs: Duff & Phelps in 1982; McCarthy, Crisanti & Maffei in 1983; IBCA in 1991; and Thomson BankWatch in 1992. However, mergers among the entrants and with Fitch caused the number of NRSROs to return to the original three by year-end 2000.

Of course, the credit rating industry was never going to be a commodity business with hundreds of small-scale producers. The market for bond information is one where potential barriers to entry like economies of scale, the advantages of experience, and brand name reputation are important features. Nevertheless, in creating the NRSRO designation, the Securities and Exchange Commission had become a significant barrier to entry into the bond rating business in its own right. Without the benefit of the NRSRO designation, any would-be bond rater would likely remain small-scale. New rating firms would risk being ignored by most financial institutions (the "buy side" of the bond markets); and since the financial institutions would ignore the would-be bond rater, so would bond issuers (the "sell side" of the markets).

In addition, the Securities and Exchange Commission was remarkably opaque in its designation process. It never established formal criteria for a firm to be designated as a "nationally recognized statistical rating organization," 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.

However, it is important to note that while the major credit rating agencies are a major source of creditworthiness for bond investors, they are far from the only potential source. A few smaller rating firms—notably KMV, Egan-Jones, and Lacle Financial, all of which had “investor pays” business models—were able to survive, despite the absence of NRSRO designations (although KMV was absorbed by Moody’s in 2002). Some bond mutual funds do their own research, as do some hedge funds. “Fixed income analysts” at many financial services firms offer recommendations to those firms’ clients with respect to bond investments.⁷

Controversy Arrives for Credit Rating Agencies

The “nationally recognized statistical rating organization” system remained one of the less-well-known features of federal financial regulation until the Enron bankruptcy of November 2001. In the wake of the Enron bankruptcy, however, the media and Congress 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 Congressional hearings in which the Securities and Exchange Commission and the rating agencies were repeatedly asked how the latter could have been so slow to recognize Enron’s weakened financial condition. The rating agencies were similarly slow to recognize the weakened financial condition of WorldCom, and were subsequently grilled about that as well. Indeed, the major agencies’ tardiness in changing their ratings has continued up to the present. The major rating agencies still had “investment grade” ratings on Lehman Brothers’ commercial paper on the morning that Lehman declared bankruptcy in September 2008.

Why does this sluggishness in adjusting credit ratings persist? According to the credit rating agencies, they profess to provide a long-term perspective—to “rate through the cycle”—rather than providing an up-to-the-minute assessment. This strategy implies that credit rating agencies will always have 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.

This practice of rating through the cycle may well be a response to the rating agencies’ institutional investor constituency. Investors clearly desire stability of ratings, so as to reduce the need for frequent (and costly) adjustments in their portfolios (for example, Altman and Rijken, 2004, 2006; Loffler, 2004, 2005; Beaver, Shakespeare, and Soliman, 2006; Cheng and Neamtu, 2009), which might well be mandated by the regulatory requirements discussed above. Prudentially regulated investors (such as banks, insurance companies, and others that are regulated for safety) may not mind inaccurate ratings—indeed, they may prefer bonds that carry

⁷ There is a professional society for fixed income analysts—the Fixed Income Analysts Society, Inc. (FIASI)—and even a Fixed Income Analysts Society Hall of Fame! Johnston, Markov, and Ramnath (2009) document the importance of fixed income analysts for the bond markets.

ratings that the market believes to be inflated, since those bonds will carry higher yields relative to the rating and the institution's bond manager can thereby obtain higher yields (by taking greater risks) and yet still appear to be within regulatory safety limits (Calomiris, 2009). In addition, issuers of securities, who pay the fees of credit rating agencies, would certainly prefer not to be downgraded. However, as Flandreau, Gaillard, and Packer (2009) document, the rating agencies' sluggishness extends back at least to the 1930s, long before the switch to the "issuer pays" business model. Also, the absence of frequent changes allows the agencies to maintain smaller staffs.

The sluggishness of these changes raises an even more central question: whether the three major credit rating agencies actually provide useful information about default probabilities to the financial markets (and, indeed, whether they have done so since the 1930s). As evidence of their value, the rating agencies themselves point to the generally tight relationship over the decades between their rankings and the likelihoods of defaults. Moody's (2009, p. 13) annual report, for example, states: "The quality of Moody's long-term performance is illustrated by a simple measure: over the past 80 years across a broad range of asset classes, obligations with lower Moody's ratings have consistently defaulted at greater rates than those with higher ratings." But this correlation could equally well arise if the rating agencies arrived at their ratings by, say, observing the financial markets' separately determined spreads on the relevant bonds (over comparable Treasury bonds), in which case the agencies would not be providing useful information to the markets.

More sophisticated empirical approaches, summarized in Jewell and Livingston (1999) and Creighton, Gower, and Richards (2007), have noted that when a major rating agency *changes* its rating on a bond, the markets react. But this reaction by the financial markets might be due to the concomitant change in the implied regulatory status of the bond. For example, if a rating moves a bond from "investment grade" to "speculative," or vice-versa—or even if it just moves the bond closer to, or farther away from, that regulatory "cliff"—many financial institutions must then reassess their holdings of that bond, rather than reacting to any truly new information about the default probability of the bond. The question of what true value the major credit rating agencies bring to the financial markets remains open and difficult to resolve.⁸

Finally, the post-Enron notoriety for the credit rating agencies exposed their "issuer pays" business model—and its potential conflicts—to a wider public view.

⁸ It is difficult for research concerning the effects of ratings changes on the securities markets to avoid this ambiguity. Creighton, Gower, and Richards (2007) claim that bond rating changes provide new information to the securities markets in Australia, where the regulatory reliance on ratings is substantially less than in the United States; but there is nevertheless some regulatory reliance in Australia, and U.S. investors in Australian bonds may be affected by the rating changes. Jorion, Liu, and Shi (2005) find that the consequences of rating downgrades were larger after a SEC regulatory change in 2000 ("Regulation Fair Disclosure") that placed the rating agencies in a favored position vis-à-vis other potential sources of information about companies; but Jorion et al. do not adequately control for a possible increase in the severity of the downgrades after the regulatory change.

Although the rating agencies' reputational concerns had kept the potential conflicts in check, the possibility that the conflicts might get out of hand loomed (Smith and Walter, 2002; Caouette, Altman, Narayanan, and Nimmo, 2008, chap. 6).

Fueling the Subprime Debacle

The problems with outsourcing regulatory judgments to three entrenched credit rating agencies—all of whom had “issuer pays” business models—became even more apparent with the unfolding of the boom and bust in housing prices, and the financial crisis that followed. 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.⁹ In turn, the underlying finance for these subprime mortgage loans came through a process of securitization. The subprime mortgage loans were combined into mortgage-related securities, which in turn were divided into a number of more-senior and less-senior tranches, such that junior tranches would bear all losses before the senior tranches bore any. Senior tranches of these mortgage-backed securities ended up being owned by many financial firms, including banks. Many financial institutions also created “structured investment vehicles,” which borrowed funds by issuing short-term “asset-backed” commercial paper and then used the funds to purchase tranches of the collateralized debt obligations backed by subprime mortgages. If these mortgage-backed securities received high credit ratings, then the asset-backed commercial paper could also receive a high credit rating—thus making it cheaper to borrow.

The securitization of these subprime mortgages was only able to succeed—that is, the resulting securities were only able to be widely marketed and sold—because of the favorable ratings bestowed on the more-senior tranches. First, recall that the credit ratings had the force of law with respect to regulated financial institutions' abilities and incentives (via capital requirements) to invest in these bonds.¹⁰ 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 nonregulated—were inclined to trust the agencies' ratings on the mortgage-related securities.

During their earlier history, the credit rating agencies rated the bonds that were issued by corporations and various government agencies. But in rating of mortgage-related securities, the rating agencies became highly involved in their design. The credit rating agencies consulted extensively with the issuers of these

⁹ The debacle is discussed extensively in Gorton (2008), Acharya and Richardson (2009), Brunnermeier (2009), Coval, Jurak, and Stafford (2009), and Mayer, Pence, and Sherlund (2009).

¹⁰ For banks and savings institutions, mortgage-backed securities—including collateralized debt obligations—that were issued by nongovernmental entities and rated AA or better qualified for the same reduced capital requirements (1.6 percent of asset value) that applied to the mortgage-backed securities issued by Fannie Mae and Freddie Mac, instead of the higher (4 percent) capital requirements that applied to mortgages and lower-rated mortgage securities.

securities on what kinds of mortgages (and other kinds of debt) would earn what levels of ratings for what sizes of tranches of these securities (Mason and Rosner, 2007). For any given package of underlying mortgages 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.

It is not surprising, then, that the securitizers would be prepared to pressure the rating agencies to deliver favorable ratings. Unlike the market for rating corporate and government debt, where there were thousands of issuers, the market for rating mortgage-related securities involved only a relatively small number of investment banks as securitizers with high volumes (U.S. Securities and Exchange Commission, 2008, p. 32); and the profit margins on these mortgage-related securities were substantially larger as well. 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.¹¹ In addition, these mortgage-related securities were far more complex and opaque than were the traditional “plain vanilla” corporate and government bonds, so rating errors were less likely to be quickly spotted by critics (or arbitragers).

Thus, in calculating appropriate ratings on the tranches of securities backed by subprime mortgages, the credit rating agencies were operating in a situation where they had essentially no prior experience, where they were intimately involved in the design of the securities, and where they were under considerable financial pressure to give the answers that issuers wanted to hear. Furthermore, it is not surprising that the members of a tight, protected oligopoly might become complacent and less worried about the problems of protecting their long-run reputations (Mathis, McAndrews, and Rochet, 2009).

The credit ratings for the securities backed by subprime mortgages turned out to be wildly optimistic—especially for the securities that were issued and rated in 2005–2007. Then, in keeping with past practice, the credit rating agencies were slow to downgrade those securities as their losses became apparent. Here is one stark indicator of the extent of the initial overoptimism: As of June 30, 2009, 90 percent of the collateralized debt obligation tranches that were issued between 2005 and 2007 and that were originally rated AAA by Standard & Poor's had been downgraded, with 80 percent downgraded below investment grade; even of the simpler residential mortgage-backed securities that were issued during these years and originally rated AAA, 63 percent had been downgraded, with 52 percent below investment grade (International Monetary Fund, 2009, pp. 88, 93).

¹¹ Informed commentary at the time acknowledged that rating shopping was occurring (Adelson, 1997). Econometric evidence that supports the likelihood of ratings shopping can be found in Benmelech and Dlugosz (2009), He, Qian, and Strahan (2009), and Morkotter and Westerfeld (2009). When some of the downgraded tranches were res securitized in 2009, the securitizers shunned Moody's, because of its more stringent rating methodology for these securitizations (IMF, 2009, pp. 86–87). And in a similar market—rating commercial mortgage-backed securities—Moody's found that it lost market share in 2007 after it tightened its ratings standards (Dunham, 2007).

Policy Responses

The main policy responses to the growing criticism of the three large bond raters—over the sluggishness in downgrading Enron and WorldCom debt, on through the recent errors in their initial, excessively optimistic ratings of the complex mortgage-related securities—have involved attempts to increase entry, to limit conflicts of interest, and to increase transparency.

The Sarbanes–Oxley Act of 2002 included a provision that required the Securities and Exchange Commission to send a report to Congress on the credit rating industry and the “nationally recognized statistical rating organization” system. The SEC duly did so (U.S. Securities and Exchange Commission, 2003); but the report only 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.

However, the Securities and Exchange Commission did begin to allow more entry. In early 2003 the SEC designated a fourth “nationally recognized statistical rating organization”: Dominion Bond Rating Services, a Canadian credit rating firm. 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 this situation, Congress passed the Credit Rating Agency Reform Act, which was signed into law in September 2006. The Act instructed the SEC to cease being a barrier to entry, specified the criteria that the SEC should use in designating new “nationally recognized statistical rating organizations,” insisted on transparency and due process in these SEC’s decisions, 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. The SEC responded by designating three new NRSROs in 2007: Japan Credit Rating Agency; Rating and Information, Inc. (of Japan); and Egan-Jones—and another two in 2008, Lacle Financial and Realpoint. Thus by early 2010, the total number of NRSROs has reached ten. However, to this point the SEC’s belated efforts to allow wider entry during the current decade have had little substantial effect. The inherent advantages of the “Big Three’s” incumbency could not quickly be overcome by the subsequent NRSRO entrants—three of which were headquartered outside the United States, one of which was a U.S. insurance company specialist, and three of which were small U.S.-based firms.

To address issues of conflict of interest and transparency, the Securities and Exchange Commission in December 2008 and again in November 2009 promulgated regulations on the “nationally recognized statistical rating organizations” that placed restrictions on the conflicts of interest that can arise under their “issuer pays” business model. For example, these rules require that the credit rating agencies not rate complex structured debt issues that they have also helped to design, they require that analysts for credit rating agencies not be involved in fee negotiations, and so on. These rules also require greater transparency, for example, by requiring that the rating agencies reveal details on their methodologies,

assumptions, and track records in the construction of ratings (*Federal Register*, vol. 74, February 9, 2009, pp. 6456–84; and *Federal Register*, vol. 74, December 4, 2009, pp. 63832–65). Similarly, in April 2009 the European Union adopted a set of rules that address the conflict-of-interest and transparency issues (European Central Bank, 2009). Political pressures to require further, more stringent efforts on the part of the rating agencies to deal with agency conflicts and enhance transparency—and possibly even to ban the “issuer pays” model—have remained strong.

This regulatory response—the credit rating agencies made mistakes; let’s try to make sure that they don’t make such mistakes in the future—is understandable. But it would not alter the rules that have pushed the judgments of the credit rating agencies into the center of the bond information process. Moreover, regulatory efforts to fix problems, by prescribing specified structures and processes, unavoidably restrict flexibility, raise costs, and discourage entry and innovation in the development and assessment of information for judging the creditworthiness of bonds. Ironically, such efforts are likely to increase the importance of the three large incumbent rating agencies. Finally, although efforts to increase transparency of credit rating agencies may help reduce problems of asymmetric information, they also have the potential for eroding a rating firm’s intellectual property and, over the longer run, discouraging the creation of future intellectual property.

Alternatively, public policy with regard to credit rating agencies could proceed in a quite different direction. This approach would begin with the withdrawal of all of those delegations of safety judgments by financial regulators to the rating agencies. Indeed, the Securities and Exchange Commission has withdrawn some of its delegations (*Federal Register*, vol. 74, October 9, 2009, pp. 52358–81) and has proposed withdrawing more (*Federal Register*, vol. 74, October 9, 2009, pp. 52374–81). Under such rules, the rating agencies’ judgments would no longer have the force of law. However, no other financial regulator has similarly withdrawn its delegations.¹² And even the SEC appears to be two-minded about this matter, since the SEC has also proposed regulations that would increase money market mutual funds’ reliance on ratings (*Federal Reserve*, vol. 74, July 8, 2009, pp. 32688–32741).

The withdrawal of these delegations need not mean an “anything goes” attitude toward the safety of the bonds that are held by prudentially regulated financial institutions. Instead, financial regulators should persist 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 it holds); but those

¹² In October 2009, the Federal Reserve announced that it would be more selective with respect to which ratings it would accept in connection with the collateral provided by borrowers under the Fed’s “Term Asset-Backed Securities Lending Facility” (TALF) and would also conduct its own risk assessments of proposed collateral; and in November 2009, the National Association of Insurance Commissioners (NAIC) announced that it had asked the Pacific Investment Management Company (PIMCO) to provide a separate risk assessment of residential mortgage-backed securities that were held by insurance companies that are regulated by the 50 state insurance regulators.

safety judgments should remain the responsibility of the regulated institutions themselves, with oversight by regulators.

Under this alternative public policy approach, banks and other financial institutions 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 advisers, which might include the incumbent credit rating agencies but might also include the fixed income analysts at investment banks or industry analysts or upstart advisory firms that are currently unknown. Regulators would—and should—continue to oversee the safety of the institution's bond portfolio, and this oversight might also include a review of how the institution evaluates the risks of its bond holdings (including its choice of adviser). 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 been possible since the 1930s. Perhaps the “issuer pays” business model would survive in this new approach; perhaps not. That outcome would be determined by the competitive process.

If this second route is pursued, then the first route—the expansion of conflict-of-interest and transparency regulations, as well as the continued existence of the NRSRO system—would no longer be needed. The bond manager of a bank or other financial institution should have sufficient market sophistication to be able to figure out who is a reliable advisor—subject, of course, to the prudential oversight of regulators. (If these markets were instead dominated by household transactors, then a different answer would be appropriate.)

Conclusion

Those who are interested or involved in this public policy debate concerning the credit rating agencies should ask themselves the following questions: Is a regulatory system that delegates important safety judgments about bonds to third parties in the best interests of the regulated financial institutions and of financial markets more generally? To what extent will more extensive regulation of the rating agencies succeed in pressing the rating agencies to make better judgments in the future? To what extent would such regulation limit flexibility, innovation, and entry in the bond information market? Can financial institutions instead be trusted to seek their own sources of information about the creditworthiness of bonds, so long as financial regulators oversee the safety of those bond portfolios?

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References

- Acharya, Viral, and Matthew Richardson, eds.** 2009. *Restoring Financial Stability: How to Repair a Failed System*. New York: Wiley.
- Adelson, Mark.** 2007. "The Role of the Credit Rating Agencies in the Structured Finance Market," Testimony before the Subcommittee on Capital Markets, Insurance and Government Sponsored Enterprises, Committee on Financial Services, U.S. House of Representatives, September 27, 2007.
- Altman, Edward I., and Herbert A. Rijken.** 2004. "How Rating Agencies Achieve Rating Stability." *Journal of Banking & Finance*, 28(11): 2679–2714.
- Altman, Edward I., and Herbert A. Rijken.** 2006. "A Point-in-Time Perspective on Through-the-Cycle Ratings." *Financial Analysts Journal*, 62(1): 54–70.
- Basel Committee on Banking Supervision.** 2000. "Credit Ratings and Complementary Sources of Credit Quality Information." Bank for International Settlements, Basel Committee on Banking Supervision, Working Paper 3. <http://www.bis.org/publ/bcb72a.pdf?noframes=1>.
- Beaver, William H., Catherine Shakespeare, and Mark T. Soliman.** 2006. "Differential Properties in the Ratings of Certified versus Non-Certified Bond-Rating Agencies." *Journal of Accounting and Economics*, 42(3), pp. 303–34.
- Benmelech, Efraim, and Jennifer Dlugosz.** 2009. "The Credit Rating Crisis." NBER Working Paper 15045.
- Brunnermeier, Markus K.** 2009. "Deciphering the Liquidity and Credit Crunch 2007–2008." *Journal of Economic Perspectives*, 23(1): 77–100.
- Calomiris, Charles W.** 2009. "A Recipe for Ratings Reform." *The Economists' Voice*, vol. 6, no. 11, Article 5.
- Cantor, Richard, and Frank Packer.** 1995. "The Credit Rating Industry." *Journal of Fixed Income*, 5(3): 10–34.
- Caouette, John B., Edward I. Altman, Paul Narayanan, and Robert Nimmo.** 2008. *Managing Credit Risk: The Great Challenge for the Global Financial Markets*, 2nd ed. New York: Wiley.
- Cheng, Mei, and Monica Neamtu.** 2009. "An Empirical Analysis of Changes in Credit Rating Properties: Timeliness, Accuracy and Volatility." *Journal of Accounting and Economics*, 47(1–2): 108–130.
- Coval, Joshua, Jakub Jurek, and Erik Stafford.** 2009. "The Economics of Structured Finance." *Journal of Economic Perspectives*, 23(1): 3–25.
- Creighton, Adam, Luke Gower, and Anthony J. Richards.** 2007. "The Impact of Rating Changes in Australian Financial Markets." *Pacific-Basin Finance Journal*, 15(1): 1–17.
- Dunham, Kemba J.** 2007. "Real Estate Finance: Moody's Says It Is Taking Hit; Ratings Firm Loses Business as Tougher CMBS Stance Spurs Issuers to 'Rate Shop.'" *Wall Street Journal*, July 18, p. B-7.
- European Central Bank.** 2009. "Credit Rating Agencies: Developments and Policy Issues." *Monthly Bulletin*, May, pp. 107–117.
- Flandreau, Marc, Norbert Gaillard, and Frank Packer.** 2009. "Ratings Performance, Regulation and the Great Depression: Lessons from Foreign Government Securities." CEPR Discussion Paper No. DP7328. (June).
- Fridson, Martin S.** 1999. "Why Do Bond Rating Agencies Exist?" *Extra Credit* (Merrill Lynch), November/December.
- Fridson, Martin S.** 2002. "Discussion," in *Ratings, Rating Agencies, and the Global Financial System*, ed. Richard M. Levich, Carmen Reinhart, and Giovanni Majnoni, 85–88. Boston: Kluwer.
- Gorton, Gary B.** 2008. "The Panic of 2007." NBER Working Paper 14358.
- He, Jie, Jun Qian, and Philip E. Strahan.** 2009. "Credit Ratings and the Evolution of the Mortgage-Backed Securities Market." Unpublished paper, November.
- International Monetary Fund.** 2009. "Global Financial Stability Report: Navigating the Financial Challenges Ahead." <http://www.imf.org/external/pubs/ft/gfsr/2009/02/index.htm>.
- Jewell, Jeff, and Miles Livingston.** 1999. "A Comparison of Bond Ratings from Moody's S&P and Fitch." *Financial Markets, Institutions, & Instruments*, 8(4): 1–45.
- Johnston, Rick, Stanimir Markov, and Sundaresh Ramnath.** 2009. "Sell-side Debt Analysts." *Journal of Accounting and Economics*, 47(1–2): 91–107.
- Joint Forum.** 2009. "Stocktaking on the Use of Credit Ratings." Bank for International Settlements, Basel Committee on Banking Supervision. June.
- Jorion, Philippe, Zhu Liu, and Charles Shi.** 2005. "Informational Effects of Regulation FD: Evidence from Rating Agencies." *Journal of Financial Economics*, 76(2): 309–330.
- Langohr, Herwig, and Patricia Langohr.** 2008. *The Rating Agencies and Their Credit Ratings: What They Are, How They Work, and Why They Are Relevant*. Chichester: Wiley.
- Loffler, Gunter.** 2004. "An Anatomy of Rating through the Cycle." *Journal of Banking & Finance*, 28(3): 695–720.
- Loffler, Gunter.** 2005. "Avoiding the Rating

Bounce: Why Rating Agencies Are Slow to React to New Information." *Journal of Economic Behavior & Organization*, 56(3): 365–81.

Mason, Joseph, and Joshua Rosner. 2007. "Where Did the Risk Go? How Misapplied Bond Ratings Cause Mortgage Backed Securities and Collateralized Debt Obligation Market Disruptions." Available at SSRN: <http://ssrn.com/abstract=1027475>.

Mathis, Jerome, James McAndrews, and Jean-Charles Rochet. 2009. "Rating the Raters: Are Reputation Concerns Powerful Enough to Discipline Rating Agencies?" *Journal of Monetary Economics*, 56(5): 657–74.

Mayer, Christopher, Karen Pence, and Shane M. Sherlund. 2009. "The Rise in Mortgage Defaults." *Journal of Economic Perspectives*, 23(1): 27–50.

Moody's Corporation. 2009. *Annual Report 2008*. New York: Moody's.

Morkotter, Stefan, and Simone Westerfeld. 2009. "Rating Model Arbitrage in CDO Markets: An Empirical Analysis." *International Review of Financial Analysis*, 18(5): 21–33.

Partnoy, Frank. 1999. "The Siskel and Ebert of Financial Markets: Two Thumbs Down for the Credit Rating Agencies." *Washington University Law Quarterly*, 77(3): 619–712.

Partnoy, Frank. 2002. "The Paradox of Credit Ratings." In *Ratings, Rating Agencies, and the Global Financial System*, ed. Richard M. Levich, Carmen Reinhart, and Giovanni Majnoni, 65–84. Boston: Kluwer.

Richardson, Matthew C., and Lawrence J. White. 2009. "The Rating Agencies: Is Regulation the Answer?" In *Restoring Financial Stability: How to Repair a Failed System*, ed. Viral Acharya and Matthew C. Richardson, 101–115. New York: Wiley.

Rysman, Marc. 2009. "The Economics of Two-Sided Markets." *Journal of Economic Perspectives*, 23(3): 125–43.

Sinclair, Timothy J. 2005. *The New Masters of Capital: American Bond Rating Agencies and*

the Politics of Creditworthiness. Ithaca: Cornell University Press.

Skreta, Vasiliki, and Laura Veldkamp. 2009. "Ratings Shopping and Asset Complexity: A Theory of Ratings Inflation." *Journal of Monetary Economics*, 56 (5): 678–95.

Smith, Roy C., and Ingo Walter. 2002. "Rating Agencies: Is There an Agency Issue?" In *Ratings, Rating Agencies, and the Global Financial System*, ed. Richard M. Levich, Carmen Reinhart, and Giovanni Majnoni, 289–318. Boston: Kluwer.

Sylla, Richard. 2002. "An Historical Primer on the Business of Credit Ratings." In *Ratings, Rating Agencies, and the Global Financial System*, ed. Richard M. Levich, Carmen Reinhart, and Giovanni Majnoni, 19–40. Boston: Kluwer.

U.S. Securities and Exchange Commission. 2003. "Report on the Role and Function of Credit Rating Agencies in the Operation of the Securities Markets." January.

U.S. Securities and Exchange Commission. 2008. "Summary Report of Issues Identified in the Commission Staff's Examinations of Select Credit Rating Agencies." July.

White, Lawrence J. 2002a. "The Credit Rating Industry: An Industrial Organization Analysis." In *Ratings, Rating Agencies, and the Global Financial System*, ed. Richard M. Levich, Carmen Reinhart, and Giovanni Majnoni, 41–63. Boston: Kluwer.

White, Lawrence J. 2002b. "The SEC's Other Problem." *Regulation*, 25(Winter 2002–2003): 38–42.

White, Lawrence J. 2006. "Good Intentions Gone Awry: A Policy Analysis of the SEC's Regulation of the Bond Rating Industry." Policy Brief No. 2006-PB-05. Networks Financial Institute, Indiana State University.

White, Lawrence J. 2007. "A New Law for the Bond Rating Industry." *Regulation*, 30(Spring): 48–52.

White, Lawrence J. 2009. "The Credit-Rating Agencies and the Subprime Debacle." *Critical Review*, 21(2–3): 389–99.