The Credit Rating Agencies: An Analysis through the Lenses of Industrial Organization, Finance, and Regulation *

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Abstract

This article uses insights from the disciplines of industrial organization and of finance – and the understanding that has developed within both disciplines with respect to regulation – for an analysis of the credit rating industry.

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I. Introduction.

The credit rating industry used to be a little-noticed part of the infrastructure of the financial markets – primarily, the bond markets in the United States. Since 2008, however, that relative obscurity is no longer the case. The financial crisis of 2008 and the major credit rating agencies’ (CRAs) role in the crisis brought them to substantial prominence.¹

Nevertheless, there is still an under-appreciation of the basic logic that underlies the role that the CRAs play in the financial markets; the reasons for the rise in importance of the three major CRAs – Moody’s; Standard & Poor’s (S&P); and Fitch – over the past few decades; the nature of the problem that led to their role in the crisis; and the public-policy actions that are appropriate in this light.

An analysis of the CRAs can usefully use the tools of the disciplines of industrial organization and of finance; and included in both disciplines is an understanding of the role of regulation. This analysis – using these three lenses – will be the task of this paper.²

This paper will proceed as follows:³ The next section will place the CRAs in the context of the information needs of a basic process of finance: making a loan. Section III discusses the structural characteristics of the CRA industry and provides some data on the specific structure of the CRA industry in the U.S., along with some important historical

¹ As is discussed below, the CRAs did attract some public attention in the aftermath of the Enron bankruptcy in the fall of 2001. But that attention largely subsided within a year.
² This paper draws heavily on and updates White (2002; 2010; 2013). The discussion in this paper will focus largely on the U.S. experience, since that is what the author knows best. However, where appropriate, the international context will be discussed as well. And the lessons and insights from this analysis have general application.
³ This paper will not try to provide a comprehensive review of the existing literature on the CRAs, which has expanded considerably in the last decade. Recent bibliographies can be found in White (2013), Kruck (2011), Darbellay (2013), Mattarocci (2014), Hemraj (2015), Cornaggia et al. (2015), and Flynn and Ghent (2016).
and institutional background. The financial crisis of 2008 and what went wrong for the CRAs – and why – will be the topic for Section IV. The policy choices going forward – including recommendations – will be addressed in Section V. And Section VI will offer a brief conclusion.

One important conceptual and terminological point needs to be stated initially: The issuers of bonds are borrowers: They are borrowing funds, with a repayment schedule that is part of the bond contract. The buyers of the bonds – who are often described as “investors” – are lenders to the bond issuers.⁴

II. Credit Rating Agencies in the Context of Finance.

A fundamental question in finance is that of a potential lender: What is the likelihood that this prospective borrower will repay me?⁵ Because there is an unavoidable elapse of time between when the funds are lent and when they are scheduled to be repaid, any lender faces an unavoidable risk of non-repayment.

Economics analysis has come to understand that this question is largely an issue of “asymmetric information”: The borrower usually knows more about itself and its prospects for repayment than does the lender. And, in turn, this problem of asymmetric information has been divided into two subsidiary issues: a) Beforehand, how can the prospective lender ascertain the creditworthiness of prospective borrowers? This has come to be understood as a problem of “adverse selection”. And b) Even after a loan has been made, how can the lender be assured that the borrower will honor the loan contract and repay the loan? This has come to be understood as a problem of “moral hazard”.

⁴ And if an initial buyer of a bond sells the bond to another party, that latter party then assumes the claims on the borrower that are at the heart of the bond contract and thus becomes the lender.
⁵ A similar question, of course, can be asked by a prospective investor in the equity of a company.
Since these are problems of asymmetric information, it should come as little surprise that the collection and analysis of creditworthiness-relevant information about prospective and actual borrowers is at the center of lenders’ efforts to ameliorate their problem. Beforehand, a prospective lender wants to know about a potential borrower’s “track record” with respect to previous financial arrangements, as well as the borrower’s current and prospective financial capabilities for repaying the loan; after making the loan, the lender wants to monitor the borrower’s activities, so as to be reassured that those activities are not impairing the borrower’s ability to repay the loan.

Since there are surely scale and expertise issues that relate to this information gathering and analysis, the scale of the lender is likely to determine whether the lender collects and analyzes the information itself, or whether it out-sources some or all of these processes to third-party specialists. Large banks, insurance companies, pension funds, and other large financial institutions may well have the scale to undertake these data-gathering and analysis activities themselves; but smaller financial institutions of all kinds are more likely to engage third-party specialists – at least for some kinds of loans.

Enter the credit rating agencies (CRAs): Credit rating agencies are a source of creditworthiness information about various kinds of bonds (and sometimes also about the issuers of the bonds). Such bonds include those issued by corporations, by governments (which, at the national level, have come to be called “sovereign” issuers), and by the securitizers of packages or bundles of smaller debt instruments (such as individual

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6 Other actions that the lender can take to reduce the risk of non-repayment include accepting collateral as security for the repayment of the loan and asking for third-party co-signors or guarantors for the loan.
7 But, even if large financial institutions analyze the information themselves, they may still rely on third-party specialists for the collection of the data. In the U.S., for example, virtually all residential mortgage lenders – large and small – have come to rely on the information on individuals that is collected by the Fair Isaac Corporation and is embodied in its “FICO score”.

residential or commercial mortgages, car loans, credit card obligations, etc.) that have come to be described as “asset-backed securities” (ABS).

The CRAs’ creditworthiness information involves their judgment or opinions as to the likelihood of a bond’s defaulting (or, for some CRAs, also including the likely recovery given default). These judgments typically involve a categorization of the debt instrument (or sometimes the judgment involves the issuer) into a creditworthiness “bucket”, as represented by a set of alphabetic symbols. The best-known of these alphabetic sets is that used by S&P and by a number of other CRAs: AAA is the highest (most creditworthy) category; D is the lowest category (for a bond that is already in default); and there are gradations (AA, A, BBB, etc.) and also pluses (+) and minuses (-) that provide more nuance to most of the gradations.\(^8\) Also, a different set of symbols are typically used for very short-term debt instruments (e.g., commercial paper), and sometimes also for the debt instruments that are issued by specialized borrowers (such as banks and insurance companies).

One other rating distinction has come to be important: “investment grade” versus “speculative”.\(^9\) In the S&P categorization, any bond that is rated BBB- or better is categorized as “investment grade”; any bond that is rated lower (i.e., BB+ or lower) is categorized as “speculative” (or, since the 1970s, such bonds have been described as “junk bonds”).

It is important to emphasize – we will return to this point later in this article – that the three major CRAs are not the only sources of such creditworthiness information. Other sources include: smaller CRAs; smaller creditworthiness advisory firms that

\(^8\) Further details as to the “symbology” that each CRA uses and the level of creditworthiness that is indicated by a specific gradation can be found on each CRA’s website.

\(^9\) Fons (2004) traces the history of this distinction.
provide similar kinds of information but that do not describe themselves as “credit rating agencies” and may not use alphabetic symbols for conveying their information; and the “fixed income analysts” that are often employed at large securities firms and that provide analyses and recommendations to those firms’ clients and securities traders with respect to bonds.\(^\text{10}\) Also, the large financial institutions that do their own analyses for their own bond portfolios have staffs of analysts that generate this information for an institution’s own internal use.

Finally, the generation and transmission of information with respect to creditworthiness is important not only to lenders but also to borrowers: Prospective borrowers that are relatively more creditworthy generally want that attribute to be conveyed convincingly to potential lenders. Accordingly, a CRA (or other provider of such creditworthiness information) constitutes a “platform” that operates in a “two-sided market” that is important (i.e., provides value) to both lenders and borrowers (Rysman 2009).

III. The Structure of the CRA Industry.

The discipline of “industrial organization” often finds useful the characterization of an industry’s structure: the number and size distribution of sellers; the conditions of entry; the structure of the buyers’ side of the market; the nature of the product; the importance of regulation; etc. That will be the approach that is employed here.

A. The numbers of providers of creditworthiness information and their relative sizes.

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\(^{10}\) That this last category of analysts can have an influence on the bond markets is demonstrated empirically by Johnston et al. (2009).
There are well over 100 companies in the world that provide creditworthiness information with respect to debt instruments and their issuers. Unfortunately, there is no comprehensive list; instead, various providers’ names appear on various lists.\textsuperscript{11} Many of these information providers are small and/or local in their orientation.

At the other extreme are the three large U.S.-headquartered CRAs: S&P, Moody’s, and Fitch. All three have worldwide operations; they each rate bond issuers that are located in many dozens of countries; and they have subsidiaries and/or alliances with local raters in a few dozen countries each.\textsuperscript{12}

For the past few years the U.S. Securities and Exchange Commission (SEC) has compiled and published information on the relative sizes of the 10 relatively large CRAs that are registered with the SEC as “nationally recognized statistical rating agencies” (NRSROs) in the U.S.; the data extend back to 2008. (More about the NRSRO system will be discussed below.) The most recent (as of early 2016) data are provided in Table 1; they apply to year-end 2014. The SEC reports are unclear as to whether these data apply just to the U.S. operations of these CRAs (which seems likely to be the case for a few of the CRAs that are headquartered outside the U.S., such as HR Ratings or JCR) or to their worldwide operations (which seems likely for the three largest CRAs), so caution should be used in their interpretation. Nevertheless, the data convey a sense of relative magnitudes.

\textsuperscript{11} For example, lists of CRAs are provided by ESMA at https://www.esma.europa.eu/supervision/credit-rating-agencies/risk; by Wikirating at http://www.wikirating.org/wiki/List_of_credit_rating_agencies; by DefaultRisk at http://www.defaultrisk.com/rating_agencies.htm; by FinanceWalk at http://www.financewalk.com/2011/credit-rating-agencies-sites/; and there are creditworthiness advisory services that do not describe themselves as CRAs but that provide similar kinds of information; see White (2013) for examples. And, as was discussed above, large securities firms provide this information to their clients.

\textsuperscript{12} These are broad generalizations. More information can be found on these firms’ websites. Brief summaries can be found in White (2013).
As can be seen in Table 1, Moody’s and S&P are by far the largest of the NRSRO CRAs; Fitch is a somewhat distant third. After that, the remaining NRSROs are comparatively small.\footnote{More information on these smaller NRSROs can be found on their websites; in USSEC (2015) and earlier reports; and in White (2013).} The total ratings column is heavily influenced by the large numbers of ratings of government bonds – many of which are “municipal” bonds that are issued by U.S. states, cities (municipalities), and other local governmental authorities. The large three CRAs are by far the dominant raters of this category of bonds. But even if the ratings of government bonds are excluded, the shares of the large three raters of the remaining aggregate of ratings are quite substantial: S&P, 36.4%; Moody’s, 29.8%; and Fitch, 18.9%. The total of the three is 85.1%.

The SEC has published similar compilations of ratings and of personnel for earlier years. Although these data show some changes, the basic dominance of the three large CRAs persists.

The SEC has also compiled annual estimates of the total rating revenues of the NRSROs and the share of the total that is accounted for by the three largest CRAs. These estimates extend back to 2010. These data are reproduced in Table 2. They again show the clear – and relatively steady – dominance of the three large CRAs.

The European Securities and Markets Authority (ESMA) has compiled similar revenue data for CRAs that rate bonds from issuers within the European Union. Table 3 provides the 2014 European data. The pattern is similar: The three large CRAs account for over 90% of the reported revenues.
In sum, there is a consistent pattern: S&P and Moody’s are clearly the two dominant CRAs; Fitch is a somewhat distant third. All of the other CRAs are relatively small.

But, again, it is important to mention that there are other sources of creditworthiness information, which were mentioned above, that are not captured in these kinds of data. These other sources do tend to be much smaller and less important in the current environment; so the reported data do provide a reasonable approximation of relative magnitudes. But these other sources should not be forgotten.

B. The users of creditworthiness information.

The bond markets are overwhelmingly an institution-to-institution or “wholesale” phenomenon. Financial institutions are the predominant buyers, holders, and sellers of bonds. Households are generally not directly involved; instead, they are indirectly involved as claimants – e.g., pension claimants – on those institutions. The only exception is municipal bonds in the U.S., where households hold approximately half of the outstanding stock of these bonds.\(^{14}\)

Accordingly, the users of third-party creditworthiness information are overwhelmingly financial institutions and their personnel; the users are not households (despite the term “investors” that is often applied to bond buyers). These financial institutions and their personnel – even if they do not have the expertise (or institutional scale) to undertake their own creditworthiness assessments – should be expected to be able to assess the competency of the providers of these kinds of information.

\(^{14}\) But municipal bonds constitute only 11% of all bonds that are held by investors of all kinds in the U.S. Further detail can be found in White (2013).
Of course, the problems of asymmetric information can affect financial institutions and their personnel; it is not a households-only phenomenon. Nevertheless, professional bond managers should have (or should be expected to have) sufficient expertise (and memories) to be able to make sensible choices with respect to providers of this type of information. To be sure, as the financial crisis of 2008 reminds us, this expectation of professional expertise does not guarantee that sensible choices always will be made. Nevertheless, it does create a presumption.

C. The nature of the “product”.

The CRAs produce creditworthiness information. In that important sense, this is not an industry where the producers are providing a homogeneous or “commodity” product. We would not expect to see an industry with thousands of commodity producers, such as is seen in many agricultural markets or even in some industrial markets (e.g., textiles). The CRAs are producing a differentiated product, where brands and reputations are important.

D. Conditions of entry.

Entry into the full-service, multi-line, multinational CRA business is clearly not easy – and never has been, as is evidenced by the comparatively few firms that have offered this kind of service, historically or today. To gain this size requires substantial sunk-cost investments, which makes the investments risky. These include investments in people, technology, information-gathering, and the time to show that the advisory service’s past judgments about bonds’ creditworthiness have been subsequently borne out; these investments thus build a reputation and develop the value of a brand name.
Nevertheless, entry as a “niche” provider of creditworthiness information – perhaps about a few companies or a few lines of business, or within a limited geographic area – does seem more feasible. And, again, we have seen such providers historically and continue to see them currently.

However, as will be clear in the discussion below, the SEC from 1975 until 2006 was a significant barrier to entry – certainly for creditworthiness information providers that had aspirations of becoming a larger-scale CRA. And it appears that since 2008 the SEC has again become a barrier.

E. The CRAs’ “business model”.

As background for this section, recall that a CRA can be described as a “platform” within a two-sided market: Lenders want to learn creditworthiness information about borrowers; and borrowers that are relatively more creditworthy also want their creditworthiness to be conveyed convincingly to lenders. In such a two-sided market, it is not immediately obvious which side will be charged fees by the platform.15

The history of the CRAs and their business models supports this ambiguity as to which side is charged fees:

The practice of providing publically available bond ratings began in the U.S. in 1909.16 John Moody was the first provider of these publicly available ratings; the ratings

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15 Newspapers, magazine, journals, and other print media constitute similar “platforms”, which bring together readers and advertisers. And we see some publications that charge fees only to advertisers and give copies away free to readers; other publications that charge fees to both readers and advertisers; and yet other publications that carry no advertising and charge fees only to readers. If content providers (e.g., writers/authors) are included as another dimension of the platform, yet greater variety is seen: Some platforms pay their writers/authors; others charge fees to writers/authors.

16 As Sylla (2002) points out, during the nineteenth century in the U.S. there were local credit reporting services, a financial press, and investment bankers and other financial advisers to help lenders assess the creditworthiness of potential and actual borrowers. Moody’s innovation was in providing readily grasped categories and in publishing the information in a volume that could be purchased by bond investors.
initially involved only U.S. railroad companies.\textsuperscript{17} Moody was a publisher, and the provision of this information followed the standard business model for publishing: Sell the information to readers. In the language that has recently come to be used to describe the CRAs’ business models, his was an “investor-pays” model; i.e., the lender/investor paid for the information.

Moody’s entry into the publicly available bond rating business was followed by the Poor’s Publishing Company in 1916, the Standard Statistics Company in 1922,\textsuperscript{18} and Fitch in 1924. All sold their bond ratings to the public; i.e., all of the CRAs employed the investor-pays model.

This model changed in the late 1960s and early 1970s to the one that generally prevails among the CRAs today: an issuer-pays model: i.e., the borrower pays to have the information (the rating) generated, and the CRA then distributes the information at no charge to the general public. The change happened gradually over a number of years: at different points in time for different lines of business (e.g., the change happened first for S&P’s municipal bond ratings) and for different raters. This wasn’t a uniform or coordinated transition.

There has been no definitive study of the reasons why the CRAs changed their business model and why they made the change at the time that they did. But it seems likely that the widespread distribution of high-speed copying machines in the late 1960s was at least partially responsible: The CRAs may well have feared that widespread and

\textsuperscript{17} It was not accidental that bond ratings began in the U.S., and that Moody’s ratings initially covered only railroads: The U.S. had a much larger bond market than almost any other country, except perhaps Great Britain (most other countries relied far more heavily on banks for providing debt finance to companies); and U.S. railroads were large and growing enterprises that needed large amounts of debt finance. Why a similar bond-rating service did not independently develop in Great Britain has not (to this author’s knowledge) been explored.
\textsuperscript{18} Poor’s and Standard merged in 1941 to form S&P.
inexpensive photocopying of the contents of the published manuals that contained the ratings would undermine their revenues (much as digital copying undermined the recorded music business 30 years later). It is clear from news reports at the time that the CRAs felt constrained in their abilities to expand their revenues from their existing (investor) customer base.

A second reason may have been the growing realization by the CRAs that – because of the increasing required use of ratings in the prudential regulation of U.S. financial institutions (see the discussion below) – the issuers really did need the CRAs’ ratings on their bonds and could be charged for those ratings; and the phenomenon of low-cost photocopying would not undercut this issuer-pays business model.

In light of the discussion of business models that will appear later in this article, it is worth noting that the potential conflicts of the issuer-pays model – that an issuer might threaten to take its rating business to a different CRA unless the issuer received the (high) rating that it desired\textsuperscript{19} -- were recognized at the time (White 2013). The CRAs responded that they could successfully “manage” the potential problem: In essence, they were arguing that their long-run reputations as accurate raters were sufficiently important to them that they would not succumb to such short-run temptations.\textsuperscript{20}

The issuer-pays model has persisted to the present day for almost all of the CRAs: Of the 10 current NRSROs, only one has an investor-pays business model. Further, two recent “entrants by purchase” (i.e., financial information firms that recently became NRSROs by buying existing small NRSROs) each entered the industry with the intention

\textsuperscript{19} Or, as a variant, a CRA might threaten an issuer with a lower rating unless the issuer paid a higher fee.

\textsuperscript{20} Though Klein-Leffler (1981) was not mentioned, the logic of the Klein-Leffler model was clearly at the heart of the “we can manage the conflict” position.
of maintaining the investor-pays model of the small NRSRO that it bought; both entrants subsequently switched to the issuer-pays model.

F. The regulatory environment.

There are two layers of regulation that affect the CRAs: 1) The CRAs themselves are regulated; and 2) The CRAs’ ratings are used in connection with the prudential regulation of financial institutions. The two categories are inter-connected. But it is worth discussing each separately.

1. The regulation of the CRAs. Until 1975, the CRAs were wholly unregulated. However, as a response to the growing use of the major CRAs’ use in the prudential regulation of U.S. financial institutions (see the discussion below), the SEC in 1975 created the category of “nationally recognized statistical rating organization” (NRSRO): Only the ratings of NRSROs could be used for prudential regulatory purposes.

The SEC immediately designated Moody’s, S&P, and Fitch as NRSROs. The SEC then became a substantial barrier to entry: During the succeeding 25 years, the SEC designated only four additional CRAs as NRSROs. Compounding the problem, the SEC never promulgated explicit criteria for becoming a NRSRO and never established a formal process for application and for approval; and along with having no criteria for approval, the SEC never performed any review – essentially, did not further regulate – the incumbent NRSROs that it had previously designated.

Although smaller creditworthiness advisory firms could and did arise, the limited willingness of the SEC to offer NRSRO designations (for reasons that were never explained or justified by the SEC) placed these smaller firms at a substantial disadvantage vis-à-vis the incumbent NRSROs and thus constituted a substantial barrier
to entry: Without the NRSRO designation, these firms were less likely to attract the attention of prudentially regulated bond investors (as will be explained below); for a firm with an investor-pays business model, this limited its potential sources of revenue. If, instead, the firm hoped to sustain an issuer-pays business model, its inability to attract the attention of the prudentially regulated bond investors equally limited its appeal to bond issuers.

Mergers among the four entrants and between the entrants and Fitch reduced the number of NRSROs at the end of 2000 back to the original three that the SEC had designated in 1975.

In the fall of 2001 the Enron Corporation declared bankruptcy, which attracted a considerable amount of media attention. In the aftermath, it was revealed that the three major CRAs had all rated Enron’s bonds as “investment grade” until five days prior to the company’s bankruptcy. Congressional hearings followed, in which representatives of the CRAs were asked why they had been so slow to recognize Enron’s weakened financial condition and officials from the SEC were asked about the NRSRO system, how the SEC managed it, and why there were only three NRSROs.\(^{21}\)

Feeling pressure from the Congress, the SEC designated a fourth NRSRO in 2003 and a fifth NRSRO in 2005. But the SEC still did not establish formal criteria or a formal application process.

Unsatisfied with the SEC’s actions, in 2006 the Congress passed (and President Bush signed) the Credit Rating Agency Reform Act (CRARA). This Act specified the criteria that the SEC should use in designating NRSROs, insisted on transparency and

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\(^{21}\) Although there was nothing secretive about the SEC’s creation and maintenance of the NRSRO designation system, the NRSRO system nevertheless was not a widely known regulatory framework, even within Washington, D.C.
due process in the SEC’s designations, and provided the SEC with information-gathering powers and limited oversight vis-à-vis the incumbent NRSROs. The Act, however, specifically restricted the SEC from influencing the ratings or the business models of the NRSROs.

In response to the CRARA, the SEC has designated six additional NRSROs; but one subsequently requested that its designation be withdrawn. Consequently, as of early 2016, there are 10 NRSROs. However, of those six additional NRSROs, five were designated within two years of the passage of the CRARA. The SEC has designated only one new NRSRO since mid 2008. The SEC may well be returning to its role of barrier to entry.

Given the CRAs’ role in the financial crisis of 2008 (discussed below), increased regulation of the CRAs was largely unavoidable. The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (DFA) included a significant section that was devoted to the CRAs. Part of the section called for federal agencies to reduce their reliance on the ratings of NRSROs (more about this will be discussed below). But a significant part called for the SEC to increase the stringency of its regulation of NRSROs: Fundamentally, the SEC has increased its scrutiny of conflict-of-interest issues and insisted on greater transparency with respect to what the NRSROs do, how they do it, and what their long-run “track record” with respect to ratings (i.e., transition matrices of year-to-year changes in ratings) has been.22

The DFA requested that the SEC undertake and report on a study of alternative business models for CRAs and specifically a study of the possibility that (for ABS) the

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22 See USSEC (2015a; 2015b) and earlier reports by the SEC; see also the “Form NRSRO” that is filed by each NRSRO with the SEC.
SEC (or a separate board) might assign the initial CRA to an issue.\(^{23}\) The SEC in 2012 issued the requisite report (USSEC 2012) but has not taken further actions. And the principle that the regulatory process should not influence the ratings themselves has remained intact.

The regulation of the CRAs outside of the U.S. took longer to develop (Garcia Alcubilla and Ruiz del Pozo 2012; Rousseau 2012; and Hemraj 2015). Despite the growth of the use of ratings in prudential regulation in other countries, these countries largely refrained from regulating CRAs. However, in the wake of the 2008 financial crisis, the European Union and other countries (e.g., Canada) began regulating or tightening existing regulations of CRAs – largely in the pattern of requiring registration, restricting conflicts of interest, and requiring transparency. After the major CRAs began downgrading European sovereign bonds in 2009, calls within Europe for more stringent regulation of the CRAs – even extending to the levels of the ratings themselves – increased.

2. The regulatory use of the CRAs’ ratings for prudential regulation. Until the 1930s, investors’ use of CRAs’ ratings was entirely a voluntary matter: A bond investor could buy a ratings manual and use the ratings to guide investment choices – or not.

This began to change in the early 1930s, when U.S. bank regulators indicated that banks’ accounting treatment of the bonds that they held in their portfolios (i.e., that they owned) would depend on whether or not the bonds were “investment grade”.

\(^{23}\) The idea for such an arrangement was developed independently by Richardson and White (2009), Mathis et al. (2009), and Raboy (2009). It eliminates (at least for this first rating) the problem of an issuer’s “shopping-around” among the CRAs for the most favorable rating; but the issue of how the SEC (or an independent board) would select this initial rater, and how the rater’s fees would be determined, would pose substantial problems for the implementation of such an arrangement; see White (2013).
The big change, however, occurred in 1936, when U.S. bank regulators declared that the only bonds that banks could own had to be “investment grade” – as determined by the major CRAs. Banks could not own “speculative” bonds.

This decision was made for understandable reasons: The bank regulators – as part of their prudential regulation of banks – wanted banks to have safe bonds in their portfolios; and the major CRAs were perceived as being good judges of safe bonds. And this was an easy way for the bank regulators to accomplish that goal. However, because the determination of “investment grade” itself was the separate decisions of the four major CRAs at the time, the bank regulators had essentially “outsourced” this decision to these third-party CRAs.

In effect, the CRAs’ ratings had now acquired the force of law. Unlike the previously voluntary use of ratings, banks now – if they wanted to invest in bonds (which most did) – could not avoid making use of the CRAs’ ratings. If nothing else, this guaranteed a market and an audience for the CRAs’ ratings. Further, since banks were a significant group of participants in the bond markets, the banks’ mandated-attention to the CRAs’ bond ratings meant that the other participants in the bond markets – even though the latter were not similarly required by regulation to heed the ratings – would also want to know about the CRAs’ ratings. The likely audience/market for the CRAs’ ratings was expanded considerably farther.

In the 1940s and 1950s the state regulators of insurance companies adopted a somewhat similar approach to their prudential regulation of insurance companies: Although the state regulators’ approach was more nuanced, they nevertheless linked their regulated insurances companies’ decisions with respect to the ownership of bonds to the
ratings (of the major CRAs) on those bonds. Similarly, in the mid 1970s the U.S. Department of Labor (DOL) linked the bond-ownership decisions of defined-benefit pension funds to the major CRAs’ ratings.

The next major step came in 1975: The SEC wanted to revise its prudential regulatory requirements for broker-dealers, and it wanted to link the capital requirements of the broker-dealers to the riskiness of the bonds in their portfolios. The SEC decided to use the CRAs’ ratings as the measure of riskiness; but the SEC was uneasy about the vagueness in other regulators’ requirements as to exactly which CRA’s ratings would be valid for prudential regulatory use. The SEC “solved” this problem by creating the NRSRO category, and the SEC immediately designated Moody’s, S&P, and Fitch as NRSROs (as was discussed above). Thus began the – not illogical – link between the regulation of the CRAs that was discussed above and the use of the CRAs’ ratings for the prudential regulation of financial institutions.

Within a few years, other prudential regulators of financial institutions adopted the SEC’s NRSRO designations for their purposes; and in subsequent decades the use of the NRSROs’ ratings for prudential regulation widened.24 This widening of the required use of NRSROs’ ratings, of course, strengthened the major CRAs’ position in the market for creditworthiness information.

In the aftermath of the financial crisis of 2008, there was a general realization that the role of the three large CRAs in the crisis (which will be discussed below) was enlarged by their centrality, which in turn was due (at least partially) to their positions as NRSROs and the required use of NRSROs’ ratings for prudential regulation (which came

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24 For example, in 1991 the SEC used the NRSROs’ ratings of short-term debt in its prudential regulation of money market mutual funds (MMMFs).
to be described as “regulatory reliance”): The issuers of residential mortgage-backed securities (RMBS) during the early 2000s needed ratings – preferably high ratings – from the NRSROs in order for those issuers’ mortgage bonds to be bought by prudentially regulated financial institutions.

Consequently, in the DFA of 2010 there was a separate provision that called for federal regulators to examine their regulatory reliance on NRSROs’ ratings and, wherever feasible, to withdraw references to NRSRO ratings in their regulations and to find alternative means of achieving the agency’s regulatory (prudential) goals. The federal regulators subsequently moved far too slowly (especially the SEC); but, as of early 2016 the federal bank regulators and the SEC have withdrawn those references. However, the DOL in its regulation of defined-benefit pension funds and the state regulators of insurance companies (which were not covered by the DFA) continue to rely on the NRSROs’ ratings for prudential regulation.

In Europe and elsewhere outside the U.S., as the importance of the bond markets increased in the 1980s and 1990s, prudential regulation of financial institutions began to include references to CRAs’ ratings. For example, the “Basel II” international accord on bank prudential regulation (which was discussed during the 1990s and finalized in 2004) had a link between banks’ capital requirements and the ratings by “external credit assessment institutions” (ECAIs) on bonds that the banks held.

In the aftermath of the financial crisis of 2008 (and the debt crises of a number of EU countries in 2009 and afterward), there have been calls in Europe and elsewhere (similar to those in the U.S.) for reduced regulatory reliance on ratings (alongside the
calls for increased regulation of the CRAs themselves). As of early 2016, however, there
has not been much progress on reductions in regulatory reliance in Europe.

G. The use of market structure information.

In a standard “industrial organization” analysis, a number of structural
characteristics – e.g., the level of seller concentration in a sensibly defined relevant
market, the conditions of entry by new firms into that market, the nature of the buying
side of the market, the nature of the product, etc. – are usually considered to be important
(but not completely dispositive) features of that market for understanding conditions of
competition (including prices, profitability, and product innovation) in that market.25

Consistent with this approach, the SEC for the past few years has computed and
published annual Herfindahl-Hirschman indexes (HHIs)26 for the NRSROs; these
calculations have used the NRSROs’ “market shares” of the categories of ratings and the
ratings totals that can be found in Table 1. The agency has concomitantly expressed
concerns about the extent of competition among the NRSROs.27

However, the concern about the dominance of the three large CRAs is largely not
about the prices (fees) that they charge issuers for their ratings28 and only secondarily
about the CRAs’ profits from their ratings business. Instead, the concern appears to be

25 This approach can be found in any standard industrial organization textbook; see, for example, Pepall et
al. (2008). It is also the approach that is at the heart of the antitrust merger analysis that is undertaken by
most government competition policy enforcement agencies; see, for example, Kwoka and White (2014).
26 The HHI is the sum of the squared market shares of the sellers in a market: A HHI of 0 would be an
atomistically competitive market; a HHI of 1.0 (if the market shares are expressed in decimals) or of 10,000
(if the market shares are expressed in whole-number percentages) would represent a monopoly. In
actuality, the SEC (USSEC 2015a) publishes the inverse of the HHI, which can be interpreted as the
number of equal-sized firms that would generate that HHI; see Adelman (1969).
27 See, for example, USSEC (2015a) and earlier reports. The ESMA has expressed similar concerns (see
ESMA 2015) and strongly encourages bond issuers to engage a smaller CRA as the issuer’s second source
of ratings.
28 There has been very little analysis of the prices/fees that the CRAs charge. One study that does include
data on fees (but not for the kind on industrial organization analysis that is described in the text) is Butler
and Cornaggia (2012).
about the “power” that they wield in the bond markets through the effects of their ratings (and of changes in their ratings) on bond prices and yields.

With respect to this “power”: On the one hand, it is clear that the major CRAs are slow to react to new information about issuers and their bonds. Typically, the bond markets have already reacted to the new information far earlier than do the CRAs; in that sense, the CRAs tend to lag the markets rather than lead them.\(^{29}\) Nevertheless, the actions of the three major CRAs do affect the bond markets: Bond rating changes – especially downgrades – do move markets.

A continuing conundrum, however, is whether these market reactions to rating changes represent the markets’ reacting to new information from the CRAs about the underlying creditworthiness of the rated bonds, or whether instead (or in addition) the markets are only (or even primarily) reacting to the changed regulatory status of the bonds that accompanies a change in a bond’s rating.\(^{30}\)

IV. The Financial Crisis of 2008: The Role of the CRAs, and the Relevance of Their Business Model.

A complete discussion of the financial crisis of 2008 is far beyond the capabilities of this article.\(^{31}\) However, as has been widely recognized, the precipitating events were: an extraordinary rise in housing prices in the U.S. from the late 1990s until mid 2006; a concomitant loosening of residential mortgage lending standards; a sharp expansion in the issuance of residential mortgage-backed securities (RMBSs) by government-

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\(^{29}\) This delay was noted above in connection with the major CRAs’ ratings of Enron shortly before its bankruptcy. As will be discussed below, these lags are a “cultural” phenomenon for the CRAs and not a consequence of their issuer-pays model.

\(^{30}\) For more discussion of this issue, see White (2013); for a recent effort to distinguish between the two effects see Cornaggia et al. (2015).

\(^{31}\) For this author’s summary efforts, see White (2011; 2014).
sponsored enterprises (i.e., Fannie Mae and Freddie Mac) and by “private-label” (i.e., non-governmental) issuers during those same years; and the post-2006 collapse of housing prices and consequent collapse of the private-label MBS market, with cascading consequences for large (and far-too-thinly capitalized) financial institutions in the U.S. and Europe.

Central to that expansion of private-label RMBSs were the ratings of the three large NRSROs. Recall that as of year-end 2000, the three large CRAs – Moody’s, S&P, and Fitch – were the only NRSROs. Recall also that the NRSROs’ ratings were necessary for the RMBS to be bought by prudentially regulated financial institutions; and high ratings (cet. par.) generally increased the demand for the bonds and allowed the issuers to pay lower interest rates on the bonds and to sell them at higher prices. Finally, recall that (since the late 1960s and early 1970s) all three CRAs had maintained an issuer-pays business model.

When the underlying residential mortgages began to default after mid 2006, the RMBS themselves began to default; and the high ratings that the NRSROs had initially assigned to the RMBS proved to be far too optimistic.

Since the high ratings had helped fuel the expansion of private-label RMBS, which in turn helped fuel the rise in housing prices, an immediate question arose: Was the pattern of the 2000s – initially high ratings for the private-label RMBS, followed by substantial defaults – merely bad modeling or bad luck by the three large CRAs? Or was there something more systematic – specifically, had the CRAs’ issuer-pays model

32 Fannie Mae and Freddie Mac also failed financially and were put into government conservatorships in September 2008. See, for example, Acharya et al. (2011).
33 But even if this relatively benign interpretation were correct, their mistakes – given the widespread consequences of the financial crisis of 2008 – unavoidably raised the “power” issue that was discussed above.
caused them to “cater” to the private-label RMBS issuers by offering those higher initial ratings? And, if the latter was true, did this mean that the entire issuer-pays business model was suspect?

The last question is perhaps the easiest to address: The NRSROs had adopted the issuer-pays model for all of their lines of rating businesses in the late 1960s and early 1970s. But, until the expansion of the private-label RMBS issuances in the mid 2000s, there had been no systematic problems in which the large CRAs were perceived as “catering” to the corporate and government issuers that were the main sources of revenue for the CRAs. If anything, the CRAs were perceived as having toughened their standards. And even during the mid 2000s and after, major problems of catering did not arise in these traditional areas. In essence, in these traditional areas the Klein-Leffler (1981) model of the importance of reputation had been – and continues to be – supported.

However, it does appear that the major CRAs did cater to the RMBS issuers in the mid-2000s – that the Klein-Leffler reputation model did break down. We can use some “industrial organization” concepts to help explain why the CRAs’ concerns about their reputations held strong (and continue to hold strong) in the traditional corporate and government areas and why these concerns weakened in the RMBS area:

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34 The problem of the CRAs’ delay in downgrading Enron was mentioned above, and there was a similar delay in the downgrading of the bonds of the WorldCom Corporation shortly before its bankruptcy in mid 2002. But these delays were fundamentally due to the culture of the CRAs more generally in being slow to change their ratings – a culture that long preceded the CRAs’ switch to the issuer-pays business model – and not to a systematic problem of catering that might be attributed to the issuer-pays model. See White (2013).

35 See White (2013) for support for this claim.

36 It is important to realize that the post-2009 complaints in Europe about the CRAs’ ratings – that the CRAs were being too tough and too precipitous in their downgrades of sovereign bond ratings – have been exactly the opposite of any concerns about “catering” to the issuer.

37 See White (2010; 2013) for the evidence to support this claim.
In the corporate and government areas, there were thousands of issuers, so the percentage of revenues that any single issuer would have represented would have been quite small. Accordingly, a plea (or demand) by any issuer for a better rating (backed-up by the threat by the issuer to take its business to a different CRA) would likely have been met by any CRA with a diplomatic version of, “Your rating business isn’t important enough for me to risk my reputation by giving you an unduly high rating.”

This resolve by a CRA not to risk a its reputation was likely strengthened by the relative transparency of much of the information that would go into a rating: Any corporation with bonds to be rated was a publicly traded company that had to make extensive, periodic (quarterly and annual), publicly available financial information filings with the SEC; and governments at all levels had budgets and other financial information that were available to the public. With these comparatively large amounts of publicly available information, the likelihood was high that a securities analyst or other critic would quickly discover any unwarrantedly high rating that a CRA might bestow on an issuer in response to a request – with the risk of negative consequences for the CRA’s reputation.

Also, the financial situations for corporate or municipal issuers were largely already determined, so an issuer would not likely to be able do much that could provide the pretext for a possible higher-than-deserved rating.

Finally, the rating processes and criteria were well established within the CRAs, so internal management controls would have helped keep any operational-level “doing favors” in check.
However, all of these conditions were quite different with respect to RMBS issuances: First, there were only a relative handful of RMBS issuers, and the largest dozen accounted for about 80-90% of RMBS issuances. Further the volumes were large (hundreds of billions of dollars of private-label RMBS were being issued annually in the mid 2000s), and the profit margins were larger on RMBS ratings than on the CRAs’ “plain vanilla” rating business. Consequently, the threat by one of the large RMBS issuers to take its business (its current issuance and all future issuances) to another CRA – unless that issuer received the rating that it desired – would have been much more potent.

Second, supporting this potency was the relative opaqueness of the information with respect to the important details about the hundreds of individual mortgages that underlay an individual RMBS; often, only averages were publicly available. Accordingly, if a CRA was tempted to cater to an issuer’s request, the CRA would have been less worried that a critic would quickly discover that a rating was unduly favorable to the issuer. And reinforcing this point was the fact that disputes between issuers and CRAs were often over the percentage (e.g., 83% versus 77%) of a specific RMBS issuance that would be awarded a AAA rating – which was a yet more abstruse point that a potential critic might have difficulty in analyzing and criticizing.

Third, because any individual RMBS had hundreds of individual mortgages, it was relatively easy for issuers to manipulate the components and thus appear to provide support – or at least the pretext – for a favorable rating (or, really, a higher percentage of the issuance to be rated AAA).
Finally, the methodology for rating RMBS and similar structured-finance bonds was relatively new and largely untested. In addition to being potentially subject to greater error, the newness of the methodology may have made it more open to manipulation at various management levels within the CRAs.

Accordingly, for these reasons, it is understandable why the issuer-pay model broke down in the context of the CRAs’ ratings of RMBS issuances of the mid 2000s – but also understandable why the issuer-pays model did not break down (and has not broken down) in the traditional “plain vanilla” rating areas.

V. The Way Forward.

As was discussed above, the major CRAs have been heavily criticized for their roles in the financial crisis, and regulation of the CRAs has followed. This section will address the question of whether extensive regulation of the CRAs continues to be warranted, or whether regulation could be greatly reduced or even eliminated.

A. Continue down the path of regulation of the CRAs.

Recall that in the U.S. it was the use of the CRAs’ ratings for prudential regulatory purposes – “regulatory reliance” on ratings – that initially led to the regulation of the CRAs themselves. If governments choose to continue their regulatory reliance on the CRAs’ ratings for prudential regulatory purposes – in essence, using the CRAs’ judgments about the creditworthiness of bonds as elements in the regulators’ efforts to have safe bonds in the portfolios of their regulated financial institutions – then the regulation of the CRAs cannot be avoided.
This necessity of CRA regulation holds true because regulatory reliance on the CRAs’ ratings cannot avoid the problem of deciding which CRA’s ratings should be the ones that matter for regulatory reliance. This decision in turn must involve the development of criteria for the choice of which CRAs should be included as valid for regulatory reliance, and which CRAs should not be included; and, of course, regulators must make and periodically review those choices among CRAs.

In sum, if prudential regulators continue to rely on the CRAs’ ratings, then the CRAs themselves must be regulated.

Further, if the CRAs are to be regulated, then the CRA regulation should best be focused on the accuracy of their judgments as to the creditworthiness of the bonds that they rate: in essence, on the “outputs” of the CRAs. But the regulation of CRAs thus far has not focused on these outputs. Instead, regulation has largely focused on “inputs”: e.g., whether a CRA has systems and structures in place to deal with conflicts of interest, and whether the CRA is being sufficiently transparent with respect to its methodology and track record of ratings.

These inputs may well translate into improved outputs; and the public revelation of such inputs may help bond investors choose among CRAs. Further, it is understandable why regulators have largely focused on inputs, since inputs are often easier and quicker for regulators to monitor and judge.38 Nevertheless, it is really outputs that matter – and the regulation of CRAs hasn’t focused on them.

38 This has generally been true in the area of environmental regulation, although there has been a movement over the past few decades toward more output-oriented regulatory methods, such as specifying outcome goals and letting regulated entities find the best ways of achieving those goals; “cap-and-trade” systems represent the culmination of such output-oriented methods. By contrast, almost all of the details of financial regulation are focused on inputs (e.g., capital requirements for financial institutions) rather than on outputs (e.g., safe financial institutions); stress tests for banks perhaps come the closest to a focus on outputs. See White (2006).
At best, then, the regulation of CRAs may only indirectly achieve the desired goals. And, of course, there is the possibility that the regulation of the CRAs will not achieve the goals at all.

But along the way there are unavoidable costs: the costs of the regulatory agencies themselves; and the costs of compliance by the CRAs themselves. In addition, there are indirect costs that may well be greater in magnitude, albeit harder to measure: erecting barriers to entry, and discouraging innovation; and the former is likely to reinforce the latter.

Regulation of the CRAs is likely to discourage entry into the creditworthiness assessment business in at least two ways: First, many of the costs of regulatory compliance tend to be fixed costs: the costs of compliance officers; the costs of lawyers; the costs of developing and maintaining the specific compliance systems that are mandated by the regulator; the costs of filling out forms; etc. These fixed costs are greater on a per-unit-of-output basis for a smaller enterprise than for a larger enterprise. Entrants into an industry tend to be small firms; the fixed costs of regulatory compliance will thus raise barriers to entry and will make it less likely that a (small) firm can enter (or that incumbent small firms can survive).

Second, a potential entrant may have different ideas as to how creditworthiness can be assessed; but if those ideas are not consistent with the standard patterns that the regulatory regime has established, then that firm is unlikely to be approved to be a CRA under the regulatory regime. Again, the regulatory regime has raised barriers to entry.

The point concerning regulation as a discouragement to innovation is related to those just made: Regulatory regimes can be hostile to innovations that don’t fit the
established regulatory patterns – whether those innovations are developed by incumbents that are already within the regulatory regime or by potential entrants. And, since entrants and smaller firms are often the sources of new ideas in many industries, the consequences of regulation in raising barriers to entry will again be negative for innovation.

But, can prudential regulation of financial institutions be successful without the mandated reliance on CRAs’ ratings? The answer – both in principle, and in practice – is “yes”.

In principle, prudential regulators – in place of the “check the box” approach that accompanies regulatory reliance – would place the burden on the regulated financial institution of convincing the regulator that the bonds in the institution’s portfolio are safe and appropriate for that institution. This is, in essence, the way that the prudential regulation of banks has dealt with all of the other assets and activities of banks that typically do not have ratings, and it should be applicable more generally to all prudential regulators’ approach to the bonds that are in the portfolios of their regulated institutions. This approach may involve more effort on the part of the regulators; but it is surely preferable to the “check the box” approach.

It is important to stress that placing the burden on the regulated financial institution need not mean that the institution must internally do all of the necessary research itself with respect to the bonds and their safety and other attributes. The financial institution ought to be able to make a choice as to whether to conduct its own research or to outsource that function to third-party creditworthiness advisory services – including CRAs. But the institution must be able to defend to its regulator its own research and/or its choices as to how and why it chose the third-party services that it did.
And in practice, this is the approach that the U.S. bank regulators and the SEC have chosen. As was discussed above, the Dodd-Frank Act (DFA) urged federal prudential regulators to find alternatives to regulatory reliance on the NRSROs’ ratings to achieve the regulators’ prudential goals. The bank regulators and the SEC have made the necessary changes and have adopted a burden-on-the-regulated-entity approach. It may be too soon to judge the ultimate success of this approach; but the changes are in place and appear to be working. Unfortunately, as was mentioned above, the DOL as prudential regulator of defined-benefit pension funds and the state prudential regulators of insurance companies have not followed suit.

If, however, regulatory reliance could be completely – or even largely – eliminated, then the justification for the regulation of the CRAs becomes far weaker. Recall that the bond markets are largely institutional markets and thus that the typical bond “investor” is a financial institution, with a professional bond manager who is (or should be) responsible for the institution’s bond portfolio. Although it is possible that the regulation of the CRA industry could help those bond managers make their choices among creditworthiness advisory services, the dangers of regulation that were discussed above could be substantial as well.

This then leads to a second possible way forward:

B. Eliminate (or greatly reduce) CRA regulation.

As the preceding discussion indicated, the absence of regulatory reliance on ratings greatly weakens the case for continued regulation of the CRAs. Without
regulation, entry into creditworthiness advisory services would be easier, and the prospects for innovation in credit rating – new ideas, new technologies, new methodologies, perhaps even new business models – would be greater.

At least two issues remain: First, is more competition among the CRAs – which the reduced barriers to entry would encourage – socially desirable? And, second, what (if anything) should be done about the CRAs’ dominant issuer-pays business model?

First, with respect to the desirability of more competition among the CRAs: The standard microeconomics presumption is that more competition in a market is generally socially beneficial. However, this presumption rests on a number of assumptions about the conditions that surround the competitive process. If these conditions do not hold – for example, if buyers are not fully informed about the quality of the goods or services that they are buying – then the presumption that more competition is beneficial need not be valid. If buyers are not fully informed, then greater competition may lead to greater efforts to deceive the buyers – or just for more opportunities for buyers to make mistakes.

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39 If entry were perceived to be easier, one potential source of supply of new entrants would be new firms that would be formed by the (former) analyst employees at existing CRAs and the (former) fixed-income analysts at securities firms that were mentioned above.

40 This insight is generally credited as having been first developed by Lipsey and Lancaster (1956).

41 In the model of CRAs that was developed by Skreta and Veldkamp (2009), where buyers’ information about the true quality of bond issuances is limited, the CRAs do not deliberately cater to issuers. But even though the CRAs try to be accurate and on average they are accurate, their ratings have an error component, and thus a group of CRAs will offer a range of ratings. To the extent that an issuer can “shop-around” among the CRAs, it will choose the CRA that offers the most favorable rating – and thus there will be an end-result of a bias toward excessively favorable ratings; and with more competing CRAs, there is likely to be a greater range of potential ratings and (when issuers can shop-around) a greater tendency toward excessively favorable ratings. See also Mathis et al. (2009), Bolton et al. (2012), and Sangiorgi and Spatt (2015).
Further, there is a growing literature that shows that greater competition among CRAs does seem generally to lead to inflated ratings\(^{42}\) – although there are exceptions, and (as was discussed above) the problem has not gotten out of hand with respect to “plain vanilla” ratings of corporate and government bonds or even in other areas (besides RMBS) of structured finance (ABS) bonds.

On balance, it seems (at least to this author) that the arguments in favor of greater competition among CRAs (and other creditworthiness advisory services) outweigh the potential dangers. This is especially true since the users of the CRAs’ information are overwhelmingly professional bond managers, for whom the information asymmetry problems ought to be less severe – rather than households (who generally are at a greater informational disadvantage in financial markets and with respect to financial matters more widely).\(^{43}\) Nevertheless, we will suggest below some additional information disclosures by issuers that could help.

Second, with respect to the issuer-pays model itself: One advantage to the model, which is often overlooked/forgotten, is that the new information with respect to a rating (or a change in a rating) is disseminated quickly and widely (e.g., through a press release). This quick and widespread dissemination enhances financial market efficiency, and there are no favored few who first get the information – in contrast to a subscriber (i.e., investor-pays) model, where the subscribers first get the information and then the information is released more publicly after a lag.

\(^{42}\) See the summary in White (2013); for a more recent summary and recent research that finds this result, see Flynn and Ghent (2016).

\(^{43}\) If households were substantial direct users of creditworthiness information about bonds, then the argument for regulating the providers of this information – much like the argument for regulating financial advisors to households – would become much stronger.
Further, even an investor-pays model can have conflicts: A major investor-customer with a large position in a specific set of bonds may want the CRA to not downgrade those bonds (or, at least, to delay the downgrade until after the investor has sold its inventory). As a variant on this issue, a major customer may want the high yield that comes with a risky investment but may want this risk masked (e.g., vis-à-vis a prudential regulator) by having the bond receive an inflated rating (Calomiris 2009; Cole and Cooley 2014).\textsuperscript{44} Or a major investor that wants to buy a specific set of bonds (or that already has a short position in the bonds) may encourage the CRA quickly to downgrade those bonds.

As has been discussed above, even under an issuer-pays business model, if a CRA cares sufficiently about its long-run reputation and/or if the users of the CRA’s ratings are sufficiently knowledgeable, the potential conflicts ought to be satisfactorily resolved. This has largely been true in the CRAs’ traditional areas of corporate and government bond ratings. But, as the financial crisis of 2008 reminds us, this reputation-based model can break down – although the analysis above shows the likely reasons why the issuer-pays model broke down in the area of RMBS and not in the more traditional areas. And, if the issuer-pays model persists going forward (as seems likely to be the case), then knowledgeable bond portfolio managers are more likely to be more wary and cautious with respect to the CRAs’ ratings in the kinds of circumstances that led to the breakdown.\textsuperscript{45}

C. Some recommendations.

\textsuperscript{44} As Cole and Cooley (2014) point out, this desire by the investor to have an inflated rating will cause higher ratings under an issuer-pays model as well.

\textsuperscript{45} The RMBS market collapsed after 2007 and (as of early 2016) has not revived. Among the reasons that it has not revived is surely the greater wariness by bond investors since 2007.
Since the fundamental problem is that of asymmetric information, more disclosure of important information ought to help ameliorate the problem.\textsuperscript{46} In that spirit I suggest the following:

1) The issuers of structured finance securities (i.e., ABS) should be required to disclose publicly much greater details about the underlying assets in an ABS issuance. Recall the argument above that suggests that the large amount of public information about corporate and government issuers helps a CRA resist an issuer’s request for an unduly favorable rating, since the CRA fears that critics could quickly spot such catering. This suggestion is in that same spirit.

Currently, under SEC regulations (that were adopted in 2009) an issuer has to reveal the details about the underlying assets of an ABS issuance not only to the NRSRO that it chooses to rate the bonds but also to other NRSROs – but only to those other NRSROs and not to the general public. That level of disclosure is not widespread enough. The model for disclosure that applies here should be that of publicly traded companies, from whom extensive disclosures to the general public are expected as a matter of course. The same approach should become true for ABS.

2) In the same spirit as #1: Cornaggia et al. (2015) show that the differences in the extent of disclosures among the issuers of various categories of municipal bonds have consequences with respect to the apparent usefulness of CRAs’ ratings. The authors argue that their results support an argument for increasing and standardizing disclosures

\textsuperscript{46} Although I offer these recommendations as a way to strengthen an unregulated CRA industry, they would be valuable even in a regulated environment. Notice also that these information-disclosure requirements should be imposed on issuers – for whom substantial disclosure is already expected – and thus need not involve regulation of the CRAs.
among such issuers. More complete disclosure by these issuers should also help ameliorate any potential problems of “granting favors” by the CRAs.

3) A bond issuer should be required to reveal any “shopping-around” among CRAs that the issuer may have done prior to selecting a specific CRA to rate its bond issuance. This disclosure should help bond managers spot potential instances of “catering” by the CRAs or even just the Skreta-Veldkamp (2009) tendency by issuers to select the most favorable rating from among a sample of candidates.

This last category of disclosure is not a sure-fire way to end catering. There is surely a great deal of ambiguity as to what constitutes “shopping-around”; and a specific CRA may simply acquire a reputation among issuers as offering favorable ratings, so that no shopping-around is needed. Still, the disclosure of any shopping-around by an issuer should help.

4) The CRAs should be held to a “negligence” liability standard – as is true for accountants/auditors in the U.S. – when sued by investors (or by issuers) with respect to the CRAs’ ratings. The goal, of course, is to make the CRAs more careful with respect to the development of the information that forms the basis for their ratings. The danger, however, is that they become overly cautious and retreat substantially from offering useful information. A negligence standard seems about the right place to be within this care/caution tradeoff.47

VI. Conclusion.

47 This appears to be the “expert liability” standard that the DFA established for NRSROs and that the ESMA established in Europe in 2013.
As of early 2016 the credit rating agencies (CRAs) remain as a topic for public discourse and policy consideration in many countries around the world. Memories of the financial crisis of 2008 and the credit ratings agencies’ (CRAs) role in that crisis, unhappiness about the perceived power of the three largest CRAs (Moody’s, S&P, and Fitch), uneasiness about the potential conflicts that arise as a consequence of their issuer-pays business model, and (especially in Europe) unhappiness about the CRAs’ post-2008 downgrades of sovereign debt have all led to a sharp increase in the regulation of the CRA industry in many countries, as compared with merely a decade ago. The likely path forward is “more of the same”.

However, a closer examination of the CRA industry – using the lenses of finance, industrial organization, and regulation – shows that the argument for regulating the CRA industry is substantially weaker than is generally realized. This is especially the case if the regulators of financial institutions can move away from a reliance on the CRAs’ ratings of bonds for their prudential regulation of these institutions. The dangers that regulation of the CRAs may stifle entry and innovation are real.

Consequently, the arguments in support of the current (and likely continued) regulation of the CRA industry deserve a re-evaluation. This article shows that there is another, more sensible path that can be pursued.


European Securities and Markets Authority (2015) “Competition and Choice in the Credit Rating Industry”.


Table 1: Some Size Dimensions for the 10 Nationally Recognized Statistical Rating Agencies (NRSROs) in the U.S. (year-end 2014)

<table>
<thead>
<tr>
<th>NRSRO</th>
<th>Financial institutions</th>
<th>Insurance companies</th>
<th>Corporate issuers</th>
<th>Asset-backed securities</th>
<th>Government securities</th>
<th>Total</th>
<th>% of total</th>
<th>Credit analysts</th>
<th>Credit analyst supervisors</th>
<th>Total</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.M. Best</td>
<td>N/R</td>
<td>7,910</td>
<td>1,526</td>
<td>26</td>
<td>N/R</td>
<td>9,462</td>
<td>0.39%</td>
<td>82</td>
<td>46</td>
<td>128</td>
<td>2.83%</td>
</tr>
<tr>
<td>DBRS</td>
<td>10,176</td>
<td>147</td>
<td>3,732</td>
<td>11,497</td>
<td>16,650</td>
<td>42,202</td>
<td>1.74%</td>
<td>109</td>
<td>41</td>
<td>150</td>
<td>3.31%</td>
</tr>
<tr>
<td>EJR</td>
<td>11,956</td>
<td>1,025</td>
<td>7,013</td>
<td>N/R</td>
<td>N/R</td>
<td>19,994</td>
<td>0.83%</td>
<td>4</td>
<td>4</td>
<td>8</td>
<td>0.18%</td>
</tr>
<tr>
<td>Fitch</td>
<td>46,260</td>
<td>3,011</td>
<td>15,558</td>
<td>42,237</td>
<td>194,086</td>
<td>301,152</td>
<td>12.44%</td>
<td>829</td>
<td>326</td>
<td>1,155</td>
<td>25.51%</td>
</tr>
<tr>
<td>HR Ratings</td>
<td>N/R</td>
<td>N/R</td>
<td>N/R</td>
<td>N/R</td>
<td>277</td>
<td>277</td>
<td>0.01%</td>
<td>29</td>
<td>7</td>
<td>36</td>
<td>0.80%</td>
</tr>
<tr>
<td>JCR</td>
<td>807</td>
<td>57</td>
<td>2,206</td>
<td>N/R</td>
<td>399</td>
<td>3,469</td>
<td>0.14%</td>
<td>26</td>
<td>32</td>
<td>58</td>
<td>1.28%</td>
</tr>
<tr>
<td>KBRA</td>
<td>14,809</td>
<td>49</td>
<td>2,856</td>
<td>2,626</td>
<td>37</td>
<td>20,377</td>
<td>0.84%</td>
<td>82</td>
<td>14</td>
<td>96</td>
<td>2.12%</td>
</tr>
<tr>
<td>Moody’s</td>
<td>52,049</td>
<td>3,336</td>
<td>41,364</td>
<td>71,504</td>
<td>673,166</td>
<td>841,419</td>
<td>34.77%</td>
<td>1,297</td>
<td>189</td>
<td>1,486</td>
<td>32.82%</td>
</tr>
<tr>
<td>Morningstar</td>
<td>N/R</td>
<td>N/R</td>
<td>N/R</td>
<td>5,542</td>
<td>N/R</td>
<td>5,542</td>
<td>0.23%</td>
<td>30</td>
<td>10</td>
<td>40</td>
<td>0.88%</td>
</tr>
<tr>
<td>S&amp;P</td>
<td>61,000</td>
<td>6,800</td>
<td>53,000</td>
<td>85,200</td>
<td>970,200</td>
<td>1,176,200</td>
<td>48.60%</td>
<td>1,157</td>
<td>214</td>
<td>1,371</td>
<td>30.28%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>197,057</strong></td>
<td><strong>22,335</strong></td>
<td><strong>127,255</strong></td>
<td><strong>218,632</strong></td>
<td><strong>1,854,815</strong></td>
<td><strong>2,420,094</strong></td>
<td><strong>100.00%</strong></td>
<td><strong>3,645</strong></td>
<td><strong>883</strong></td>
<td><strong>4,528</strong></td>
<td><strong>100.00%</strong></td>
</tr>
</tbody>
</table>

Note: N/R indicates that the NRSRO is not registered for the rating category that is indicated.

Source: USSEC (2015a).
Table 2: U.S. NRSROs’ Revenue Shares, 2010-2014

<table>
<thead>
<tr>
<th>Fiscal year</th>
<th>Aggregate rating revenues ($B)</th>
<th>% share of S&amp;P, Moody’s, and Fitch</th>
<th>% share of all other NRSROs</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>$4.2</td>
<td>94.6%</td>
<td>5.4%</td>
<td>100.0%</td>
</tr>
<tr>
<td>2011</td>
<td>4.3</td>
<td>94.0</td>
<td>6.0</td>
<td>100.0</td>
</tr>
<tr>
<td>2012</td>
<td>5.1</td>
<td>94.7</td>
<td>5.3</td>
<td>100.0</td>
</tr>
<tr>
<td>2013</td>
<td>5.4</td>
<td>94.5</td>
<td>5.5</td>
<td>100.0</td>
</tr>
<tr>
<td>2014</td>
<td>5.9</td>
<td>94.3</td>
<td>5.7</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: USSEC (2015) and earlier reports.
<table>
<thead>
<tr>
<th>Registered credit rating agencies</th>
<th>Revenue share</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.M. Best Europe Rating Services Ltd. (AMBERS)</td>
<td>0.79%</td>
</tr>
<tr>
<td>ARC Ratings, S.A.</td>
<td>0.02</td>
</tr>
<tr>
<td>ASSEKURATA Assekuranz Rating Agentur GmbH</td>
<td>0.21</td>
</tr>
<tr>
<td>Axessor S.A.</td>
<td>0.61</td>
</tr>
<tr>
<td>BCRA Credit Rating Agency AD</td>
<td>0.02</td>
</tr>
<tr>
<td>Capital Intelligence (Cyprus) Ltd.</td>
<td>0.12</td>
</tr>
<tr>
<td>CERVED Group S.p.A.</td>
<td>1.20</td>
</tr>
<tr>
<td>Creditreform Rating AG</td>
<td>0.50</td>
</tr>
<tr>
<td>CRIF S.p.A.</td>
<td>0.33</td>
</tr>
<tr>
<td>Dagong Europe Credit Rating Srl</td>
<td>0.02</td>
</tr>
<tr>
<td>DBRS Ratings Ltd.</td>
<td>1.47</td>
</tr>
<tr>
<td>Euler Hermes Rating GmbH</td>
<td>0.20</td>
</tr>
<tr>
<td>Feri EuroRating Services AG</td>
<td>0.64</td>
</tr>
<tr>
<td>Fitch Group</td>
<td>16.80</td>
</tr>
<tr>
<td>GBB Rating Geselleschaft fur Bonitatsbeurteilung GmbH</td>
<td>0.32</td>
</tr>
<tr>
<td>ICAP Group SA</td>
<td>0.55</td>
</tr>
<tr>
<td>Moody’s Group</td>
<td>34.67</td>
</tr>
<tr>
<td>Scope Credit Rating GmbH</td>
<td>0.14</td>
</tr>
<tr>
<td>Spread Research SAS</td>
<td>0.11</td>
</tr>
<tr>
<td>S&amp;P Group</td>
<td>40.42</td>
</tr>
<tr>
<td>The Economist Intelligence Unit Ltd.</td>
<td>0.87</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>