Credit Rating Agencies in Capital Markets: A Review of Research Evidence on Selected Criticisms of the Agencies

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This study assesses the validity of widespread criticisms of the large, "nationally recognized" credit rating agencies (CRAs). The accounting scandals of 2000–02, in particular the highly publicized failure of Enron in December 2001, led many to question their competence and the value of their ratings. This paper evaluates important criticisms of the CRAs discussed in a recent Securities and Exchange Commission (SEC) staff report by using evidence from empirical research studies, and suggests many promising subjects for future research. The analysis given in this paper, and the results of the suggested research (when available), should be of particular interest to lawmakers and regulators who are responsible for determining whether and to what extent the credit rating industry should be subject to statutory and regulatory oversight. Although little rigorously gathered empirical evidence supports the criticisms, many issues remain unresolved. Powerful tests related to potential conflicts of interest and alleged unfair practices are exceptionally difficult to design, and the alleged deficiencies of rating agencies' disclosure practices have yet to be analyzed. Finally, many criticisms are based on subjective benchmarks that are difficult to quantify and open to question. To date, however, accounting researchers have played only a minor role in the debate. Because they are well-versed in such areas as disclosure analysis, capital market tests, and the operation of financial intermediaries and external auditors, these researchers potentially have much to add in this regard.

Keywords: *credit rating agencies, Enron, capital markets, Securities and Exchange Commission*

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I am grateful for helpful comments and suggestions from Marie Blouin, Richard Cantor, Kee Chung, Petrina Dawson, Clifford Griep, Robert Grossman, Feng Gu, John Hand, Ronald Huefner, John (Xuefeng) Jiang, Myungsun Kim, Alan Levin, Richard Rogers, Catherine Shakespeare, Mariarosa Verde, and Dave Ziebart. Thanks are also due to the following individuals for helpful discussions and information: Eric Bigelsen, Rita Bolger, Ed Emmer, Robert Grossman, Alan Levin, Curtis Moulton, William O'Neill, Christopher Pruette, Steven Pruette, Solomon Samson, John Sorce, and Norman Stewart.

1. Introduction

Credit rating agencies (CRAs) provide opinions on the creditworthiness of entities and their financial obligations. Recently, the large, nationally recognized CRAs have been sharply criticized. The massive accounting and auditing scandals of 2000–02, in particular the highly publicized failure of Enron in December 2001, led many to question their competence and the value of their ratings. Enron's failure prompted ongoing scrutiny and investigations by Congress and the U.S. Securities and Exchange Commission (SEC).[1] A key question was whether CRA operating practices and the lack of regulatory oversight contributed to investor losses.

The large CRAs also have been the focus of international attention. The International Organization of Securities Commissions (IOSCO) has been examining their role in capital markets (IOSCO [2003a]),[2] and the European Parliament recently called on the European Commission to assess the need for legislation to deal with the CRAs.[3]

This paper evaluates criticisms of the CRAs discussed in a recent SEC staff report [2003a] by using evidence from empirical research studies.[4] The criticisms extend well beyond Enron. For example, U.S. House Financial Services Committee former chair Michael Oxley recently raised the issues of possible unfair and anticompetitive practices, and unmanaged conflicts of interest in the credit rating industry (Oxley [2005]).

I discuss a cross-section of existing research and focus on specific papers to illustrate general concepts. The analysis is intended to (1) provide a research-based evaluation of some of the principal criticisms of the CRAs; (2) point to some of the lessons learned from recent scandals (such as Enron and WorldCom); and (3) provide suggestions for future research that would shed more light on these questions. The results of the suggested research (when available) should be of particular interest to lawmakers and regulators who are responsible for determining whether and to what extent the credit rating industry should be subject to statutory and regulatory oversight.

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1. For example, see U.S. House of Representatives (2003, 2004, 2005a, 2005b, 2005c), U.S. Senate (2002, 2003), SEC (2003a, 2003b, 2003c), and Tafara (2005).

2. IOSCO created a task force to examine credit rating agencies. The task force activities resulted in IOSCO's *Statement of Principles Regarding the Activities of Credit Rating Agencies* (IOSCO [2003b], and its consultation report on code of conduct fundamentals for CRAs (IOSCO [2004a, 2004b]).

3. See The Committee of European Securities Regulators (2004).

4. The SEC staff report was mandated by the Sarbanes-Oxley Act of 2002. The Act directed the SEC to prepare a report on the credit rating agencies that would cover (1) the role of credit rating agencies in the evaluation of securities issuers; and (2) the importance of that role to investors and the functioning of securities markets. In response, the Commission conducted a comprehensive study of CRAs that included public hearings in November 2002 and a staff report (SEC [2003a]).

To date, accounting researchers have played only a minor role in the debate. Because they are well-versed in such areas as disclosure analysis, capital market tests, and the operation of financial intermediaries and external auditors, these researchers potentially have much to add.

This paper focuses on the three major Nationally Recognized Statistical Rating Organizations (NRSROs): (1) Standard & Poor's Credit Market Services (S&P); (2) Moody's Investors Service; and (3) Fitch, Inc.[5] These three rating agencies have played the most influential role in securities markets and have been the most sharply criticized.

The SEC created the concept of the NRSRO in 1975 to designate agencies whose credit ratings could be used by broker-dealers to comply with the SEC's Net Capital Rule.[6,7] The quasi-regulatory monitoring role of NRSROs has created incentives that often conflict with those created by their investor-oriented information-supplying role.

Exhibit 1 groups these issues into several major categories. The first category concerns disclosure. Should NRSROs disclose more information about the key bases of, and assumptions underlying, the ratings decision, and should they publicly disseminate their ratings widely? A second category relates to potential conflicts of interest. For example, should NRSROs implement procedures to manage potential conflicts of interest that arise when issuers pay for ratings, or when the agencies develop ancillary fee-based businesses?

A third category focuses on alleged anticompetitive or unfair practices. A fourth category focuses on reducing potential regulatory barriers to entry, and a final category concerns the appropriate level of regulatory oversight of NRSROs. Implicit in the SEC's interest in the last two categories is the question of whether NRSROs have acted with sufficient diligence and competence.

The rest of this paper is organized as follows. Section 2 presents background information on credit ratings and the credit rating industry. Section 3 discusses CRA disclosure practices. Section 4 addresses potential conflicts of interest, and alleged anticompetitive or unfair practices are addressed in Section 5. The diligence and competence of CRAs are examined in Section 6. Sections 3–6 also include research suggestions. Conclusions are presented in Section 7.

5. For convenience, this paper refers to S&P, Moody's, and Fitch collectively as the "principal (or large) CRAs" and as the "principal (or large) NRSROs." Dominion Bond Rating Services and A.M. Best Company, Inc. are the two other NRSROs.

6. The Net Capital Rule requires broker-dealers to deduct from their net worth certain percentages of the market value of their proprietary security positions when computing net capital.

7. Recently the NRSRO designation has received intense scrutiny. Many argue that its existence favors the CRAs that already have the designation and creates a difficult barrier to entry to firms that do not have it.

EXHIBIT 1

Credit Rating Agency Issues That Should be Further Examined

Based on U.S. Securities and Exchange Commission (2003a).

A. Disclosure
1. Should CRAs disclose more information about the key bases of, and assumptions underlying, the ratings decision?
2. Should NRSROs publicly disseminate their ratings on a widespread basis?
3. Should NRSROs that issue unsolicited ratings clearly indicate that fact on any such rating?
4. Should issuers provide expanded disclosures relating to the existence and impact of ratings triggers, conditional elements of important financial contracts, short-term credit facilities, special purpose entities, and material future liabilities?

B. Potential Conflicts of Interest
1. Should NRSROs implement procedures to manage potential conflicts of interest that arise when issuers pay for ratings?
2. Should NRSROs prohibit or severely restrict direct contacts between rating analysts and subscribers?
3. Should NRSROs implement procedures to manage potential conflicts of interest that arise when rating agencies develop ancillary fee-based businesses?

C. Alleged Anticompetitive or Unfair Practices
1. Do allegations of anticompetitive or unfair practices by large credit rating agencies have merit and, if so, how should they be addressed?

D. Reducing Potential Regulatory Barriers to Entry
1. How might the current NRSRO recognition criteria be clarified?
2. Should timing goals for the evaluation of NRSRO applicants be put in place?
3. Should rating agencies that cover a limited sector of the debt market or limited geographic area be permitted to achieve NRSRO recognition?
4. Should there be viable alternatives to the NRSRO concept in SEC rules?

E. Ongoing Oversight
1. Is more direct, ongoing oversight of NRSROs warranted? If so, should NRSROs incorporate general standards of diligence in performing their ratings analysis?

2. Background

2.1 What Is a Credit Rating?

A credit rating is a CRA's assessment of the credit quality of a debt issuer or a specific debt obligation (SEC [2005a]).[8] Almost all agencies base their ratings on the relative, not absolute, probability of default. A credit rating consists of a letter rating (credit category) and commentary (if provided). The

8. For other definitions, see S&P (2005), Griep and De Stefano (2001), BIS (2000), and Cantor and Packer (1994).

commentary can include a "credit watch" or "credit outlook" modifier; assumptions, criteria, and methods used to determine the rating opinion; conditions under which the rating may or will be changed; and descriptions of the rated company and its lines of business.[9]

The three principal CRAs provide extensive, freely available information on letter ratings and commentary, and also offer fee-based services that provide additional information and data to subscribers.[10] The extent to which ratings information is publicly disclosed is strongly influenced by the CRA's primary revenue source. Rating agencies that are supported by fees from the issuers they rate disclose much more than those that are supported by revenue from subscribers.

Corporate credit rating opinions are assigned at the issuer level and to specific fixed payment obligations undertaken by these issuers (generally debt and preferred stock). Ratings of specific issues are created by first rating the issuer and then making adjustments based on such features as seniority.[11] Undisclosed (or confidential) ratings are those that are provided only to the rated issuer (that purchased the rating).

2.2 The Credit Rating Industry and Process

By 2000, roughly 130 to 150 CRAs were operating worldwide. Some agencies operate globally; many others seek industry or geographic niche markets.[12] The three largest CRAs use a mix of quantitative models and qualitative analysis performed by trained analysts. Many other agencies rely almost exclusively on quantitative models, enabling them to rate virtually all issuers in a given marketplace using small staffs.[13] The credit rating process at the principal CRAs involves analysis of both business risk (industry characteristics and the company's competitive position and management quality) and financial risk (financial characteristics, financial policy, capital structure, cash flow protection, and financial flexibility).[14]

The large CRAs use a committee process to evaluate issuers. Following company visits by analysts, rating committees meet to discuss analyst recommendations

9. For example, one large CRA includes as part of many of its credit ratings the following information: (1) a Credit Watch that indicates the "potential direction" of a rating change (depending on specific events and trends), which is expected to be resolved within ninety days; and (2) a Ratings Outlook that indicates the "potential direction" of a rating change over a period of about six months to two years (S&P [2005]).

10. Examples include background information on industry conditions and prospects, credit rating databases, ratings histories, and press release archives.

11. For convenience, this paper focuses on credit ratings applied to profit-making corporate issuers at the issuer level.

12. See Cantor and Packer (1994) for the historical development of the credit rating industry. See BIS (2000) for a comprehensive description of the global credit rating industry.

13. For example, seven of the thirty agencies described in the BIS report (BIS [2000]) have twelve or fewer employees.

14. Refer to BIS (2000) for descriptions of the rating approaches used by many different types of CRA. SEC (2003a) discusses general procedures used by the large CRAs.

and the pertinent facts supporting the rating. After the committee votes, the company (issuer) is notified of the rating and major factors supporting it. The issuer is allowed to present additional data in response to the rating decision before the rating is published.

2.3 Role of Credit Rating Agencies in Capital Markets

The large CRAs play two key roles in capital markets.[15] First, they play a valuation role by disseminating information to market participants. In this role, CRAs gather and analyze information relevant for assessing credit quality, and make the results of their analyses widely available to investors, portfolio managers, buy-side firms, sell-side firms, and others. Two characteristics that facilitate the usefulness of credit ratings in valuation are (1) ratings timeliness, and (2) information usefulness. Information usefulness is positively associated with ratings accuracy and the extent to which CRAs provide additional relevant information in the form of commentary (including watches and outlooks).[16]

The second role of the large CRAs is to facilitate contracting (including financial regulation), because letter ratings are viewed as efficient credit quality benchmarks.[17] In private contracting, ratings-based constraints appear in loan agreements, bond covenants, and other financial agreements. Ratings also are used in institutional investors' in-house investment rules.[18]

U.S. financial regulators and lawmakers increasingly have been using credit ratings-based criteria. For example, Rule 2a-7 under the Investment Company Act (1940) limits money market funds to investing only in high-quality short-term instruments, where the minimum quality investment standards are based on ratings published by the NRSROs.[19] As a second example, NRSRO ratings are used to determine eligibility for the issuers' use of the streamlined SEC registration statements.[20] Internationally, the Basel II Revised International Capital Framework has expanded the quasi-regulatory role of major rating agencies.

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15. For additional discussions, see Gonzales et al. (2004), SEC (2003a), IOSCO (2003a), IMF (1999), and Dallas (1997). See Boot, Milbourn, and Schmeits (2006) for a theoretical analysis of the role of credit ratings in the capital markets.

16. Concepts of ratings accuracy vary. Moody's emphasizes two accuracy measures: (1) investment-grade default rates over multiple horizons and (2) the average rating of defaulting issuers up to three years before their defaults (Cantor & Mann [2003]).

17. Watts (1998, 2003) and Watts and Zimmerman (1986) discuss the role of accounting numbers in contracting. Their framework provides a useful structure for considering the role of credit ratings in contracting.

18. For example, see Stevens (2005).

19. Specifically, Rule 2a-7 requires that an "eligible security" must have received a short-term rating by the requisite NRSROs in one of the two highest short-term rating categories or, if unrated, must be of comparable quality to a security meeting the rating requirements.

20. Cantor and Packard (1994, 1997) summarize selected uses of credit ratings in U.S. regulation, and BIS (2000, part I, section D) summarizes the use of CRA ratings in financial regulation in eighteen countries. Also see Gonzales et al. (2004), SEC (2003a), IMF (1999, Annex VI), and Dale and Thomas (1991).

Pillar 1 of the new capital framework redefines how internationally active banks should be required to calculate regulatory capital (BIS [2004]).[21]

Two characteristics enhance the usefulness of credit ratings in private contracting and regulation. First, ratings should be stable. That is, ratings should change only when fundamental credit risk changes, which, the CRAs argue, generally happens quite slowly. The emphasis on fundamental credit risk is consistent with the large agencies' "through-the-business-cycle" rating approach, in which transitory shocks that might affect a company's credit risk in the short term are given relatively little weight in the credit analysis process. Measures of rating stability include the frequency of rating changes, the frequency of large "multinotch" rating changes, and the frequency of rating reversals (rating actions in the opposite direction of the preceding rating action).[22]

The adverse consequences of unstable ratings in contracting can be severe. For example, rating changes, particularly downgrades, can precipitate costly contract renegotiations, and can force managers to adjust their portfolio mixes.

Conservatism is another important quality of credit ratings used in contracting. Ratings are deemed "conservative" if a greater level of verification is required for credit rating upgrades than for downgrades (Watts [2003]). Conservatism is a useful attribute in that it reduces the risk that a business will be portrayed as being financially stronger than it really is.

The multiple roles played by credit ratings create conflicting incentives for the large CRAs. As information suppliers, the large CRAs are expected to change ratings promptly in response to changing conditions and to make ratings information widely available to the public at no charge. Their role in contracting demands, however, that they be relatively cautious in taking rating actions to promote ratings stability. Because of the existence of contractual provisions such as rating triggers (discussed below), ratings downgrades—particularly from investment grade to noninvestment grade—can have consequences for the company far beyond that of increasing its cost of capital.[23]

3. Credit Rating Agency Disclosure Practices

Three concerns about CRA disclosure practices have been raised. CRAs might (1) fail to adequately disclose information about their procedures;

21. For discussion and analysis of the role of credit ratings in the new capital adequacy framework, see Altman, Bharath, and Saunders (2002), Altman and Saunders (2001), Cantor (2001), and Linnell (2001).

22. See Cantor and Mann (2003) for further discussion.

23. The credit rating industry has been sensitive to this conflict for some time. Cantor (2001) asserts that the widespread use of ratings in regulation might impair the quality of credit ratings (from an information perspective) over time by creating adverse incentives. Also see Cantor and Mann (2003) and IMF (1999).

(2) selectively disclose material information to their subscribers; and (3) inadvertently disclose confidential information about the entities they rate.

3.1 Disclosure Adequacy

The U.S. Congress, the SEC, and IOSCO agree that CRAs should freely disclose information about their ratings procedures, analytical methods, and criteria.[24] Similarly, witnesses at SEC hearings call for more information about CRA analyst assumptions, expectations about the issuer's financial performance, and industry trends (SEC [2003a, 2003b]).[25] Many users of credit ratings are frustrated by what they refer to as the almost-total mystery surrounding analyst meetings, as well as follow-up and monitoring communications. It is predictable that users of credit ratings would demand more information than CRAs willingly disclose, because the disclosed information is available to the public at no charge, while the CRAs incur disclosure costs.[26]

Many promising research topics fall within the area of disclosure adequacy. Little (if any) descriptive evidence has been published on *any* of the disclosure issues raised by the SEC in 2003 (see Exhibit 1). Surveys on user and issuer perceptions have been published, but no information has been disclosed about what the agencies actually do.[27] Descriptive evidence on what CRAs disclose about their procedures and analytic methods, and their methods of information dissemination, would provide an important starting point for further work and would be of great interest to legislators and regulators. For example, evidence on the types and amount of credit rating information freely available on CRAs' Web sites would be highly useful.

Researchers could document the extent to which CRAs conform to IOSCO's (2003b) disclosure guidelines. IOSCO recommends that rating agencies disclose the following: (1) the meaning of each rating category; (2) the definition of

24. IOSCO (2003a) states that "Transparency in the rating process benefits both investors and issuers. Investors are given information to help assess the quality of a CRA's opinion for the purposes of their investment decision-making. Issuers, on the other hand, are reassured of the fairness of the rating process and encouraged to provide issuers with the information CRAs need in forming their opinions."

25. Buy-side analysts in particular seek more detailed information about the rationales behind rating decisions and the information on which the agencies rely. See testimony of Cynthia L. Strauss, Fidelity Investments Money Management Inc., and Deborah A. Cunningham, Federated Investors, Inc. in the SEC Hearings Transcript (SEC [2003b]).

26. In theory, CRAs will voluntarily disclose only so far as the expected marginal benefit of disclosure exceeds the expected marginal cost. The benefits to the CRAs of increased disclosure include the following: (1) stronger reputation and credibility; (2) a higher-quality credit ratings "product" that the marketplace will value; and (3) a better chance of preempting increased statutory or regulatory requirements or oversight. Potential costs of increased disclosure include the following: (1) release of proprietary information to competitors; (2) release of proprietary information to users of credit ratings, who then might no longer require the agencies' services; and (3) increased vulnerability to litigation.

27. The surveys provide useful information but need to be interpreted with caution. For example, a recent report by the AFP (2004) was based on a survey having a response rate of slightly less than 10 percent.

default; (3) the time horizon the CRA used when making a rating decision; (4) historical default rates of CRA rating categories and whether the default rates of these categories have changed over time; and (5) whether a rating is unsolicited.[28]

Another disclosure-related issue for accounting researchers concerns what the issuers disclose. The SEC has asked whether issuers should improve the extent and quality of their disclosures, including disclosures related to the existence and impact of rating triggers, conditional elements of important financial contracts, short-term credit facilities, special purpose entities, and material future liabilities. The first step toward providing an answer to the SEC is to document current practice in this area.

3.2 Alleged Selective Disclosure to Subscribers

Two issues related to selective disclosure are (1) the possible release of information concerning a rating action to subscribers before public issuance of the rating; and (2) the extent to which information concerning a rating is made available to subscribers but not to the general public. These questions are important because it is widely agreed that the rating agencies whose ratings are used for regulatory purposes under SEC rules and regulations (i.e., the NRSROs) should publicly disseminate their ratings widely and at no cost (SEC [2005b]).

The three principal CRAs state that they disclose letter ratings and commentary to subscribers and to the public at the same time. Some background information related to the issuer and its industry, however, is provided to subscribers only. Subscribers have better access to CRA analysts for discussion of ratings actions. Little systematic evidence has been presented on the selective disclosure issue to date.

Researchers can provide useful evidence by documenting what the large CRAs make available to subscribers, what they publicly disclose, and when the various disclosures are made. Analysis of documentary materials (written and Web-based) would be informative. Evidence on less formal contacts (such as telephone conversations) may be difficult to obtain. Interviews and carefully designed surveys might shed light on these matters, and thus add to the currently limited evidence.

3.3 Maintaining Confidentiality

The SEC's Regulation Fair Disclosure (Reg FD) prohibits selective disclosure of nonpublic information; however, it grants issuers a conditional exception for information disclosed to rating agencies, provided that the information is used solely to prepare a credit rating. CRAs state that this unique access facilitates

28. The first four disclosure items are the same as the recommended CRA disclosures presented in the new Basel II framework (BIS [2004]). The Investment Company Institute (2003) recommends that NRSROs disclose their policies and procedures for addressing conflicts of interest, as well as their methodologies used to evaluate the material risks involved with types of financial instruments.

and improves the credit rating process, although they also say they can produce reasonable credit ratings without it. The Reg FD exemption benefits issuers, because it allows them to disclose freely to the CRAs without violating the regulation.

One witness at the SEC hearings said that if confidential information makes a difference in the rating decision, then that information is material and should be disclosed to credit rating users.[29] Issuers have made it clear, however, that they're willing to make this information available to the agencies only on the condition that it remains confidential. Without this assurance, there would be no disclosure at all, which might deprive the rating agencies of important information and result in a lower-quality work product.[30]

The three principal CRAs generally ask issuers to review all ratings for factual (not editorial) information and commentary before public release to protect against misuse and unauthorized disclosure of nonpublic information. With this approach, the issuer is the last line of defense to prevent the release of its confidential information. CRAs have firewalls to insulate this information from their nonratings businesses. The effectiveness of such firewalls would be exceptionally difficult to assess, however, because such an assessment would require access to (and the ability to process) all internal communications within the agency.

4. Potential Conflicts of Interest

A potential conflict of interest exists when a CRA has an economic interest in basing a credit rating on anything other than an issuer's creditworthiness. IOSCO (2003a) states that "[p]erhaps the single greatest concern facing CRAs is identifying and addressing potential and actual conflicts of interest that may inappropriately influence the rating process." CRAs acknowledge the existence of potential conflicts and agree that clear (and consistently enforced) structures and procedures must be in place to counteract them. Thus, the debate is not over whether these potential conflicts exist, but over whether the agencies are managing them adequately.

4.1 Charging Issuers for Credit Ratings

All CRAs were supported by paid subscriptions until the early 1970s. This structure became unworkable for two reasons. First, the rapid spread of low-cost

29. See testimony of Cynthia L. Strauss, Fidelity Investments Money Management Inc. (SEC [2003b]).

30. A senior executive of Ford Motor Company testified before the SEC that "[I]f we were required to observe FD with the ratings ... there is no way that we would release confidential product plans for future years and data of that type, which could be used by our competitors" (SEC [2003b]). More generally, some have proposed that issuers use the credit rating process as a way to incorporate inside information into assigned ratings without disclosing specific details to the public (e.g., Kliger & Sarig [2000]).

copiers created an unmanageable "free rider" problem. Also, the rapidly growing demand for credible ratings required the agencies to assemble expensive teams of well-trained analysts that could not be supported by subscription revenues alone. For these reasons, the principal agencies began to charge issuers for their credit ratings, and issuers were willing to pay these rating fees because they benefited from having these ratings (Cantor & Packer [1994]).

Some people argue that a CRA's dependence on fees from issuers might encourage the CRA to issue more favorable ratings and to be less diligent in probing for negative information (SEC [2003a, 2005b]). The large CRAs respond that there is no connection between credit analysts' compensation and the relationship between the agency and the issuer, and that credit analysts work independently from business development staff.[31] Certainly, the relationship between an issuer and the credit analyst is nothing like the relationship the issuer has with the engagement partner of its external audit firm or with the partner in charge of its account at its main outside law firm. The credit analyst only has infrequent personal meetings with company management, is responsible for rating dozens of issuers, and is not paid based on any relationship with any issuer.

Only a few empirical studies have examined the effects of potential conflicts arising from a CRA's reliance on issuer fees. Covitz and Harrison (2003) hypothesize that if conflicts of interest strongly influence CRAs, then CRAs should be slower in issuing credit rating downgrades (1) for their larger clients, and (2) in cases in which the rating changes from investment to noninvestment grade. The authors then argue that if such conflicts are significant, greater market anticipation will be observed for credit rating downgrades in these situations.[32]

Covitz and Harrison (2003) conclude that reputational incentives, not conflicts of interest, influence the CRAs. Specifically, they find that market anticipation of credit rating changes is *less* for large issuers and issuers that fall from investment grade to noninvestment grade. The authors acknowledge that their reliance on monthly (versus daily) spread data reduces statistical power. The analysis assumes that any observed across-issuer differences in market anticipation are due to differences in conflicts rather than to other factors. The assumption that conflicts of interest fully explain delays in ratings downgrades from

31. This is in contrast to the situation that existed until recently at investment banks, in which some equity research analysts were paid bonuses for participating in efforts to gain underwriting business and there was a free flow of information and contacts between the business development and research analysis groups.

32. Empirical tests use as a measure of the anticipation of credit rating downgrades the ratio of the "prior period spread change" to the "total period spread change." The prior period spread change is the spread change measured over the months leading up to, but not including, the month of a credit rating change, and total period spread change is the prior period spread change *plus* the spread change during the month of the credit rating change. Spreads are computed relative to other corporate bonds of matching maturities and credit quality. (The spread of a bond generally refers to the difference between that bond's yield and the yield of a Treasury bond with the same maturity. Treasury bonds are considered risk free; therefore, the spread indicates the bond's risk premium.)

investment to noninvestment grade is also incorrect because large CRAs have significant other incentives to delay the issuance of rating downgrades.[33]

Stronger evidence on CRA's potential conflicts of interest might be obtained by the following: (1) using better proxies for market anticipation (such as might be constructed using daily equity or bond returns); (2) controlling for potentially relevant explanatory variables; and (3) developing additional measures of ratings timeliness. Future research might also (1) identify further issuer characteristics and situations in which the greatest conflicts are expected, and (2) examine a more complete set of CRA practices than timeliness alone. Results from this research will do much to show whether further legislation or regulatory action is warranted in this area.

4.2 Ancillary Advisory Services

Some CRAs have developed ancillary advisory services that capitalize on their reputations and expertise in risk analysis. For example, all three principal CRAs offer customized credit risk management services and quantitative tools (e.g., probability of default and portfolio modeling) through separate divisions. The provision of these services has led to charges of conflict of interest.

One activity that has been criticized is that of rating banks and, at the same time, selling them data, analytics, and models to help in the design or improvement of existing internal risk systems. One critic states that the CRA is "highly unlikely to downgrade a bank's risk capabilities if the bank has bought one of its risk systems." In a rebuttal to this criticism, one CRA employee pointed out that the firm's specialist unit that provides risk management tools is firewalled from ratings activities.[34]

Researchers have yet to support accusations of unmanaged conflicts arising from the provision of ancillary advisory services. Documenting inappropriate behavior would be extremely difficult, however, because doing so would require access to internal communications that would be typical, for example, of a criminal investigation by the U.S. Department of Justice.

One research suggestion is to identify the issuers purchasing ancillary services and then determine whether, for those issuers, relative to a control group (1) ratings are upwardly biased, or (2) rating downgrades are less timely. Potentially relevant explanatory factors would have to be controlled for, however, and achieving such control is exceptionally difficult.

5. Alleged Anticompetitive or Unfair Practices

The large CRAs have been accused of using aggressive competitive practices in an abusive way to maintain their dominance (Nazareth [2003]). Little evidence is available on CRAs' possible unfair practices, but the lack of such evidence is

33. See Butler and Rodgers (2003) for additional evidence.
34. See Veverka (2003).

no surprise. To provide empirical evidence of such unfair practices, researches would need not only to show that a certain pattern of behavior exists, but also to demonstrate that it does not have an innocent explanation. The strongest evidence supporting the existence of unfair practices is expected from parties that are harmed, and this evidence may not be publicly available.

5.1 Unsolicited Ratings

Standard & Poor's and Moody's (but not Fitch) rate all large taxable corporate bonds publicly issued in the United States, whether solicited (requested) or not. The rationale for this practice is that if all securities are rated, an issuer cannot avoid ratings by *not* requesting them, and a self-selection process in which only low-credit-risk issuers are rated cannot develop. A small ratings agency may use unsolicited ratings to establish its reputation, as will a larger agency seeking to expand its business into new sectors, or to provide comprehensive ratings coverage. Here, the rated issuer often cooperates by supplying information to the CRA.[35]

Some critics have charged that rating agencies may have used coercive practices to induce issuers to pay for ratings that they did not request (Nazareth [2003]). Little empirical research supports these charges. The one lawsuit brought against a CRA in this regard was dismissed without going to trial, and a three-year investigation by the Justice Department resulted in no prosecutions.[36]

If the critics' charges are valid, unsolicited credit ratings should be systematically lower than solicited ratings after controlling for all other potentially relevant factors, such as CRA, issuer characteristics (including credit risk), and time. Following this logic, Poon (2003) examines the credit ratings of 256 issuers rated by S&P in fifteen countries during 1998–2000. She finds that unsolicited ratings are lower than solicited ratings, but also that issuers who choose not to obtain ratings have relatively weak financial profiles, suggesting that self-selection might explain the difference. Poon also finds, in the Japanese subsample, that mean unsolicited ratings are lower than mean solicited ratings. This result must be interpreted with caution. Although Poon controls for financial profile, her test uses only 64 of her 295 Japanese sample credit ratings (32 matched pairs). Multiple regression or similar approaches would have allowed her to analyze all 295 sample ratings and achieve better control of potentially relevant explanatory variables. Additionally, the credit ratings industry in Japan was unstable during the sample period, with the number of S&P-issued ratings more than doubling between 1998 and 2000.[37]

35. Refer to Cantor and Packer (1994) and BIS (2000) for further discussion of unsolicited ratings.

36. The Justice Department's inquiry included an examination of whether Moody's used the threat of unsolicited ratings to coerce issuers to hire the agency for credit rating purposes. See Gilpin (1999).

37. Refer to Cantor and Packer (1997) for evidence on systematic between-agency differences in average ratings and for evidence as to whether issuers who obtain additional ratings from CRAs that issue higher average ratings do so to clear regulatory hurdles.

5.2 Notching

Fitch Ratings claimed at one point that S&P and Moody's tried to drive it out of certain structured financial products markets by using "notching"—the practice of lowering ratings on, or refusing to rate, securities issued by asset pools (such as collateralized debt obligations)—unless a large share of the assets within those pools also were rated by them (Nazareth [2003]).[38]

Moody's responded to allegations of unfair notching by commissioning an independent research study of the ratings process.[39] The study's results are inconclusive, leaving the issue unresolved, which should come at no surprise. The challenges of designing and conducting an effective study of notching practices are daunting. As with unsolicited ratings, a successful investigation would require access to and the ability to process a huge volume of internal company communications. This would require resources on a scale normally not available to academic researchers.

6. Diligence and Competence

The scandals of 2000–02, particularly Enron and WorldCom, led to intensified criticisms of the large CRAs. In particular, it was claimed that CRAs' failure to lower Enron's credit rating below investment grade until only a few days before Enron's bankruptcy proved that they were woefully lacking in diligence and competence.

Specific criticisms of CRAs' diligence and competence in dealing with Enron are that they (1) failed to ask sufficiently probing questions of company management; (2) did not effectively use their special access to confidential information provided under Reg FD to uncover the truth about Enron; and (3) as a result, failed to provide timely and high-quality information on Enron's true condition to financial markets. It also was said that these alleged failings were inherent characteristics of the entire credit rating industry.

Important lessons were learned from these scandals. As discussed below, at least two major agencies made extensive changes to their analytic procedures, and one of them decided that their analysts needed to be more probing and skeptical in the questions posed to company management. Ultimately, however, CRAs rely on the company's external auditors for assurance that its financial disclosures are accurate and conform to Generally Accepted Accounting Principles (GAAP), and also rely on in-house and external lawyers for assurance that the company's operations conform to legal requirements. The agencies are in no position to do the auditor's or the lawyer's job. If management provides false or misleading information, and its auditors and lawyers facilitate or do nothing to

38. The term "notching" has been used to refer to a variety of practices. For example, see S&P (2005).

39. See Carron, Dhrymes, and Beloreshki (2003).

stop the deception, the agencies can do little to defend themselves and those who rely on their ratings. There is simply no substitute for a credible, effective external audit.

6.1 Alleged Failure to Ask Sufficiently Probing Questions

The large CRAs were sharply criticized for not asking more detailed and probing questions of Enron management, using the special access to information provided under Reg FD (e.g., U.S. Senate [2002]). For example, Senate staff characterized CRAs as "outside watchdogs" (U.S. Senate [2002]), although the agencies have never held themselves out as such.[40] Given that Enron's managers already had lied to the CRAs (and others), there is every reason to believe that the closer questions would have come to exposing the truth, the more Enron's managers would have lied.[41]

It's easy to say after the fact that the agencies should have been more aggressive and probing, but it is much harder to reconstruct what they should have known at the time. Most corporate insolvencies come after a prolonged period of financial stress. Enron's collapse was unusually fast. As late as the fourth quarter of 2000 (one year before its bankruptcy), Enron appeared to be highly profitable. We know now that this appearance was misleading[42] and that Enron's structure made it extraordinarily vulnerable to adverse economic circumstances. In fact, Enron's structure was so complex and highly leveraged that possibly only a few highly placed executives had any idea of its exceptionally fragile nature. Many other types of market participants, such as sell-side analysts and leading fund managers, also were misled (see Healy & Palepu [2003]).

To assess whether CRAs' questioning is sufficiently probing, one would have to develop an objective and measurable standard of interviewing agreed on by industry participants. It is not clear that this can be done, but similar standards *have* been developed for the audit industry, and it may be possible to do so for the credit rating industry as well.

Accounting researchers might provide useful evidence and analysis on the SEC's question of whether NRSROs should incorporate general standards of diligence in performing their ratings analysis (see Exhibit 1). For example, what are

40. Unlike an external auditor, a CRA is not charged with determining whether an entity's financial statements fairly present its financial position and results of operations in conformance with GAAP. The CRA relies on the outside auditor to make this determination, and lacks the necessary time, access, and expertise to do so itself.

41. The account of how internal auditors at WorldCom discovered the fraud there illustrates how hard it can be to detect fraud. At WorldCom, the company's internal auditors were denied access to key financial documents. To gather information on what they suspected were fraudulent accounting practices, the head of internal audit, and two of her staff, had to surreptitiously gain access to WorldCom's highly restricted computerized accounting systems, full access to which normally was given only by permission of Scott Sullivan, WorldCom's chief financial officer. See Pulliam and Solomon (2002).

42. Subsequent analysis by forensic accountants has determined that Enron actually lost money in 2000, despite reporting large profits.

the key similarities and differences between the roles of CRAs and auditors in capital markets, and what do these imply for how CRAs should operate? Should CRAs be like auditing firms, for which Generally Accepted Auditing Standards (GAAS) prescribe many of the tasks, methods, and types of communication used to perform an audit, or should they be more like newspapers and magazines, which have much more freedom to use individual methods and techniques?[43]

6.2 Use of Special Access to Confidential Information

Some critics argue that CRAs do not effectively use their access to confidential information provided under the Reg FD exemption. This exemption improves CRAs' access to confidential information only so far as company managers disclose such information. If managers are not forthcoming, or if they lie, the exemption will not provide improved disclosure.

Jorion, Liu, and Shi (2005) argue that Reg FD potentially increases the information value of credit ratings, because under Reg FD equity analysts no longer have access to companies' confidential information. The authors find that the stock price response to rating changes increased after Reg FD went into effect. This evidence is consistent with the view that CRAs *do* use their access to confidential information and that the confidential information provided by company managers is credible. However, Jorion, Liu, and Shi's (2005) evidence does not address whether the large CRAs take "enough" advantage of the Reg FD exemption (however defined).

Researchers might survey company managers to gather evidence on the following: (1) the nature of CRAs' questions; (2) the types of confidential information disclosed in response to those questions (or at the company's initiative); and (3) the frequencies of relevant corporate disclosures that would not have been made in the absence of Reg FD. Such evidence could show the extent to which CRAs use the Reg FD exemption, and therefore could show whether the exemption is achieving its intended purpose.

6.3 Information Timeliness and Quality

6.3.1 Alleged Inadequate Warning of Major Failures (such as Enron)

Enron's collapse is widely regarded as a "big miss" by the large CRAs.[44] Given the information that was available to the CRAs, exactly when should Enron have lost its investment grade rating? This question highlights the difficulties created by the conflicting roles of NRSROs. Because these agencies knew that downgrading Enron below investment grade would put the company into bankruptcy (caused by rating triggers that a downgrade would activate), it may have been

43. Because each agency has its own methods and its own view of which information is most important, the "journalism" model is much closer to current CRA practice.

44. The case of Enron is examined here because it has received, by far, the most attention from the media, the U.S. Congress, and the SEC.

reasonable for them to be more hesitant to issue a downgrade than smaller firms (such as Egan-Jones). These smaller firms' ratings are not used for contracting, and thus a downgrade would not have had such a dramatic consequence.[45]

Even so, Moody's staff did acknowledge that it would have been better to ask Enron management more questions, although the answers might have been false or misleading (Morris [2002]), and Moody's and S&P have launched several initiatives to improve the quality of their rating procedures in the wake of Enron (Moody's [2003]; Bolger [2005]). Finally, Frost and Kim (2006) find that the CRAs have become quicker to downgrade issuers since Enron's collapse.[46] Such stringency, however, does not necessarily mean improved timeliness or accuracy.

6.3.2 Alleged Superiority of Quantitative Models

Some critics assert that quantitative models provide better credit risk assessments than those provided by the larger CRAs. Attempts to determine the "superiority" of purely quantitative approaches versus approaches used by the large CRAs are misguided. The two approaches differ along many dimensions; in particular, they differ in terms of time horizon and the resulting ratings volatility. At one extreme, the pure "point-in-time" quantitative methods involve a short time horizon and high volatility. At the other extreme, the traditional CRA approach is closest to a pure "through-the-business-cycle" method.[47]

Although the large CRAs use quantitative models extensively, their heavy reliance on human judgment becomes important when unexpected events or developments take place that strictly quantitative methods cannot incorporate. Thousands of securities are not publicly traded or are highly illiquid, and therefore, they are not well-suited for market-based default prediction models.

6.3.3 Credit Ratings Are Not Associated with Bond Values

Some critics claim that credit ratings are only weakly correlated with bond values. For example, *The Economist* (2002) argues that "... it seems a bond's rating tells you ever less about the price investors are willing to pay." A partial explanation for the declining association between bond prices and credit ratings is that bond prices have become more volatile. Additionally, bond prices reflect much more information than credit risk.[48] As a result, the use of bond prices (or spreads) as a benchmark for evaluating the "usefulness" of credit ratings may be misleading.

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45. In light of what we know now, even Egan-Jones was wildly "optimistic" in its assessment of Enron's creditworthiness.

46. See Blume, Lim, and MacKinlay (1998) and Jorion, Shi, and Zhang (2007) for evidence on general trends in CRA stringency over time.

47. See Gonzales et al. (2004), Altman (2002), Antonov (2000), and Robbe and Mahieu (2005) for further comparisons of quantitative versus judgmental credit risk rating systems.

48. See Elton, Gruber, Agrawal, and Mann (2001, 2004), John, Lynch, and Puri (2003), and Longstaff and Schwartz (1995).

Much empirical evidence indicates that credit ratings *are* associated with credit risk and bond spreads.[49] But at what level is the association "large enough," considering the different factors that influence bond prices and credit ratings?

6.3.4 Credit Ratings Do Not Convey New Information to Financial Markets

Some critics claim that credit ratings provide almost no information to the capital markets.[50] A large body of evidence refutes these critics.[51]

Hand, Holthausen, and Leftwich (1992) and many other studies find that announcements of credit rating downgrades are associated with a greater magnitude of abnormal market returns than announcements of upgrades. Jorion, Liu, and Shi (2005) discuss possible interpretations of the "downgrade effect," noting that downgrades might impose real costs on the affected firms and that the fall in stock price might represent the capitalized value of higher borrowing costs. Jorion, Liu, and Shi (2005) do find, however, that the market reaction to upgrades, insignificant in many prior studies, became significant after Reg FD went into effect.

6.3.5 Research Suggestions: Diligence and Competence

6.3.5.1 Factors associated with timeliness and quality. Some cases of CRAs "missing" large-scale company failures, such as Enron and WorldCom, involved egregious fraud by company managers. Analysis of the relative importance of various factors (such as issuer fraud) associated with the timeliness and accuracy of credit rating actions would provide useful evidence to the policy debate. In particular, a finding that "misses" are highly correlated with issuer fraud would indicate that the performance of the rating agencies is not the problem in this area.

6.3.5.2 Information value of credit watches and other commentary. Some CRAs provide extensive commentary along with letter ratings. Further analysis of the role of commentary in the credit rating process is warranted. For example, in what situations are CRAs most likely to issue credit watches, and what is the information value of credit watches?[52]

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49. See Norden and Weber (2004) for summaries of many relevant studies.

50. Some of the more extreme criticisms (e.g., Partnoy [1999, 2005]) should be interpreted with great care. Hill (2004) evaluates many of these criticisms.

51. Norden and Weber (2004) summarize seventeen studies that investigate the market response to credit rating announcements. Evidence is presented in Jorion, Liu, and Shi (2005); Gande and Parsley (2005); Hull, Predescu, and White (2004); Norden and Weber (2004); Dichev and Piotroski (2001); Kliger and Sarig (2000); Goh and Ederington (1993, 1999); Cantor and Packer (1996); Hand, Holthausen, and Leftwich (1992); Reiter and Ziebart (1991); Holthausen and Leftwich (1986); Beaver, Shakespeare, and Soliman (2005); and Chung, Frost, and Kim (2006).

52. Norden and Weber (2004) summarize several studies that document the information value of credit watches. Also see Hamilton and Cantor (2004), Griep and Parisi (2001), and Chung, Frost, and Kim (2007).

6.3.5.3 Economic consequences of rating triggers. A rating trigger is a contractual provision that gives lenders specified rights (e.g., to accelerate loan repayment) when a borrower's credit ratings decline to a certain level.[53] The operation of rating triggers can precipitate liquidity crises, sharp declines in investor confidence, or even default or bankruptcy. When Enron's credit rating was downgraded below investment grade, rating triggers set off a process that caused bankruptcy within days.[54]

Although the adverse consequences of rating triggers are widely recognized, researchers might investigate them in a more formal way. For example, the relationship between the use of rating triggers and the availability and cost of capital would be important in assessing their value. If, for example, it could be shown that the use of rating triggers increases the availability or lowers the cost of capital, then this fact could be used to argue for allowing the use of rating triggers, even though in some cases they have had serious, observable adverse consequences.

6.3.5.4 Influence of conflicting incentives. Researchers should further investigate how the large CRAs deal with conflicting incentives arising from their dual roles in valuation (information dissemination) and contracting. The conflicting incentives may be unavoidable. If credit ratings are not used for regulatory purposes, what is the alternative? The NRSRO designation originated because credit ratings have information value. Further research could develop and test models of how CRAs optimize across their conflicting rating goals. A more complete understanding of the role of CRAs in contracting would facilitate more realistic expectations on the part of lawmakers and regulators.

Empirical researchers have begun to provide evidence on the effect of conflicting incentives. Beaver, Shakespeare, and Soliman (2006) hypothesize that Moody's ratings and practices differ systematically from those of Egan-Jones (a small agency that sells credit ratings to subscribers), because Moody's ratings are used in contracting and regulation, while Egan-Jones' are not. They find that Moody's is more conservative (as defined in Section 2.3) and that its letter ratings are more stable and less timely, relative to Egan-Jones. Johnson (2003) provides evidence consistent with the view that NRSRO ratings are less timely than non-NRSRO ratings.

53. See Stumpp (2001) and Bhanot and Mello (2006) for further discussion and analysis of rating triggers. Along with loan agreements, rating triggers are used in certain types of agreements between a company and parties with which it conducts business, and in agreements covering mergers and acquisitions and other corporate actions. For discussion and detailed examples, see Stumpp (2001).

54. As noted above, the NRSROs were fully aware that that would happen, and this may partially explain why they put off the downgrade until they had no alternative.

7. Conclusions

This study assesses the validity of widespread criticisms of the large, "nationally recognized" CRAs by reviewing and analyzing evidence from empirical accounting and finance research studies. Although little rigorously gathered empirical evidence supports these criticisms, there are many open questions and unresearched topics for which accounting research could make a contribution. Because accounting researchers are well versed in such areas as disclosure analysis, capital market tests, and the operation of financial intermediaries and external auditors, their expertise can be applied directly to many of the issues raised and discussed in this review.

This paper gives particular attention to the case of Enron because that company's failure occasioned the sharpest and most pointed criticism of CRAs. The role of the CRAs in Enron's collapse is hard to assess, however, because of such confounding factors as the pervasive dishonesty of the company's top management and the gross negligence (if not outright complicity) of its external auditors. It is unclear how any proposed reforms or regulatory changes to the credit rating industry would have improved its performance in this case.

Numerous suggestions for potential accounting research are given throughout this paper. Evidence from these studies, if they are conducted, would provide useful input to lawmakers and regulators as they continue to assess the role of CRAs and determine whether additional legislation or regulatory oversight of the industry is warranted.

A growing number of studies provide useful evidence on the role of credit ratings in capital markets, although they do not directly evaluate criticisms of the NRSROs. These studies include those motivated by recent high-profile cases of corporate fraud (e.g., Ashbaugh-Skaife, Collins, & LaFond [2006]) and those that provide further evidence on such topics as rating determinants and stability.[55] Researchers are developing conceptual models that incorporate key institutional details for use in empirical tests. For example, Boot, Milbourn, and Schmeits (2006) include credit watch procedures in their model of credit ratings to provide empirical predictions and insights. Progress in these areas will facilitate research that directly addresses policy issues related to CRAs.

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