

Assessing Credit Rating Agencies by Bond Issuers and Institutional Investors

H. Kent Baker* and Sattar A. Mansi**

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*University Professor of Finance
American University
Kogod School of Business
Department of Finance and Real Estate
4400 Massachusetts Avenue, NW
Washington, D.C. 20016
e-mail: kbaker@american.edu
(202) 885-1949

** Corresponding Author
Assistant Professor
Texas Tech University
College of Business Administration
Area of Finance, Box 42101
Lubbock, TX 79409
e-mail: smansi@ba.ttu.edu
(806) 742-3350

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ABSTRACT

We examine how a sample of publicly traded corporate bond issuers and institutional investors, namely corporate bond funds, assess the four major nationally recognized credit rating agencies and their role in capital markets. The results show that these issuers and institutional investors differ dramatically in their assessments about rating agencies. Specifically, the majority of institutional investors require, as a matter of formal policy, only one rating when they buy rated corporate bonds, but most issuers obtain two or more ratings. Issuers and institutional investors also differ in their assessments about whether ratings accurately reflect creditworthiness and whether agencies maintain timely ratings. In aggregate, the results suggest that differences between bond issuers and institutional investors reflect the different roles that rating agencies provide in the market place.

Keywords: credit ratings, bond issuers, institutional investors

1. INTRODUCTION

In the past twenty years, the role and the complexity of financial markets have grown tremendously, causing a dramatic change in the financial services industry. Issuers, investors, and government regulators have increased their reliance on the opinions of credit rating agencies for corporate financing, investment decisions, and risk management. According to Jewell and Livingston (1998), these parties have long considered bond ratings an important part of the credit-certification process in the issuance of public corporate debt. Although conflicting views exist on the importance of bond ratings, evidence provided by Reiter and Zeibart (1991), Ederington, Yawed, and Roberts (1987), and Liu and Thakor (1984) shows that ratings bring information to the marketplace beyond that conveyed by publicly available financial information alone. In contrast to equity issuance where investment bankers set the initial price for a stock, more than one rating agency often independently certifies the credit quality of a bond issue.

We examine how bond issuers and investors, the two most important participants in the credit rating industry, assess credit rating agencies. Issuers are the agencies' "suppliers" while investors represent their "consumers." This approach permits looking at issues related to bond ratings from different sides of the rating process. As suppliers, corporate bond issuers rely on credit ratings to ensure the best possible interest rate for their securities; as consumers, bond investors depend on credit ratings to determine the creditworthiness of companies in which they invest. Specifically, we compare a sample of industrial bond issuers to those of institutional investors, represented by corporate bond funds, on various issues involving credit ratings. We focus on ratings issued by the four major Nationally Recognized Statistical Rating Organizations (Norcross) in the United States: Moody's Investors Service, Inc. (Moody's), Standard & Poor's Corporation (S&P), Duff & Phelps Credit Rating Co. (DCR), and Fitch IBCA (Fitch).

Although others have examined the opinions of various market participants about rating agencies, only Ellis (1998) has sought answers from *both* issuers and investors.¹ Ellis surveyed the chief financial officers (CFOs) of 200 investor-owned utilities and 400 institutional fixed-income investors (analysts, portfolio managers, or principals). His findings suggest that issuers and investors often view bond ratings from a different perspective. For example, issuers often obtain ratings from three or more agencies, but investors usually require only one rating. Investors, unlike issuers, would like to see ratings updated immediately to reflect all relevant information, even if a change is likely to be reversed in the near future.

Our study is important for three main reasons. First, our findings add to the very limited survey research on credit rating agencies. Gathering and interpreting data about the attitudes, perceptions, and behaviors of issuers and investors provide further knowledge about market participants. Because Ellis (1998)

¹ See, for example, "Rating the Rating Agencies" (1998).

examines only utilities, his results may be unrepresentative of other types of issuers.² In our study, we investigate a different set of corporate bond issuers, namely industrials, representing about 70% of the fixed-income market. Additionally, we survey a different sample of institutional investors, specifically corporate bond funds to include both investment grade (BBB or above) and non-investment grade (below BBB) industrial bonds.

Second, our study complements and extends other empirical research and provides valuable insights about the importance of bond ratings, the perceived accuracy and timeliness of ratings, the factors contributing to creditworthiness, and changing credit quality and standards.

Third, our study examines view of issuers and institutional investors about not only the two largest rating agencies – Moody's and S&P – but also smaller rating agencies DRC and Fitch. Previous studies on bond ratings are typically confined to the two major rating services because they rate almost all publicly issued, Securities and Exchange Commission-registered corporate debt. Research by Jewell and Livingston (2000) shows that Moody's and S&P only rated about 60% of the bonds in their sample over the period January 1991 through March 1997. Therefore, DCR and Fitch provide an additional source of information to investors. These smaller agencies may be able to provide a more flexible or more informed approach to judging the default probabilities of individual bond issues. Because firms may believe that Moody's and/or S&P have misjudged them, and have set too low a rating, some seek out a third rating.

The results suggest that fundamental differences exist between the role of ratings for issuers and investors. This finding helps to explain why issuers typically obtain multiple bond ratings while investors require by policy only one or at most two ratings. Although issuers and investors agree on the relative rankings of the four major rating agencies, their reasons differ for ranking an agency's corporate bond ratings the best. Issuers and investors also differ on whether bond ratings accurately reflect their issuers' creditworthiness and whether agencies maintain timely ratings.

2. RESEARCH QUESTIONS AND HYPOTHESES

Although we use survey research methodology to solicit opinions about many issues involving bond ratings, we investigate four major research questions:

1. *Does the number of rating agencies hired by issuers to rate a bond differ from the number of ratings required by institutional investors to buy corporate bonds?*

² According to the Lehman Brothers Fixed Income database, utilities represent a small part (about 10%) of the U.S. fixed-income market.

We expect that issuers hire more credit agencies to rate a bond issue than institutional investors require to buy rated corporate bonds. As previously mentioned, issuers and investors may have different reasons for needing bond ratings. According to Hsueh and Kidwell (1988), issuers are likely to require more than one rating to reduce informational asymmetry problems, which in turn reduces their borrowing costs. In the case of disagreements among the rating agencies, such as split ratings, issuers may obtain three or more ratings to help resolve the split rating. Thus, a third rating may have value as a tiebreaker. Cantor and Packer (1995) report that given the possibilities for split ratings, the decision to employ a third rating agency is non-random. They find the demand for third ratings increases with the issuer's proximity to investment-grade. Jewell and Livingston (1999, 2000) find that both Fitch and DCR credit ratings have a significant impact upon bond yields. Their results suggest that third ratings generally include information not included by the larger raters.

Institutional investors, however, should require fewer ratings than issuers for several reasons. First, these sophisticated investors have the ability to conduct independent analysis and, therefore, do not need to rely solely on multiple ratings in order to make investment decisions. Second, institutional investors are probably aware that dual rating is fairly automatic because both Moody's and S&P rate virtually all publicly traded corporate bond issues. Because ratings of these two services are very highly correlated, the majority of institutional investors should be able to rely on a single rating, instead of requiring multiple ratings.³

2. *Do issuers and institutional investors perceive any differences in the accuracy of ratings among the four major rating agencies?*

We hypothesize that both issuers and investors assess Moody's and S&P as more accurate than DCR and Fitch. As the two largest rating services, Moody's and S&P hold a dominant position among U.S. credit rating agencies and are much more active in rating U.S. corporate bonds than DCR and Fitch. Beattie and Searle (1992) find the rough equivalence in the rating standards of Moody's and S&P does not extend to other rating agencies including DCR and Fitch. If issuers and investors are aware of such differences, they should assess Moody's and S&P as providing more accurate ratings than DCR and Fitch.

From a behavioral finance perspective, issuers and investors may have several heuristic-driven biases that affect their judgment about the relative accuracy of these four rating agencies. One bias, known as *representativeness*, occurs when people make judgments based on stereotypes. That is, issuers and investors may associate the size of a credit rating agency with the accuracy of its ratings. Another bias, known as the *aversion*

³ Based on 1,398 cases in 1990 in which both Moody's and S&P assigned senior debt ratings, Beattie and Searle (1992) report a correlation of 0.97 between the ratings of the two rating agencies. They conclude that Moody's and S&P assign very similar average ratings compared to the other leading international rating agencies. Other researchers including Perry (1985), Ederington (1986), and Billingsley, Lamy, Marr, and Thompson (1985) note a rough equivalence between the ratings of Moody's and S&P.

to ambiguity, occurs when people prefer the familiar to the unfamiliar. Because issuers and investors are likely to be more familiar with Moody's and S&P than with DCR and Fitch, they may associate familiarity with rating accuracy.

3. *Do issuers and institutional investors believe that agencies maintain corporate bond ratings on a timely basis?*

We hypothesize that the assessments of issuers and investors differ significantly on whether agencies maintain timely bond ratings. Specifically, we expect that a much smaller percentage of investors than issuers believe agencies maintain up-to-date ratings. Our rationale for this belief stems from the basic difference between the role of ratings for investors and issuers, and the indirect costs of ratings borne by issuers. If investors use ratings as a source of information on creditworthiness, they should want ratings to be timely and reflect recent changes because such changes could affect the value of the bond. In addition, if investors perceive that rating agencies avoid changing a rating resulting from short-term fluctuations, which is typically the case according to Howe (1995), they should assess ratings as lagging the issuer's current status. If the primary role of bond ratings from the issuers' perspective is to certify the quality of the bond offering, they are unlikely to want frequent changes in ratings based on short-term fluctuations in their condition. Instead, issuers should want to minimize the number of times they have to go through the rating process because of the time, effort, and expense involved.

Another reason for expecting the assessments of issuers and investors to differ on whether agencies maintain timely ratings is psychological. From a behavioral finance perspective, the form used to describe the timeliness of ratings may be frame dependent. That is, issuers and investors may prefer some frames for viewing the timeliness of ratings to others, a principle known as *hedonic editing*.⁴ As discussed above, issuers and institutional investors may assess timeliness from different frames or perspectives because ratings serve a different role for each.

4. *Do issuers and institutional investors believe published ratings of corporate bonds accurately reflect their issuers' creditworthiness?*

We anticipate that the majority of issuers and investors perceive that corporate bond ratings accurately reflect their issuers' creditworthiness. That is, the four rating services examined in this study measure relative credit risks of U.S. corporate bonds with reasonable accuracy. Empirical evidence supports this notion. For example, Altman (1989) finds that market yields are generally closely related to credit ratings for U.S. corporate bonds. Brand, Kitto, and Bahar (1994) among others report that average short-term and

⁴ Shefrin (2000) provides a discussion of hedonic editing in the context of frame dependence.

long-term default rates are correlated in a sensible way with credit ratings. This evidence implies that ratings provide a useful rank ordering of credit risks.

3. DATA SOURCES

I. Sample

Our sample consists of two groups: (1) issuers, represented by 474 U.S. industrial firms with publicly traded debt and (2) institutional investors, represented by 387 mutual funds that invest primarily in publicly traded domestic corporate debt. We obtained the list of bond issuers from the Lehman Brothers Fixed Income database as of January 31, 1998. All companies surveyed had rated industrial bonds. We gathered the names and addresses of the CFOs using *Standard & Poor's Register of Corporations*, Hoover's online web site, and individual corporate web sites.

Using the Internet, we identified bond investors from a list of mutual funds provided by the Investment Company Institute and Fund Focus Inc. These mutual funds represent four types of taxable bond funds as classified by the Investment Company Institute.

- *Corporate bond funds - in general*: These funds invest two-thirds or more of their portfolios in U.S. corporate bonds with no restrictions on maturity.
- *Corporate bond funds - intermediate term*: These funds invest two-thirds or more of their portfolios in U.S. corporate bonds with an average maturity of five to ten years.
- *Corporate bond funds - short term*: These funds invest two-thirds or more of their portfolios in U.S. corporate bonds with an average maturity of one to five years.
- *High-yield funds*: These funds invest two-thirds or more of their portfolio in lower-rated U.S. corporate bonds (Baa or lower by Moody's and BBB or lower by Standard and Poor's rating services).

We developed two surveys: one for issuers and the other for investors. Each survey contained one open-end question, which asked respondents to indicate their current position or title, and 15 closed-end questions. The surveys included nine common questions in order to compare the responses from issuers and investors. The questions common to both surveys addressed such issues as the number of bond ratings necessary or desirable, the perceived accuracy and timeliness of corporate bond ratings agencies, and whether corporate bond ratings accurately reflect their issuers' creditworthiness. Both surveys focused on Moody's, S&P, DCR, and Fitch.⁵

⁵ In April 2000, which was after the completion of our survey, Fitch IBCA acquired Duff & Phelps.

Moody's and S&P are the largest and most-recognized U.S. rating services. Each rates most publicly issued, SEC-registered corporate debt and makes their ratings public regardless of the desires of the issuing firm. Thus, Moody's and S&P sometimes provide unsolicited ratings. By contrast, DCR and Fitch, as smaller bond rating agencies, rate firms only if issuers solicit a rating. If an issuer does not agree with a DCR rating, the debt-issuing firm has the option of whether to make the rating public. In the case of Fitch, the issuer has several opportunities to decide against publicizing the rating once the process has begun. All four rating agencies charge issuers fees, except in the case of unsolicited ratings, but the issuance fee and annual fee differ somewhat between the agencies. All four are full service agencies.⁶

Jewell and Livingston (1999, 2000) show that Moody's and S&P differ from DCR and Fitch in other ways. For example, Moody's and S&P rate most corporate bonds but very few bonds are rated by DCR or Fitch only. Compared with Moody's and S&P, DCR and Fitch rate higher-quality firms, on average. Also DCR and Fitch assign slightly higher ratings than Moody's and S&P. The typical firm releasing a DCR and Fitch rating is more likely to receive an upgrade.

We sent the initial surveys in mid-June, 1999 and follow-up surveys to all non-respondents in early July. Of the 474 surveys sent to issuers, we received 114 usable responses or a 24.1% response rate. The response rate from the investors was 25.8% or 100 of 387 surveys. The sample sizes are sufficiently large to draw reliable statistical inferences. We use nonparametric statistical tests, chi-square tests and Spearman rank-order correlations, to analyze our data.

II. Potential Limitations

Before presenting the results, several potential limitations of the study should be noted. First, despite receiving a high response rate for surveys of this type, the possibility of non-response bias exists. The response rate suggests that both issuers and institutional investors had considerable interest in the topic.

Second, we were unable to partition the sample into investment grade versus high yield institutional investors. Because of the small number of responses from high-yield funds compared with the corporate bond funds, we consolidated all institutional, mutual-fund investors into a single group.

Third, the choice of investors is a potential limitation. We focused only on one type of institutional investor, namely corporate bond funds. Other types of institutional and individual investors may be meaningful users of information provided by credit rating agencies. Such investors may have an entirely different stake in the information that ratings supply and may be an important constituency for rating

⁶ For a discussion of the history of these four rating agencies, see Cantor and Packer (1995), Jewell and Livingston (2000), and each company's websites (www.standardandpoors.com, www.moody.com, www.duffilc.com, and www.fitchibca.com).

information. Also, the responses from the investors surveyed may be biased because they come from only the managers and not the asset owners or guarantors. These three separate groups may have different assessments about rating agencies. Surveying other investors including asset owners and guarantors is beyond the scope of this study.⁷ Because the needs and reactions of other parties may differ from those of the institutional investors surveyed, making generalizations about all bond investors for this specific group of investors may be inappropriate.

4. SURVEY RESULTS

I. Respondent Profile

Virtually all respondents to the survey sent to bond issuers hold senior finance positions of which the most common are CFO (41.4%), vice president (30.6%), and treasurer (10.8%). The most common positions held by respondents to the survey of institutional investors are portfolio manager (37.8%), vice-president (23.5%), and senior vice-president (15.3%). No other position for either survey amounts to as much as 10% of the responses.

II. Number of Ratings

Informational asymmetry exists in credit markets where bond issuers know more about the quality of the issue than investors, yet the issuers cannot convey their superior information to investors without incurring costs. Hseuh and Kidwell (1988) point out that one way issuers can resolve the informational asymmetry problems is to use credit ratings to signal the market about the credit quality of their bonds. Specifically, a rating agency uses both publicly available information, such as accounting statements, and nonpublic information, such as confidential interviews, to assign quality ratings to individual corporate bonds. An agency uses its reputation to certify a bond's credit quality. This certification involves costs because credit rating agencies charge fees for bond ratings.⁸ Investors use bond ratings to infer the true credit quality of a bond and to price it accordingly. According to Millon and Thakor (1985), the primary value of a bond rating from the issuer's perspective lies in its certification of the debt issuer's credit quality. Using a credit rating agency for signaling also reduces the moral hazard problem of transferring information directly. That is,

⁷ According to Fridson (1999), traditional reasons for bond rating agencies such as price discovery and credit-worthiness are less important than the inherent conflict between asset owners (investors), asset managers (portfolio managers as agents of owners), and guarantors (underwriters, bond insurance companies, deposit insurance guaranty providers).

⁸ Howe (1995) reports that a rating agency charges a one-time fee for which it assigns a bond rating usually at the time of issuance and periodically reviews the issue during its life, for which it charges an annual fee.

investors face a moral hazard because they may not receive true information from bond issuers because sellers may exaggerate about their bond's true credit quality.

Bond issuers face a trade-off between fewer and more ratings. If issuers believe that a single rating eliminates any uncertainty about their true financial condition, they should minimize costs by obtaining a single rating. If, however, issuers believe that two credit ratings have a stronger certification effect than one rating, they should incur additional costs and obtain more than one rating. Hsueh and Kidwell (1988) contend that the double confirmation effect can reduce uncertainty about a bond's credit quality. Although debate exists about the economic justification of buying credit ratings from more than one rating agency, Hsueh and Kidwell conclude that two credit ratings provide additional information to the market and reduce borrowing costs. This is because the value of the added information exceeds the cost of obtaining a second rating.

Jewell and Livingston (1999, 2000) find evidence supporting the proposition that Moody's and S&P misjudge some bond issues by overlooking or misinterpreting some important information. They also find that both Fitch and DCR ratings have incremental information not included by the larger raters. In the case of split ratings between Moody's and S&P, Jewell and Livingston also show that the DCR or Fitch rating usually serves as a tiebreaker and significantly affects market yields. This evidence does not lend support to the arguments made by Cantor and Packer (1995, 1997) that the ratings of the smaller rating agencies, DCR and Fitch, may be inflated or that issuing firms may engage in "rate shopping." If the market suspects rate shopping, the artificially high rates would be ignored and third ratings would have no affect upon bond yields.

Institutional investors face an enormous information problem because of the large number of individual bond issues. Bond ratings help to reduce this problem. Unlike most individual investors, however, corporate bond funds have the ability to conduct their own internal analyses of a bond. Therefore, they may not have to rely solely on multiple ratings to assess a bond's creditworthiness.

Table 1 presents evidence involving our first research question: Does the number of rating agencies hired by issuers to rate a bond differ from the number of ratings required by institutional investors to buy corporate bonds? Table 1 shows that 97.4% of the issuers responding to our survey buy credit ratings from more than one credit agency. About three-quarters of the issuers (77.2%) hire two rating agencies and 20.2% hire three or more agencies.⁹ These findings suggest that issuers apparently believe they need multiple ratings to communicate the true state of creditworthiness to current and potential investors. An implication of these findings is that most issuers believe that the benefits of hiring more than one issuer exceed the costs. This belief involving dual bond ratings is consistent with the findings of Thompson and Vaz (1990). Based on their study of industrial issuers, they conclude that investors value a second rating. Their empirical evidence

⁹ Jewell and Livingston (2000) examine the breakdown of bond ratings from Moody's, S&P, DCR, and Fitch for 2,410 publicly traded straight debt issues during March 1997. Of these bonds, 7.5% have only one rating, 64.6% have two ratings, 22.4% have three ratings, and 5.6% have four ratings.

indicates that rational issuers should obtain two ratings because an expected positive return exists. That is, bond issues with two identical ratings have yields significantly less than issues receiving that rating from only one rating agency.

In contrast with the results reported for issuers, the majority of institutional investors (57.3%) require only one bond rating, as a matter of formal policy, before buying rated corporate bonds. The remaining 42.7% of the investors require two ratings. None of the corporate bond funds requires more than two bond ratings. When asked, “Do your firm’s policies *require* a rating for a corporate bond from any of the four major U.S. credit rating agencies?” most respondents (72.0%) answer “no”. Virtually all respondents whose firms require a rating indicate that they require Moody’s or S&P as the rating agency. Although this evidence shows that company policy typically requires that institutional investors review only one or two bond ratings, this does not mean that they do not use the information supplied by multiple and split ratings in practice. The survey focused on the number of ratings required but is silent on the number of ratings typically used in practice.

The results of the chi-square test support our hypothesis that issuers hire more credit agencies to rate a bond issue than institutional investors require to buy rated corporate bonds. As we previously discussed, a possible explanation for this result is that institutional investors are aware that issuers generally use more than one rating agency and, therefore, investors are comfortable with only one rating agency. Another explanation, which we examine in Table 3, is that institutional investors in industrial bonds typically do not require more than one rating agency because they often rely on their own internal analyses.

(Insert Table 1)

In addition, our survey asked issuers to indicate who typically decides which rating agencies to hire to rate a bond issue. About half (50.5%) of the respondents report that the person is internal, usually the CFO or treasurer. Another 40.2% of the respondents indicate that the underwriter does the hiring. The remaining responses consist of “required for indenture” (4.7%), “bond counsel” (1.9%), and “other” (2.8%).

III. Value of Multiple Ratings

Table 2 identifies the source of value for those issuers who typically hire three or more rating agencies. For the issuers of industrial bonds, the most common response is to resolve a split rating from two rating agencies (48.0%), followed by to get better coverage than provided by the agencies already hired (40.0%), and to obtain a higher or investment grade rating (8.0%).

(Insert Table 2)

Resolving a split rating may be important to issuers because it may result in a lower spread. Increasing the degree of coverage of their firm by analysts may be important to issuers when trying to sell new issues. Hiring three or more rating agencies may lead to obtaining an investment grade rating. This may be important to some issuers because without such a rating their bonds may be ineligible for investment by many institutions and funds, by either legal or policy constraints. Therefore, some corporations strive to achieve an investment grade bond rating.

Split ratings occur when two rating agencies, typically Moody's and S&P, assign a different rating to the same security. Early researchers believed that split ratings are not random errors, but reflect legitimate differences in opinion between the rating agencies on a company's credit quality. Therefore, the market valuation generally reflects only the higher or the lower of the two ratings received depending on which rating agency the market believes. For example, Perry, Liu, and Evans (1988), Liu and Moore (1987), and Billingsley, Lamy, Marr, and Thompson (1985) find that the market tends to price the bond, in terms of yield, based on the lower rating. Reiter and Zeibart (1991) and Hsueh and Kidwell (1988) present evidence that the higher rating sets the market prices, resulting in lower yields relative to similar bonds having only one rating. Ederington, Yawed, and Roberts (1987) and Ederington (1986) find no systematic pattern associated with the differences in ratings between S&P and Moody's. Several methodological limitations of these early studies make interpreting their results difficult.

Later studies, such as Cantor, Packer, and Cole (1997) and Jewell and Livingston (1998), find that neither Moody's nor S&P consistently gives higher ratings. These studies report that split ratings appear to reflect random differences on the part of rating agencies and that both ratings affect bond yields. Therefore, yields on split-rated bonds tend to be an average of the yields of the two ratings.

For example, Jewel and Livingston (1998) examine the effect of more than two ratings on bond spreads. For corporate bonds similarly rated by Moody's and S&P, they find the presence of a higher Fitch rating resulted in a lower spread. They also report that the lower the credit rating of the issue, the higher the impact a third rating has on credit spreads. Therefore, third ratings do not go unnoticed by the capital markets. In many cases, they can help issuers achieve cheaper funding costs. An implication of this research evidence is that issuers appear to have a rational economic basis for seeking a third corporate debt rating, especially if they think the third rating will be the same as the higher of the two original ratings. That is, a third corporate rating can affect spreads and serve as a tiebreaker when the two chief rating agencies disagree.

Jewell and Livingston (2000) provide a three-rater analysis to determine the rating of DRP when Moody's and S&P have a split rating. Their evidence shows that S&P consistently gives a higher rating than Moody's when they disagree. DCR consistently gives higher ratings than either Moody's or S&P when disagreements exist. These results are comparable to those reported by Jewell and Livingston (1999) in their

study of Fitch versus Moody's and S&P. This evidence suggests that DCR and Fitch ratings serve as a tiebreaker when Moody's and S&P disagree and ratings are split.

From the investor's perspective, the potential value of bond ratings is that they provide information about the credit risk level of debt and improve the attractiveness of a bond issue. Investors need ratings to compute transitional probabilities (the chance that a bond will move from one rating to another), which are essential ingredients in evaluating credit risk. Others, however, question the importance of ratings and rating agencies to institutional investors. For example, Ellis (1998) suggests that rating agencies may not be as necessary as in the past because institutional investors have access to increased amounts of information and can analyze that information themselves.

To determine whether bond ratings provide valuable information, the survey posed several questions to investors. The first question asked investors about the extent to which they bought only rated corporate bonds or both rated and unrated corporate bonds. Although a majority of institutional investors from our sample (57.3%) buy only rated corporate bonds, 42.7% purchase both rated and unrated bonds.

These results have several interpretations. First, the large percentage of the respondents who buy unrated bonds may reflect a decline in the perceived importance of bond ratings. The increased sophistication of institutional investors may also enable them to manage the risks associated with unrated bonds better than in the past. The results may further reflect the increased prevalence of high yield bond issues. Second, a question asked investors whether a rating by a particular rating agency makes a corporate bond more attractive. Most respondents from our sample (71.0%) said "yes," especially if the rating was from one of the two largest agencies, Moody's and S&P. As previously discussed, bond ratings contain information beyond that provided by accounting and economic information. Third, a question asked how much emphasis investors put on corporate bond ratings produced by the four leading U.S. credit rating agencies compared with their own internal analysis. Table 3 shows that most investors (63.0%) rely on their own analysis much more than on ratings from the agencies. This evidence lends support to the view that some investors do not rely solely on bond ratings as an evaluation tool because they have the ability to conduct their own credit analysis.

(Insert Table 3)

IV. Unsolicited Ratings

Much controversy exists over the issuance of unsolicited ratings. Proponents claim that unsolicited ratings help to avoid "rate shopping", which occurs when companies hire only those agencies that offer favorable ratings. Critics claim that unsolicited ratings are less accurate than those paid for in the traditional

manner because the rating agency does not have access to confidential information as part of the traditional rating process.¹⁰

Table 4 shows that most issuers (76.1%) are aware of whether any of the four major rating agencies publish unsolicited ratings of their bonds, but about a quarter of the respondents answers “don’t know.” This finding is surprising given the expectation that issuers would likely check to see if an agency published anything about their bonds. Of those companies receiving unsolicited ratings, more than half (58.3%) indicate that unsolicited ratings have “about the same accuracy” as the agencies their company hire. None report that the unsolicited ratings are more accurate. Compared with Ellis (1998), a significantly smaller percentage of issuers of industrial bonds compared with utility bonds (10.6% and 42.2%, respectively) note the bonds of their companies had actually received unsolicited ratings.

Table 4 also shows about three-fourths (75.2%) of the issuers believe rating agencies should clearly identify unsolicited ratings in order to distinguish them from ratings that issuers have sought and paid for in the typical manner. By taking such actions, rating agencies would likely improve their standing from the issuers’ perspective.

(Insert Table 4)

V. Conflict of Incentives

In providing services to both issuers and investors, rating agencies face a potential conflict of incentives. Because rating agencies charge fees for rating an issuer’s bond, the current payment structure may appear to encourage agencies to assign higher ratings to satisfy issuers. Although fees that agencies charge vary with the size and type of issue, fees on new long-term corporate bond issues range from 2.00 to 3.25 basis points of the principal for each year the agency maintains the rating. Yet, rating agencies have an incentive to maintain a reputation for high-quality, accurate ratings, because their future revenues depend on the quality of today’s information. Disseminating only correct information is important because the existence

¹⁰ According to Cantor and Packer (1995), both Moody’s and S&P rate all taxable securities in the U.S. domestic market registered by the Securities and Exchange Commission, regardless of whether the issuer requests and pays for the rating. In contrast, both Duff & Phelps and Fitch refrain from assigning unsolicited ratings on any security.

of bond rating agencies depends on the market's acceptance of their signals. Besides placing an agency's reputation at risk, inaccurate ratings could expose the agency to costly legal damages.¹¹

To determine the opinions of issuers on this potential conflict of incentives, the survey asked them to indicate with which of two assessments they more strongly agree. As Table 5 shows, the issuers overwhelmingly agree, "rating agencies have an overriding incentive to maintain a reputation for high-quality, accurate ratings." Only 2.7% show stronger agreement with the statement that "the current structure for paying rating agencies encourages agencies to assign high ratings to satisfy issuers."

(Insert Table 5)

VI. Accuracy of Ratings

A bond rating is one of the most important indicators of a corporation's credit quality. The importance of ratings to issuers and investors largely depends on the accuracy of the ratings. Current users of ratings often presume rating agencies accurately measure both *relative* and *absolute* risks of corporate bond defaults. Historically, rating agencies, especially Moody's and S&P, have done a reasonable job in assessing relative credit risk of corporate bonds. That is, lower-rated bonds tend to default more often than higher-rated bonds. Yet, agency ratings have been a less reliable guide to absolute credit risks because default probabilities associated with their specific letter ratings have drifted over time.¹²

In recent years, the financial press has published numerous articles conveying the perception that Moody's is the less credible of the two major rating agencies. Kish, Hogan, and Olson (1999) examine whether the market shares this perception and whether this perception carries an economic cost. Using regression analysis of public issues of corporate bonds during the period 1986 through the first quarter of 1996, they conclude the market finds value in the ratings from both Moody's and S&P, but the value is not symmetrical between the two agencies. Insufficient evidence exists, however, to conclude the market values one agency over the other.

We examine the issue of rating accuracy by asking both issuers and investors questions about the relative accuracy of the four major U.S. credit rating agencies. The survey asked each group to rank the four rating agencies in terms of the accuracy of their corporate bond ratings from 1 (most accurate) to 4 (least accurate).

¹¹ Cantor and Packer (1995) discuss research on the ex post accuracy of bond ratings. Moody's and S&P provide ex post analyses of corporate bond defaults by rating categories.

¹² Cantor and Packer (1995) discuss empirical research related to the reliability of ratings in measuring relative and absolute credit risk. Blume, Lim, and McKinlay (1998) also discuss the issue of rating drift.

Table 6 helps to answer our second research question: Do issuers and institutional investors perceive any differences in the accuracy of ratings among the four major rating agencies? As indicated by their means in Table 6, both issuers and investors assess S&P ratings as slightly more accurate than Moody's. Although not shown in Table 6, the difference in perceived relative accuracy between S&P and Moody's is statistically significant at the 0.01 level for issuers ($\chi^2 = 23.10$ with $df = 3$) but not for investors ($\chi^2 = 0.786$ with $df = 2$). On a relative basis, respondents assess the ratings of DCR and Fitch as less accurate than the two leading rating agencies.¹³ Therefore, these results support our hypothesis that both issuers and investors assess Moody's and S&P as more accurate than DCR and Fitch.

As Table 6 shows, the chi-square tests reveal statistically significant differences exist between the issuers and institutional investors in their ratings of the accuracy of S&P, DCR, and Fitch. A greater proportion of issuers give these three rating agencies a higher rating in terms of the accuracy of their corporate bond ratings than is the case for investors.

(Insert Table 6)

To determine why issuers and investors chose the agency that they selected as most accurate, the survey asked them to indicate the most important reason for the accuracy of the agency's corporate bond ratings. Table 7 shows the relative rankings for the various reasons given by issuers and investors are not significantly correlated, as indicated by the low Spearman rank order correlation coefficient ($r_s = 0.377$). These differences most likely occur because accurate ratings serve different roles for issuers and investors.

A majority of issuers (57.8%) chose "most understanding of firm and industry" as the most important reason for accurate ratings compared with only 22.2% of the investors. The emphasis that issuers place on this response may reflect their desire to develop long-term relationships with rating agencies that will enable them to lessen the time spent in the rating process. The low ranking that issuers place on "most timely in updating ratings" reinforces the notion that issuers want to minimize the number of times they have to go through the rating process. Compared to issuers, investors place more importance on timeliness because they use ratings as a source of information about creditworthiness. Because a change in an issuer's financial condition affects the value of the bond, investors want rating agencies to maintain ratings on a timely basis. The highest ranked reason given by investors is "most consistent research." Investors apparently want a rating from a particular agency to have the same meaning regardless of the issuing company. Consistent ratings are important if investors are to interpret a rating change as conveying new information. That is,

¹³ Chi-square tests show that all six pair-wise comparisons between the rankings of the accuracy for the rating agencies by either issuers or investors are statistically significant at the 0.01 level, except between S&P and Moody's for investors.

issuers chose “understanding issuers” and investors selected “consistent research” as the most important reasons.

(Insert Table 7)

VII. Timeliness of Ratings

A common criticism of rating agencies is that they do not respond quickly enough to changes in credit conditions. That is, when a firm’s financial condition changes, rating agencies should change their ratings to reflect the altered probabilities of default. The credit rating agencies have become increasingly sensitive to this criticism. For example, S&P created *Credit Watch* to provide a weekly notice of companies whose credit ratings are under surveillance for rating changes. DCR also has a “Watch List” of companies that are potential upgrades or downgrades. Although rating agencies have been quicker to change a rating as financial parameters change than in the past, they recognize the financial impact of their ratings and their obligation to rate a company’s long-term prospects. According to Howe (1995), rating agencies take a three-to five-year perspective and avoid changing a rating because of short-term fluctuations. Therefore, rating agencies are reluctant to make ratings changes based only on cyclical considerations.

The concern about the timeliness of ratings may reflect the effect that rating changes have on bond prices. For example, Hand, Holthausen, and Leftwich (1992) found bond price effects associated with announcements of additions to the *Credit Watch* list, and with announcements of actual rating changes by Moody’s and S&P. They report statistically significant average excess bond returns to announcements of downgrades of straight debt, with less reliable effects for upgrades. Moreover for downgrades, the average excess bond returns are stronger for below investment grade bonds than for investment grade bonds. Hite and Warga (1997) report similar results. Downgraded firms reveal a significant announcement effect in both the announcement month and pre-announcement period. The magnitude of downgrading effects increases dramatically as the sample moves from investment-grade to non-investment-grade firms. Upgrade effects are much weaker in magnitude and significance.

To determine how issuers and investors assess the timeliness of ratings, the survey asked several questions. One question asked only investors to rank the four rating agencies in terms of how closely their ratings of corporate bonds compare to where these bonds *actually trade*. Rating agencies typically adjust their ratings after market participants have already adjusted their perceptions of creditworthiness. Therefore, the results shown in Table 8 may be interpreted as reflecting how investors assess each rating agency’s ability to maintain its issues ratings in a timely manner. Because lower mean scores are better than higher mean scores, the results show investors perceive that Moody’s maintains ratings in a timelier manner than S&P. The chi-square test, showing a significant difference between Moody’s and S&P, reinforces this interpretation.

Investors also assess corporate bond ratings for these agencies as much closer to the “true” rating than DCR and Fitch.

(Insert Table 8)

Jewell and Livingston (2000) offer other empirical evidence on the timeliness of rating changes. Their evidence shows that DCR tends to change its ratings less frequently than Moody’s and S&P, but more often than Fitch. Also, when DCR or Fitch rates an issue, the frequency of an upgrade by Moody’s and S&P increases, and the frequency of downgrades decreases. These findings support the idea that DCR and Fitch have rating information or skill not available to Moody’s or S&P.

Our survey asked both issuers and investors about whether rating agencies maintain corporate bond ratings on a timely basis, so that the ratings accurately reflect their issuers’ creditworthiness at any given moment. Table 9 presents evidence on our third research question: Do issuers and institutional investors believe that agencies maintain corporate bond ratings on a timely basis? As table 9 shows, issuers and investors differ significantly in their responses about whether rating agencies maintain corporate bond ratings on a timely basis. Most issuers (74.1%) believe rating agencies maintain timely ratings for their corporate bond ratings. Yet, most investors (71.0%) think the ratings on the corporate bonds that they buy lag the issuers’ creditworthiness at any given moment. This discrepancy between issuers and investors suggests that the two groups hold basically different assessments about the role of ratings. These findings support our hypothesis that the assessments of issuers and investors differ significantly on whether agencies maintain timely bond ratings.

(Insert Table 9)

The next two questions provide further evidence about the assessments of issuers and investors about updating ratings. Panel A of Table 10 shows that the two groups share similar assessments about whether rating agencies should update corporate bond ratings to reflect recent changes. A majority from each group prefers that agencies provide up-to-date ratings, even if the ratings are likely to be reversed within a year. Providing up-to-date ratings has the benefit of reflecting all available information, thereby reducing ratings lag. This preference runs counter to that of the agencies because they typically favor incorporating only changes with long-term implications into their ratings.

Panel B of Table 10 shows whether issuers and investors believe rating agencies should update corporate bond ratings to reflect small, marginal changes in financial conditions. Although an overwhelming majority of both issuers and investors prefer that updates reflect only major changes in financial condition, the assessments differ significantly between the two groups. Compared with issuers, a much larger proportion

of investors believe that rating agencies should update corporate bond ratings to reflect small, marginal changes in a firm's financial condition. The desire of some investors to have updates reflect minor changes may indicate their concern about experiencing financial losses as a result of delays in updating ratings.

At first glance, the results from Panels A and B of Table 10 appear contradictory, but this is not the case. Both groups believe that rating agencies should update ratings if these changes are major, not small or marginal, changes. If rating agencies must reverse the change within a year, this is acceptable to most respondents.

(Insert Table 10)

VIII. Ratings and Creditworthiness

The intent of quality ratings is to measure the creditworthiness of a corporation with respect to a particular debt security. One question from the survey focused on determining whether quality ratings measure what they are supposed to measure. Table 11 presents evidence on our fourth research question: Do issuers and institutional investors believe published ratings of corporate bonds accurately reflect their issuers' creditworthiness? As we expected, Table 11 shows a majority of issuers (69.6%) and investors (63.5%) believe that bond ratings accurately reflect their issuers' creditworthiness, but they differ about whether bond ratings overstate or understate credit risk.

Not surprisingly, a higher percentage of issuers than investors perceive that bond ratings overstate the issuers' credit risk. These results reinforce the notion that issuers and investors assess bond ratings from a different perspective. Bond issuers are concerned about whether ratings overstate their credit risk because such overstatement could increase their borrowing costs. Bond investors are more concerned than issuers about whether ratings understate the issuer's credit risk because such understatement could translate into a greater likelihood of default or delayed payment of the bond.

Table 11 also shows, however, that about the same percentage of investors believe that corporate bond ratings overstate risk (18.8%) as understate risk (17.7%). This finding is not surprising given the results shown in Table 9 that the majority of investors (71.0%) believe that ratings lag the current status of the issuer. This lag may result in either overstating or understating an issuer's credit risk.

(Insert Table 11)

The second question asked issuers and investors to indicate the most important factor in evaluating an issuer's creditworthiness from a list of seven factors plus an "other" category. The source of this list of possible factors is Standard and Poor's *Corporate Finance Criteria* (1996). Table 12 shows that the responses are

highly similar for the two groups. The Spearman rank order correlation coefficient between the rankings of issuers and investors on the factors for evaluating an issuer's creditworthiness is 0.928, which is significant at the 0.01 level. The top rated factors for evaluating an issuer's creditworthiness – cash flow protection, financial flexibility, and capital structure – are the same for both groups.

(Insert Table 12)

IX. Changing Credit Quality

Our survey's final topic focused on whether issuers assess the declining credit quality of U.S. corporate debt as a myth or reality. Several empirical studies, such as Lucas and Lonski (1992), Carty and Fons (1994), Cantor and Packer (1995), and Blume, Lim, and Mackinlay (1998), support the notion of declining credit quality. For example, Cantor and Packer (1995) report a general deterioration in credit ratios within rating classes beginning in the mid-1980s. Their data suggest that a relaxation of credit standards may have occurred, perhaps as a result of the views commonly held in the late 1980s that even healthy corporations should increase leverage.

Blume, Lim and Mackinlay (1998) note that the number of downgrades in corporate bond ratings has exceeded the number of upgrades. This finding has led some to conclude that the credit quality of U.S. corporate debt had declined over time. Blume, Lim, and Mackinlay suggest that part of the decline in the level of actual bond ratings could be due to using more stringent standards in assigning ratings. Their empirical results are consistent with this explanation. They conclude that the level of bond ratings might have actually been higher today than in the past if agencies had not used more stringent ratings standards.

Panel A of Table 13 shows that the assessments of issuers and investors differ on whether the credit quality of U.S. corporate bonds has declined in the recent past. The majority of respondents from both groups believe that credit quality has not declined, but a much larger proportion of investors think that credit quality has declined compared with issuers (25.0% and 15.8%, respectively). Panel B of Table 13 presents data about whether credit agencies use more stringent standards to rate corporate bonds than a decade ago. No consensus appears among either issuers or investors on this issue.

(Insert Table 13)

5. CONCLUSIONS

In recent years, both the complexity of bond markets and the sophistication of investors have increased. Together, these trends have prompted market participants to assess the role and performance of

credit rating agencies. Although numerous studies have examined the historical reliability of ratings, only one study has previously attempted to investigate how two different participants in the credit process – issuers and investors – assess credit rating agencies. The current study builds upon and extends previous research by seeking opinions from both groups using survey research methodology.

Our results show industrial companies issuing bonds and mutual funds investing in corporate bonds differ in some of their assessments about rating agencies. For example, issuers think they need more ratings, while investors require fewer ratings. The most likely reason for issuers to obtain multiple ratings is to resolve previously unknown information about the bond's credit quality that the first rating did not convey. That is, issuers use multiple ratings to increase the probability of a true evaluation emerging, which, in turn, could help to ensure the best possible interest rate for their bonds. Institutional investors, on the other hand, require one rating or, at most, two ratings, typically from the largest agencies. Thus, institutional investors appear to require ratings for certification but they could also use them for evaluation. As highly sophisticated investors, they have the capacity to produce their own internal credit analysis. These results convey the impression that institutional investors use ratings as inputs, but not as the sole criterion, in the investment decision. One implication of the findings is issuers and institutional investors approach the issue of the required number of ratings from different directions.

Issuers and institutional investors perceive that Moody's and S&P provide more accurate ratings of corporate bonds than DCR or Fitch. This finding suggests that market participants assess a rating from one agency as conveying somewhat different information than one from another agency. This result is not surprising because differences among the agencies over specific ratings are common and unavoidable. Such differences are attributable to using alternative rating methodologies and reflect the element of judgment in the ratings process. An implication of this finding is issuers and investors should restrict their use of ratings to those that are the most accurate and consistent. In the case of issuers of industrial bonds, our results suggest they should typically focus on ratings from the largest agencies unless they need additional ratings to resolve a split rating or to provide information not included by the larger raters.

Another difference between issuers and industrial investors is the reason they consider a particular agency's corporate bond ratings the most accurate. Most issuers attribute accuracy to the agency with the most understanding of the firm and industry, but issuers attribute accuracy to the most consistent research.

Issuers and industrial investors also differ in their assessments about whether agencies maintain timely ratings and whether ratings accurately reflect creditworthiness. Most issuers believe that agencies maintain timely ratings, but most investors think ratings lag the current status. Due to this perceived lag, a sizable portion of investors perceives that bond ratings overstate or understate their issuers' creditworthiness at any given moment. The majority of issuers and investors, however, perceive that published bond ratings

accurately reflect a firm's creditworthiness. Taken as a whole, these differences reflect the different roles that rating agencies serve for issuers and investors.

REFERENCES

- Altman, E. (1989), 'Measuring Corporate Bond Mortality and Performance', *Journal of Finance*, Vol. 44, No. 4 (September), pp. 909-922.
- Beattie, V., and S. Searle (1992), 'Bond Ratings and Inter-Rater Agreement', *Journal of International Securities Markets* (Summer), pp. 167-172.
- Billingsley, R., R. Lamy, M. Marr, and G. Thompson (1985), 'Split Ratings and Bond Reoffering Yields', *Financial Management*, Vol. 14, No. 2 (Summer), pp. 59-65.
- Blume, M., F. Lim and A. Mackinlay (1998), 'The Declining Credit Quality of U.S. Corporate Debt: Myth or Reality?', *Journal of Finance*, Vol. 53, No. 4 (August), pp. 1389-1413.
- Brand, L., C. Kitto, and R. Bahar (1994), '1993 Corporate Default, Rating Transition Study Results', Standard & Poor's *Credit Week International* (June 6), pp. 9-21.
- Cantor, R., and F. Packer (1995), 'The Credit Rating Industry', *Journal of Fixed Income*, Vol. 5, No. 3 (December), pp. 10-34.
- Cantor, R., and F. Packer (1997), 'Differences of Opinion and Selection Bias in the Credit Rating Industry', *Journal of Banking and Finance*, Vol. 21, No. 10 (October), pp. 1395-1417.
- Cantor, R., F. Packer, and K. Cole (1997), 'Split Ratings and the Pricing of Credit Risk', *Journal of Fixed Income*, Vol. 7, No. 3 (December), pp. 72-82.
- Carty, L., and J. Fons (1994), 'Measuring Changes in Corporate Credit Quality', *Journal of Fixed Income*, Vol. 4, No. 1 (June), pp. 27-41.
- Corporate Finance Criteria*, 1996, New York, NY, Standard & Poor's.
- Ederington, L. (1986), 'Why Split Ratings Occur', *Financial Management* Vol. 15, No. 1 (Spring), pp. 37-47.
- Ederington, L., J. Yawed, and B. Roberts (1987), 'The Informational Content of Bond Ratings', *Journal of Financial Research*, Vol. 10, No. 3 (Fall), pp. 211-226.
- Ellis, D. (1998), 'Different Sides of the Same Story: Investors' and Issuers' Views of Rating Agencies', *Journal of Fixed Income*, Vol. 7, No. 4 (March), pp. 35-45.
- Fridson, M. (1999), 'Why Do Bond Rating Agencies Exist?', *Extra Credit*, Merrill Lynch (November/December), pp. 3-14.
- Hand, J., R. Holthausen, and R. Leftwich (1992), 'The Effect of Bond Rating Agency Announcements on Bond and Stock Prices', *Journal of Finance*, Vol. 47, No. 2 (June), pp. 733-752.
- Hite, G., and A. Warga (1997), 'The Effect of Bond-Rating Changes on Bond Price Performance', *Financial Analysts Journal*, Vol. 53, No. 3 (May/June), pp. 35-51.
- Howe, J., (1995), 'Credit Analysis for Corporate Bonds', in F.J. Fabozzi and T. D. Fabozzi, Ed., *The Handbook of Fixed Income Securities*, New York, NY, Irwin Professional Publishing, pp. 373-410.

- Hsueh, L. and D. Kidwell (1988), 'Bond Ratings: Are Two Better Than One?', *Financial Management*, Vol. 17, No. 1 (Spring), pp. 46-53.
- Jewell, J. and M. Livingston (1998), 'Split Ratings, Bond Yields, and Underwriter Spreads', *Journal of Financial Research*, Vol. 21, No. 2 (Summer), pp. 185-204.
- Jewell, J. and M. Livingston (1999), 'A comparison of Bond Ratings from Moody's, S&P, and Fitch', *Financial Markets, Institutions and Instruments* (Fall 1999).
- Jewell, J. and M. Livingston (2000), 'The Impact of a Third Credit Rating on the Pricing of Bonds', *Journal of Fixed Income*, Vol. 19, No. 3 (December), pp. 69-85.
- Kish, R., K. Hogan, and G. Olson (1999), 'Does the Market Perceive a Difference in Rating Agencies?', *Quarterly Review of Economics and Finance*, Vol. 39, No. 3 (Fall), pp. 363-377.
- Liu, P. and W. Moore (1987), 'The Impact of Split Bond Ratings on Risk Premia,' *Financial Review*, Vol. 22, No. 1 (February), pp. 71-85.
- Liu, P., and A. Thakor (1984), 'Interest Yields, Credit Ratings, and Economic Characteristics of State Bonds: An Empirical Analysis', *Journal of Money, Credit, and Banking*, Vol. 16, No. 3 (November), pp. 696-697.
- Lucas, D., and J. Lonski (1992), 'Change in Corporate Credit Quality 1970-1990', *Journal of Fixed Income*, Vol. 1, No. 4 (March), pp. 7-14.
- Millon, M. and A. Thakor (1985), 'Moral Hazard and Information Sharing: A Model of Financial Information Gathering Agencies', *Journal of Finance*, Vol. 40, No. 5 (December), pp. 1403-1422.
- Perry, L. (1985), 'The Effect of Bond Rating Agencies on Bond Rating Models', *Journal of Financial Research*, Vol. 8, No. 4 (Winter), pp. 307-315.
- Perry, L., P. Liu, and D. Evans (1988), 'Modified Bond Ratings: Further Evidence on the Effect of Split Ratings on Corporate Bond Yields', *Journal of Business Finance & Accounting*, Vol. 15, No. 2 (Summer), pp. 231-241.
- 'Rating the Rating Agencies,' (1998), *Institutional Investor* (April), p. 32.
- Reiter, S., and D. Zeibart (1991), 'Bond Yields, Ratings, and Financial Information: Evidence from Public Utility Issuers', *Financial Review*, Vol. 26, No.1 (February), pp. 44-74.
- Shefrin, H. (2000), *Beyond Greed and Fear*, Boston, MA, Harvard Business School Press.
- Thompson, G., and P. Vaz (1990), 'Dual Bond Ratings: A Test of the Certification Function of Rating Agencies', *Financial Review*, Vol. 25, No. 3 (August), pp. 457-471

Table 1.
Number of Rating Agencies Hired by Issuers and Required by Investors

Typical number of rating agencies:	N	Number of Rating Agencies				O ² (df = 1)
		1	2	3	4	
A. Hired by issuers to rate a bond	114	2.6%	77.2%	19.3%	0.9%	77.89**
B. Required by investors to buy rated corporate bonds	96	57.3	42.7	0.0	0.0	

Note: This table provides evidence about the importance of bond ratings from the perspective of issuers of industrial bonds and institutional investors (corporate bond funds). Panel A reports the frequency distribution for the number of rating agencies that industrial bond issuers typically hire to rate a bond issue. Panel B reports the frequency distribution for the number of rating agencies that mutual funds typically require to buy rated corporate bonds. The chi-square test shows whether a significant difference exists between the typical number or rating agencies hired by issuers to rate a bond and required by investors to buy rated corporate bonds. To perform the chi-square tests, the categories are collapsed from four to two (1 and 2 or more rating agencies) to lessen the problem of small cell size. Percentages are rounded. *, ** Significant at the 0.05 and 0.01 level, respectively.

Table 2.
Reasons Issuers Hire More than Two Credit Agencies

Reason (n = 25)	%
To resolve a split rating from two rating agencies	48.0
To get better coverage than provided by the agencies already hired	40.0
To obtain a higher or investment grade rating	8.0
Other	4.0

This table presents the 25 responses from issuers of industrial bonds to the question, “If your firm typically hires more than two rating agencies, why does your firm add another rating agency?”

Table 3.
Emphasis Placed by Investors on Corporate Bond Ratings

n	None	Less	About the Same	More
100	6.0%	57.0%	28.0%	9.0%

Note: This table presents the 100 responses from institutional investors (corporate bond funds) to the question “How much emphasis do you put on the corporate bond ratings produced by the four leading U.S. credit rating agencies compared with your own internal analysis?” The four major U.S. credit rating agencies refer to Moody’s Investors Service, Inc., Standard & Poor’s Corporation, Duff & Phelps Credit Rating Co., and Fitch IBCA.

Table 4.
Assessments of Issuers about Unsolicited Ratings

Statement	n	Yes	No	Don't Know
Do agencies publish unsolicited ratings of your bonds?	113	10.6%	65.5%	23.9%
Should unsolicited ratings be clearly identified as such?	105	75.2	5.7	19.0

Note: This table reports the results of two questions posed to issuers of industrial bonds about unsolicited ratings. Percentages are rounded.

Table 5.
Assessments of Issuers about Conflicting Incentives of Rating Agencies

Statement (n = 112)	Agree
The current structure for paying rating agencies encourages agencies to assign high ratings to satisfy issuers.	2.7%
Rating agencies have an overriding incentive to maintain a reputation for high-quality, accurate ratings	97.3

Note: This table presents evidence about which of two statements involving conflicting incentives of rating agencies do issuers of industrial bonds more strongly agree.

Table 6.
Perceived Accuracy of Rating Agencies in Rating Corporate Bonds

Rating Agency	n	Ranking of Accuracy				Mean	Rank	O² (df = 3)
		1	2	3	4			
<i>Standard & Poor's</i>								
Issuers	112	67.0%	24.1%	4.5%	4.5%	1.46	1	14.94**
Investors	77	45.5	45.5	9.1	0.0	1.64	1	
<i>Moody's</i>								
Issuers	112	35.7	51.8	8.0	4.5	1.91	2	3.38
Investors	77	46.8	40.3	10.4	2.6	1.69	2	
<i>Duff & Phelps</i>								
Issuers	58	15.5	25.9	46.6	12.1	2.55	3	15.94**
Investors	77	5.2	9.1	51.9	33.8	3.14	3	
<i>Fitch</i>								
Issuers	51	9.8	15.7	29.4	45.1	3.10	4	8.40*
Investors	77	2.6	5.2	28.6	63.6	3.53	4	

Note: This table presents evidence about the relative accuracy of the four major U.S. credit rating agencies as perceived by issuers of industrial bonds and institutional investors (corporate bond funds). Respondents ranked the accuracy of the rating agencies on a four-point scale from 1 = most accurate to 4 = least accurate. Therefore, the lower the mean, the higher the perceived relative accuracy. The chi-square tests show whether the perceptions for each rating agency differ significantly between issuers and investors. Although not shown in this table, collapsing the number of categories from four to three to perform the chi-square tests did not change the significance level of the chi-square tests. Percentages are rounded. *, ** Significant at the 0.05 and 0.01 level, respectively.

Table 7.
Reasons for Ranking an Agency's Corporate Bond Ratings the Best

Reason	Issuers (n = 109)		Investors (n = 90)		r _s
	%	Rank	%	Rank	
Most understanding of firm and industry	57.8	1	22.2	2	0.377
Most objective research	16.5	2	14.4	5	
Most accurate research	11.0	3	15.6	3.5	
Most consistent research	6.4	4	24.4	1	
Most timely in updating ratings	4.6	5	15.6	3.5	
Other	3.7	6	7.8	6	

Note: This table presents evidence on why issuers of industrial bonds and institutional investors (corporate bond funds) perceive that a rating agency is the best. The last column shows the Spearman rank correlation coefficient, r_s , for the ranking of the reasons between the issuers and investors. Percentages are rounded. *, ** Significant at the 0.05 and 0.01 level, respectively.

Table 8.
Perceptions by Investors of How Closely Corporate Bonds Compare to Where They Actually Trade

Rating Agency	n	Ranking of Closeness of Ratings to Where Bonds Actually Trade				Mean	Rank	O ² (df = 1)
		1	2	3	4			
Moody's	65	63.1%	35.4%	1.5%	0.0%	1.38	1	10.63**
Standard & Poor's	64	34.4	64.1	1.6	0.0	1.67	2	
Duff & Phelps	64	1.6	0.0	67.2	31.3	3.28	3	18.00**
Fitch	64	1.6	0.0	29.7	68.8	3.66	4	

Note: This table shows the responses of the institutional investors (corporate bond funds) to the question "How would you rank the following rating agencies in terms of how closely their ratings of corporate bonds compare to where these bonds *actually trade*?" Respondents ranked the closeness of ratings to where bonds actually trade on a four-point scale from 1 = most accurate to 4 = least accurate. Therefore, the lower the mean, the higher the perceived relative accuracy. The chi-square tests show whether the perceptions for each rating agency differ significantly between issuers and investors. Based on a four-point scale from 1 = closest to 4 = farthest, the lower the mean, the closer the perceived accuracy of rating agencies in terms of how closely their ratings of corporate bonds compare to where these bonds actually trade. The first chi-square tests show whether the frequency distributions of the rankings differ significantly between Moody's and S&P. The second chi-square tests shows whether the frequency distributions of the rankings differ significantly between Duff & Phelps and Fitch. To perform the chi-square tests, the number of categories was collapsed from four to two in order to lessen the problem of small cell sizes. Percentages are rounded. *, ** Significant at the 0.05 and 0.01 level, respectively.

Table 9.
Maintenance of Ratings on Corporate Bonds in a Timely Manner

Response	Issuers (n = 112)	Investors (n = 100)	O² (df = 3)
Yes, almost always	33.9%	8.0%	43.941**
Yes, most of the time	40.2	21.0	
No, sometimes lag current status	17.9	42.0	
No, usually lag current status	8.9	29.0	

Note: This table presents evidence about the perceptions of issuers and institutional investors (corporate bond funds) on whether rating agencies update their ratings on corporate bonds in a timely fashion. The chi-square test shows whether the frequency distributions of the responses differ significantly between issuers and investors. Percentages are rounded.

*, ** Significant at the 0.05 and 0.01 level, respectively.

Table 10.
Assessments of Issuers and Investors about Updating Ratings

Issue	Issuers (n = 114)	Investors (n = 97 and 100 for A and B)	O² (df = 2)
A. Should corporate bond ratings be updated to reflect recent changes, even if the ratings are likely to be reversed within a year?			3.407
Yes	50.9%	58.8%	
No	40.4	38.1	
No opinion	8.8	3.1	
B. Should corporate bond ratings be updated to reflect small, marginal changes in financial condition?			16.709**
Yes	3.5%	21.0%	
No	93.0	74.0	
No opinion	3.5	5.0	

Note: This table presents evidence about the assessments of issuers and institutional investors (corporate bond funds) about the conditions under which they believe agencies should update ratings on corporate bonds. The chi-square test shows whether the frequency distributions of the responses differ significantly between issuers and investors. Percentages are rounded. *, ** Significant at the 0.05 and 0.01 level, respectively.

Table 11.
Bond Ratings and Issuers' Creditworthiness

Response	Issuers (n = 112)	Investors (n = 96)	O² (df = 2)
Yes	69.6%	63.5%	16.709**
No, overstate risk	28.6	18.8	
No, understate risk	1.8	17.7	

Note: This table presents evidence from issuers and institutional investors (corporate bond funds) on whether corporate bond ratings accurately reflect their issuers' creditworthiness. The chi-square test shows whether the distribution of responses between issuers and investors differs significantly. Percentages are rounded. *, ** Significant at the 0.05 and 0.01 level, respectively.

Table 12.
Most Important Factor in Evaluating an Issuer's Creditworthiness

Factor	Issuers (n = 111)		Investors (n = 98)		r_s
	%	Rank	%	Rank	
Cash flow protection	32.4	1	37.8	1	0.928**
Financial flexibility	24.3	2	24.5	2	
Capital structure	19.8	3	17.3	3	
Management quality	6.3	4.5	9.2	4	
Operating efficiency	6.3	4.5	1.0	7	
Competitive climate	5.4	6.5	2.0	6	
Other	5.4	6.5	8.2	5	
Regulatory climate	0.0	8	0.0	8	

Note: This table presents evidence about which factor issuers and institutional investors (corporate bond funds) consider most important in determining the creditworthiness of an issuer. The last column shows the Spearman rank correlation coefficient, r_s, for the ranking of the factors between the issuers and investors. Percentages are rounded. *, ** Significant at the 0.05 and 0.01 level, respectively.

Table 13.
Issues involving Changes in Credit Ratings and Standards

Issue	Issuers (n = 114)	Investors (n = 96 and 97 for A and B)	O² (df = 2)
A. Has the credit quality of U.S. corporate bonds declined over the past 10 years?			
Yes	15.8%	24.0%	8.160*
No	53.5	61.6	
No opinion	30.7	14.5	
B. Are rating agencies using more stringent standards in assigning corporate bond ratings than 10 years ago?			
Yes	27.7%	34.0%	3.280
No	30.4	36.1	
No opinion	42.0	29.9	

Note: This table presents evidence about the perceptions of issuers and institutional investors (corporate bond funds) about trends in the credit quality of U.S. corporate bonds and credit standards in assigning corporate bond ratings over the past 10 years. The chi-square tests show whether the frequency distributions of the responses on these issues differ significantly between issuers and investors. Percentages are rounded. *, ** Significant at the 0.05 and 0.01 level, respectively.