THE CREDIT RATING INDUSTRY: AN INDUSTRIAL ORGANIZATION ANALYSIS

Lawrence J. White
Stern School of Business
New York University
e-mail: lwhite@stern.nyu.edu

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Abstract

The June 1999 proposal by the Bank for International Settlements (BIS) Basel Committee on Banking Supervision to include borrowers' credit ratings in assessments of the adequacy of banks' capital has heightened general interest in the credit rating industry: who they are, what they do, how they do it, and what the consequences of their actions are. This paper uses the structure-behavior-performance paradigm of "industrial organization" to shed light on the credit rating industry and to provide a framework for arranging initial observations and developing questions for further analysis.

A striking fact about the structure of the industry in the U.S. is its persistent fewness of incumbents. There have never been more than five general-purpose bond rating firms; currently there are only three. Network effects -- users' desires for consistency of rating categories across issuers -- is surely part of the explanation. But, for the past 25 years, regulatory restrictions (by the Securities and Exchange Commission) on who can be a "nationally recognized securities rating organization" has surely also played a role.

A curious part of the behavior of the rating firms is their coverage and their pricing. Hypotheses to explain this behavior are explored.

Although only limited information on profitability is available, it appears that bond rating is quite profitable. A growing regulatory demand for ratings (for safety-and-soundness regulation by bank regulators, insurance regulators, pension fund regulators, and securities regulators) and a regulatory limitation on supply surely are contributory factors.

There is an alternative to these growing regulatory pressures. It would involve the safety-and-soundness regulators' becoming more directly involved in regulatory judgments, rather than abdicating these judgments to private-sector bond rating firms. The SEC could then vacate its role as the certifier of the certifiers.

These suggestions do not mean that the credit rating firms should be prevented from playing a continuing role in helping issuers and investors pierce the fog of asymmetric information. But that role should be determined by the market participants themselves, not by additional regulation that artificially increases demand and restricts supply. The latter is a recipe for shortages and rents. This is not a welcome prospect.

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Lawrence J. White*
Stern School of Business
New York University
lwhite@stern.nyu.edu

Introduction

The June 1999 proposal by the Bank for International Settlements (BIS) Basel Committee on Banking Supervision to include borrowers' credit ratings in assessments of the adequacy of banks' capital has heightened general interest in the credit rating industry: who they are, what they do, how they do it, and what the consequences of their actions are. This paper will use the methodology of "industrial organization" to shed light on the credit rating industry.[1]

The typical "industrial organization" study of an "industry" uses the structure-behavior-performance paradigm as its mode of analysis:[2] The industry's structure (e.g., numbers of buyers and sellers, the degree of seller and buyer concentration, conditions of entry, the extent and importance of regulation, etc.) is described and analyzed; the implications of that structure for behavior (e.g., pricing, products, advertising, R&D, entry, regulatory behaviors and influences) and performance (e.g., profitability, efficiency, regulatory consequences) are predicted; and then measures of actual behavior and performance are gathered and compared to the predictions, with suitable analysis and discussion.

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[1] This paper will focus primarily on bond rating firms.

[2] See, for example, Scherer and Ross (1990) or Carlton and Perloff (1994).

This study of the credit rating industry will explore some of these traditional aspects of industrial organization.[3] But many of the interesting aspects of this industry transcend these limited questions; and data/information limitations are likely to restrict my ability to answer others.

Nevertheless, the structure-behavior-performance paradigm will inform this investigation of the credit rating industry and provide a framework for arranging initial observations and developing questions for further analysis. It illuminates the special role that government regulation plays in increasing the demand for the services of the credit rating industry while also limiting the supply of credit rating firms.

The remainder of this paper will proceed as follows: Section II will briefly discuss the rationale for the existence of credit rating agencies. The following sections will then develop the structure-behavior-performance themes: Section III will discuss the structure of the industry: the major firms in the industry and some of their characteristics. A striking feature of this structure is the fewness of the number of credit rating firms in any country. We will offer some hypotheses as to the reasons that underlie this fewness. Section IV will discuss the behavior of the firms in this industry: specifically, their pricing and product behavior. Section V will analyze performance. Section VI will address policy -- regulatory -- issues, with application to the BIS proposal. And Section VII will provide a brief conclusion.

The discussion in this paper will tend to focus on the credit rating industry in the U.S., since information is more readily available for these firms.[4] But, wherever possible, the discussion will extend to non-U.S. firms as well. Also, the most attention will be given to rating behavior with respect to corporate debt, because more information is available in this area.

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[3] Other studies of the industry can be found in Ederington and Yawitz (1987), Wilson (1987, ch. 9), Cantor and Packer (1995), Fridson (1999), Partnoy (1999), and BIS (2000).

[4] Even a study by the BIS (2000), though it developed information about non-U.S. firms, tended to provide much more information about the U.S. firms.

II. Why Credit Rating Firms?[5]

The reason for the existence of credit rating firms clearly lies in a basic problem of finance: How do lenders determine the creditworthiness of potential borrowers and assure themselves of the continued soundness of borrowers after a loan has been extended? Specialist lenders -- financial intermediaries such as banks and other depositories, insurance companies, and finance companies -- may be able to develop the necessary information themselves, or turn to specialist credit bureaus. Similarly, when corporations borrow in public debt markets -- issue bonds -- many of these same specialist lenders (as well as mutual funds) may be able to generate their own information. But non-specialist lenders -- e.g., the general public -- may well need help in developing information about bond issuers; and even specialist lenders may want help when they venture beyond their traditional boundaries of lending (i.e., to new bond markets).

In sum, credit rating firms help lenders pierce the fog of asymmetric information that surrounds lending relationships.[6] Further, for bonds -- where hundreds or thousands of lenders may hold the debt of a single issuer -- the "public good" nature of information means that a specialized credit rater that disseminates its information can reduce or eliminate the duplication of information-generation efforts in which the separate bondholders might otherwise engage, as well as allowing

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[5] Standard terminology for the firms in the credit rating industry is to refer to them as "agencies". But this terminology makes them sound as if somehow they are different from other enterprises -- they are not -- or they might be part of a "government agency". To avoid any of these connotations, this paper will refer to them as "firms".

[6] Fridson (1999) proposes a variant on this theme. Though (he claims) the direct participants in bond markets are sufficiently knowledgeable that they do not need credit raters and ratings, he recognizes that there are less knowledgeable entities -- e.g., the buyers of bond mutual funds, or the claimants of pension funds -- that employ agents (the mutual fund or pension fund managers), and the ratings permit the mutual or pension fund shareholders more easily to assure themselves against errant behavior by their agents (who commit to investing the shareholders' funds only in bonds that are at or above a specified rating). At its base, Fridson's argument is the same as that in the text.

holders of small tranches to avoid the high per unit costs that their own investigations might require.

This role for the rating firm, though, begs a logical next-step question: How does the non-specialist bondholder come to trust the judgment of the rating firm? Here, the long-run reputation of the rating agency in its assessments of large numbers of bonds over time -- which surely will be a broader experience and exposure than any individual bondholder is likely to have -- must be the crucial element in conveying trust to the bondholder.

III. Structure

A. The United States

There are currently three active bond rating firms in the U.S.: Moody's; Standard & Poors (S&P); and Fitch IBCA.[7] Moody's is currently a free-standing company that is highly specialized on rating activities.[8] S&P's credit rating activities are only part of the larger financial information services that are provided by S&P, which in turn is owned by McGraw-Hill. Fitch IBCA is owned by a French company, FIMALAC.[9]

Of the three rating firms, Moody's and S&P are by far the largest. Since Moody's is freestanding, data about it (as of 1999/2000) are most readily presented. These data are found in Table 1.

[7] In addition, A.M. Best devotes itself solely to the ability of insurance companies to honor their insurance obligations, and KMV and Lace Financial focus on a mix of banks and insurance companies.

[8] Moody's was spun off by Dun & Bradstreet in the summer of 2000; Dun & Bradstreet had bought Moody's in 1962.

[9] Fitch merged with IBCA (a UK firm) in 1997, and the combined entity was subsequently bought by FIMALAC. In June 2000 Fitch IBCA bought Duff & Phelps. As of December 2000 Duff & Phelps was still being maintained as a separate entity, with its own brand name, within Fitch IBCA. In December 2000 Fitch absorbed Thomson BankWatch.

Table 1: Some Characteristics of the Three Large Bond Rating Firms in the U.S.

Moody's:[10]

- Annual revenues: $564 million (1999);[11] about 70% arises in the U.S.; about 90% is derived from bond rating
- Annual (after tax) net income: $156 million (1999)
- Assets: $368 million (2000)
- Employees: 1,500, including 700 analysts
- Coverage:
  - -- $30 trillion in debt issuances (ratings and analysis)
  - -- 143,000 corporate, government, public finance issuances
  - -- 4,200 corporate relationships
  - -- 100 countries (offices in 14 countries)

S&P:[12]

- Coverage:
  - -- $11 trillion in debt issuances
  - -- 3,500 corporate issuers (2,614 in the U.S.)
  - -- 60 countries (offices in 16 countries)

Fitch IBCA:[13]

- Annual revenues: $260 million
- Employees: 1,100
- Coverage:
  - -- 75 countries (offices in 23 countries)

[10] Sources include Fridson (1999), the Moody's prospectus (SEC Form 10, June 27, 2000), and the Moody's website.

[11] $289 million in the first half of 2000.

[12] The source is Fridson (1999).

[13] Source: Fitch IBCA website.

The first ratings were issued by Moody's in 1909. Poor's Publishing Company followed in 1916, the Standard Statistics Company began issuing ratings in 1922, and the Fitch Publishing Company began its ratings in 1924. Since then the number of U.S. general-purpose rating firms[14] in existence at any given time has fluctuated only narrowly between three and five.

B. Outside the U.S.

As the data above indicate, all three U.S. firms have substantial presences outside the U.S. In addition, there are about 40 additional credit ratings firms in operation outside the U.S.[15] From the BIS (2000) report and the affiliates listed by Moody's, S&P, and Fitch IBCA, the major credit ratings firms appear to be headquartered as is indicated in Table 2.

[14] This excludes the narrower firms that focus only on banks or insurance companies.

[15] The BIS (2000) report identifies a total of 28 firms, including Moody's, S&P, Fitch IBCA, and Duff & Phelps. The report includes the specialized firms, like A.M. Best and Thomson BankWatch, as well as a firm like Dun & Bradstreet, that offers credit ratings on millions of firms but that does not do specific bond ratings. The report does not mention another 20 firms that are listed as affiliates by Moody's, S&P, or Fitch IBCA (including Duff & Phelps).

Table 2: Headquarters Country and Numbers of Prominent Credit Rating Firms

Argentina: 1
Bangladesh
Brazil: 1
Canada: 2
Chile: 2
China: 2
Columbia: 1
Cyprus: 1
Egypt: 1
France: 1
Germany: 2
India: 3
Indonesia: 1
Italy: 1
Israel: 1
Japan: 3
Korea: 3
Malaysia: 1
Pakistan: 2
Peru: 1
Russia: 1
South Africa: 1
Sweden: 2
Taiwan: 1
Tunisia: 1
Venezuela: 1

Some of the firms listed in Table 2 are national in their focus; others aim for a more global presence.

C. Why So Few?

As was mentioned in the Introduction, a striking "fact" about these structural characteristics is the fewness of the numbers. The U.S. currently has three general-purpose bond rating firms[16] and has never had more than five in operation at any given time. India, Japan, and Korea have only three; Canada, Chile, China, Germany, Pakistan, and Sweden each have only two; the remaining countries have only one each. It is also striking that the U.K., despite its prominence as an international finance center, has no bond rating agency headquartered in the country.[17]

The fewness of the number of bond rating firms outside of the U.S. (and the U.K.) is probably best explained by the less well developed corporate bond markets in these countries (as compared with the U.S.) and hence a lesser need for specialized institutions to help pierce the asymmetric information fog in bond markets.[18]

But what about the U.S.? The fewness of the bond rating firms contrasts sharply with the thousands of stock analysts, employed by hundreds of securities firms, who regularly offer opinions about companies' equity share price prospects. Why are there so many of the latter (none of whom command the sweeping authority of Moody's and S&P) and so few of the former?

First, it is easy to understand why the bond rating firms have chosen to remain separate

[16] And Fitch IBCA is owned by a French company.

[17] IBCA was originally headquartered in the U.K.

[18] These countries have tended to stress bank-supplied loans as their sources of finance for companies; and, since the countries tend to be more geographically compact than is the U.S. and they encouraged nationwide branching, the banks themselves could be effective information gatherers.

("independent") from the borrowers and lenders themselves.[19] This structure minimizes conflicts (and appearances of conflicts) of interest. It is the same principle that keeps Consumers Union as a freestanding entity that accepts no advertising in its publication Consumer Reports.

But what about fewness? There are a few possibilities. First, in 1975 the U.S. Securities and Exchange Commission (SEC) initiated the designation of bond rating firms as "nationally recognized statistical rating organizations" (NRSROs). At the time of the initial designation, the SEC "grandfathered" Moody's, S&P, and Fitch. It subsequently designated Duff & Phelps (1982) and McCarthy, Crisanti & Maffei (MCM) (1983) as NRSROs (MCM was absorbed by Duff & Phelps in 1991), and designated IBCA (1991) and Thomson BankWatch (1992) as NRSROs for banks and financial institutions. The SEC has not granted the NRSRO designation to any new entities since then,[20] despite applications by non-U.S. firms. Indeed, IBCA's frustration with its inability to expand its NRSRO designation beyond bank ratings was a major factor underlying IBCA's purchase of Fitch in 1997.

Regulation, then, is currently limiting entry.[21] But this cannot explain the fewness before 1975. Instead, the explanation may be partly based on economies of scale and scope and of standardization: Reputation is vital for a bond rating firm. Reputation gets built by having extensive experience with a wide range of bond issues. And lenders (bondholders) may well prefer having only a few standardized ratings and raters, so that the lenders can more readily make

[19] Security Pacific Bank tried to buy Duff & Phelps in 1984, but the Federal Reserve Board effectively killed the deal by ruling that the post-merger Duff & Phelps would no longer be able to issue public ratings.

[20] In January 1999 the SEC "upgraded" Thomson BankWatch's status from a specialized NRSRO to a general-purpose NRSRO. In December 2000 Thomson BankWatch was absorbed by Fitch IBCA.

[21] The SEC in 1997 proposed formal criteria for designating NRSROs. It has not finalized any action. I will return to this regulation in Section VI.

comparisons of the ratings of issues and issuers based on a relatively straightforward "probability of default" judgment on the part of the rater. By contrast, the process of predicting outcomes for equity instruments may well be considerably more complex (since the extent of gain and loss are important considerations) and more judgmental; investors may well be more open to varied opinions from many sources, none of which command sweeping authority.

IV. Behavior

A. Pricing.

1. Who pays? Until the early 1970s the credit rating firms earned their incomes by selling publications (containing their ratings) and related materials. In essence, they were charging the bondholders for the information provided.

In 1970 Moody's and Fitch began to charge the issuers for the ratings; S&P followed suit a few years later.[22] The bulk of their ratings-related incomes now come from issuer fees.

This change in the early 1970s coincides with the spread of low-cost photocopying; the issuers were going to have difficulties in preventing free-riding on the publication of their information. Also, in 1970 the default by the Penn Central on $82 million in commercial paper, followed by liquidity crises by other short-term issuers and their defaults, was a defining moment that focused both issuers and investors on the risks of such issuances. Issuers were more desirous of reassuring nervous investors of the quality of their issuances and actively sought ratings. Charging the issuers for the ratings naturally followed.

2. The structure of fees.

Both Moody's and S&P follow similar patterns with respect to pricing and coverage of corporate issuances: They state that they will rate and make public all SEC-registered corporate bonds, whether requested or not by the issuer. If the issuer does not request the rating, then the rating firm will simply do the rating on the basis of publicly available information. If the issuer requests the rating, then it gets the privilege of sharing its information with the rating firm, but it must pay a one-time fee. Both Moody's and S&P have the following "list prices" for the requested ratings: 3.25 basis points[23] on issues up to $500 million, with a minimum fee of $25,000 and a

[22] S&P had begun to charge fees to municipal bond issuers in 1968.

[23] This information is from Fridson (1999).

maximum of $125,000 (S&P) or $130,000 (Moody's); both charge an additional 2 basis points on amounts above $500 million (S&P caps the amount at $200,000; it also has a one-time fee of $25,000 for first-time issuers). Both offer negotiated rates for frequent issuers and offer quarterly charges on amounts outstanding for issuers of commercial paper.

S&P states that it only does solicited ratings for structured securities and non-U.S. company bonds. Moody's, however, does unsolicited as well as solicited ratings of such securities.

By contrast, both Fitch IBCA and Duff & Phelps only do solicited ratings of any type of security. With respect to corporate securities, either or both are asked to provide a rating most often when the two "major" rating firms have split in their ratings. Apparently, in such instances issuers hope that the additional rating will be on the more favorable side. Also, Duff & Phelps does not make its ratings public unless the issuer requests that it do so. The structure of both issuers' fee schedule is similar to that of Moody's and S&P; but, as would be expected from firms that are perceived to be more peripheral, their fee levels are lower (2.5 basis points for Fitch IBCA; 2.75 basis points for Duff & Phelps).

Let us return to the fee structures of Moody's and S&P. Virtually all corporate issuers to request a listing, believing that the opportunity to present their story directly to the rating firms offers a sufficiently high probability of improving their ratings (and thus lowering their issuing costs) so as to justify the fees.

At first glance, this complete or near-complete set of request-responses by issuers indicates that Moody's and S&P -- collectively, if not individually -- are not charging sufficiently high fees so as to maximize their profits. If the demand by issuers for ratings has a "normal" shape -- perhaps it is linear -- Moody's and S&P should be able jointly to increase their profits by raising their prices (but consequently losing some customers) until reaching the standard monopoly maximizing point (i.e., the point at which $P = MC(1/(1+1/E_D)$.[24] This point is not affected by the commitment by the

[24] In this formula P is the price charged by the monopolist, MC is the monopolist's marginal

rating firms to rate all corporate issues, whether requested or not. Under this commitment, the costs of ratings are a fixed obligation, and the only relevant marginal costs are the extra costs that are incurred in dealing with a requester.

So, why don't they raise their prices? First, there may be a sharp kink in the demand curve at the point where the price paid just offsets the reduction in issuance costs. But this kink would have to be uniform for all issuers and to be present just above 3.25 basis points for the current schedule to be a maximizing one. This is possible, but it seems unlikely.

Second, oligopolistic rivalry (a la Bertrand) may be such that each firm may fear that if it initiates a price rise, the other will not follow and the initiator will lose too much in rating fees; i.e., its perceived demand (given its fears that the other will not "cooperate" in a price increase) may be quite elastic.

Third, the "list price" schedule described above may be actually paid by only a few issuers, while the rest negotiate lower fees; i.e., the rating firms may be practicing first-degree price discrimination, which would yield a maximizing outcome that results in nearly all buyers' remaining in the market.

Fourth, so long as the rating firms continue to commit to rate all corporate issues, whether requested or not, the ratings firms may be uneasy about seeing too many issuers drop their requests, since the unsolicited ratings that follow may be (or may be perceived as) less reliable, thereby damaging the reputations of the raters. But, if that were true, why do the raters persist in their commitment to do unsolicited ratings? Or why don't they announce that unsolicited ratings are less reliable than solicited ratings.[25]

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costs, and E_D is the elasticity of the demand curve facing the monopolist.

[25] On this point, Moody's and S&P appear to want to have the best of both worlds: They aren't prepared to admit that unsolicited ratings are less reliable; yet their encouragement of requests and the concomitant sharing of issuers' information clearly indicates the opposite.

In sum, the pattern of near-ubiquity of requested ratings by corporate issuers is a puzzle to which we can only supply some partially satisfactory answers.

B. Spread of coverage.

As the financial markets developed new debt instruments in the 1970s and the following decades, the ratings firms expanded their coverage from the corporate and municipal debt that had been their mainstays to these new instruments. It appears that the smaller credit rating firms were more aggressive in expanding this coverage.

V. Performance

A. Profits.

The typical industrial organization assessment of performance begins with a report of profits. Supra-normal profits may be an indicator of the exercise of market power,[26] although the vagaries of accounting data require considerable caution if they are used to generate rates of return that are to be compared to a competitive standard.[27]

The only credit rating firm for which stand-alone profit data are available is Moody's, and only for 1999. As was reported in Section II, Moody's after-tax profits for 1999 were $156 million; its total assets at year-end were $368 million. These profits represent a 42% return on those assets.[28] If an additional $11 million in debt payment is added, the return rises to 45%. Even within the possible range of vagaries of accounting, this magnitude of return is breath-taking. It certainly raises the suspicion that Moody's is able to exercise market power.[29]

B. Innovation.

A second measure of performance is the extent and sources of innovation in an industry. There is no absolute standard against which an industry can be judged, and judgments with respect to innovation in the credit rating industry do seem particularly difficult.

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[26] They may also just indicate returns to superior efficiency or intangible investments in intellectual capital.

[27] See, for example, Benston (1983) and Fisher (1983).

[28] The proposed balance sheet for Moody's shows a negative net worth at the end of 1999, so profits as a fraction of net worth would not be a meaningful number.

[29] If, however, Moody's is exercising first-degree price discrimination, as was suggested as a possibility in Section IV, then there may be little quantity distortion arising as a consequence of this market power.

It does seem to be the case, however, that innovations -- such as expanding the ratings to non-traditional instruments, and adding finer gradations to ratings -- have been generally initiated by the smaller rating firms, with the larger two then following.[30] This finding, plus the lower fees that the smaller firms charge, indicates that competition brings the same beneficial effects to this industry that it does in others.

C. Moral hazard behavior.

For bond rating firms, the temptations for moral hazard behavior are constantly present. A rating firm might offer to improve an issuer's rating in return for a higher fee. Or it might threaten that an unsolicited rating would be substantially lower than a requested (fee-based) rating.

There have not been widespread instances of such moral hazard behavior on the part of the rating firms. Apparently, their institutional concerns about their long-run reputations have been sufficiently strong so as to keep the moral hazard tendencies in check.[31]

D. Efficacy.

Beyond the question of market power, there is the persistent question of whether the rating firms provide any extra information to the bond markets. It is well known that the ratings do correlate well with average default rates: higher rated issues default less frequently than do lower rated issues. But this result alone is no indicator of whether the rating firms provide extra information. The ratings might simply be reflecting market outcomes (e.g., the interest spreads of

[30] See Cantor and Packer (1995).

[31] There have been some notorious errors in judgement -- e.g., in the Orange County debacle; see Figlewski and White (1995) and Jorion (1995). And there have been a few allegations that Moody's has used low unsolicited ratings as a means to punish issuers for not requesting ratings; see Partnoy (1999).

various issues against comparable Treasury obligations).

Instead, a better test is whether a change in a rating causes a significant change in market spreads (i.e., the rating change is providing new information to the market) or whether the market remains unchanged (i.e., the market already "knew" about the change in the company's underlying condition that inspired the rating change). Recent evidence indicates that the ratings changes do provide significant new information to the market.[32] Even this evidence, however, does not provide a definitive answer to the question of efficacy: If the market otherwise would have soon (say, a day later) learned anyway the underlying information that inspired the rating change, then the social benefits of the rating firms' additional information in terms of the market's improved pricing of risk may not be worth the costs.

Further, the rating firms' accuracies are not perfect; there is variance around the average default rates embodied in each rating.[33] Large variances mean greater noise and inconsistencies in the ratings. Further, though the ratings do represent relative risks (on average) reasonably well, they are less reliable as indicators of absolute credit risks; default probabilities associated with specific rating levels have drifted over time.[34]

In sum, though the credit rating firms do provide significant new information to the market, it is unclear whether their continued existence passes "a market test". This conclusion may appear surprising, since the credit rating firms have persisted and prospered. But the safety-and-soundness (prudential) regulation of financial institutions in the U.S. has forced those institutions to make use

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[32] For a summary, see Jewell and Livingston (1999).

[33] See Altman and Saunders (2000). As these authors explain, the average default and loss rates predicted by the ratings should be the basis for a financial institution's required loan-loss reserves. It is the unexpected defaults and losses -- the variance in the default rates -- that should be the basis for the institution's required capital.

[34] See Cantor and Packer (1995).

of ratings in their purchase and holding decisions with respect to bonds. Thus the rating firms have likely received an artificial lift in their business from this regulation. We now turn to a more detailed discussion of regulation and how it affects the bond rating industry.

VI. Policy Issues: Regulation

In Section III we briefly mentioned that the SEC since 1975 has designated rating firms as "nationally rated statistical rating organizations" (NRSROs) and has used this regulation to limit entry into the U.S. industry. At the end of Section V we briefly discussed the safety-and-soundness regulation that require financial institutions to use the ratings. We now consider these regulatory impacts in greater depth. We will begin with the safety-and-soundness regulation.

A. Safety-and-soundness regulation.

The safety-and-soundness regulation of financial institutions -- notably banks and other depositories, insurance companies, and defined-benefit pension funds -- in the U.S. has a long history. The general goal is to protect the liability holders of such institutions from the losses that would arise from the insolvencies of the institutions, as well as specifically to preserve the systemic stability of the banking system.[35] As part of those schemes, regulators have attempted to limit the riskiness of the assets that such institutions hold. And, beginning in 1931 regulators have grafted bond ratings into these limitations, either by banning the holding of securities that fall below a specified grade[36] or by specifying capital requirements for holding the securities that are geared to their ratings.[37] In addition, the SEC has employed the same tools for safety regulation of broker-dealers and of money market mutual funds.[38]

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[35] See, for example, White (1991a, 2000).

[36] For example, banks and savings institutions are not permitted to hold bonds that are below "investment grade" (BBB) level.

[37] For example, state insurance regulators gear the capital requirements of insurance companies to the risk categories -- as determined by ratings -- of the assets that they hold.

[38] Partnoy (1999) lists a number of the requirements by various regulatory authorities that involve the use of bond ratings.

The net effect of these requirements is to create a specific demand for ratings that might not be present in the absence of this specific manifestation of safety-and-soundness regulation. But whose ratings can be used for these regulatory purposes? Until 1975 this question remained unaddressed.[39] In that year, however, when the SEC applied a net capital rule to broker dealers, it specified securities ratings as the basis for the "haircuts" (percentage reductions in the value of owned securities) that would be required for calculating net capital. The SEC apparently realized that by specifying ratings it thereby had to address the "whose ratings" question, and it created the NRSRO category. Since then, other regulatory agencies have adopted the NRSRO terminology and accepted the SEC designees within that category.

B. NRSRO regulation.

As was discussed in Section III, the SEC last approved a new general-purpose NRSRO in 1983; it last approved a new specialist (banks and financial institutions) NRSRO in 1992.[40] Applicants, including rating agencies that are headquartered in other countries, have applied; the SEC has not acted. In essence, the SEC's behavior has raised an absolute barrier to entry, thereby limiting supply.

In 1994 and again in 1997 the SEC proposed regulations that would formalize its criteria for designating and monitoring NRSROs. Included in the criteria would be the requirements that an NRSRO:

(1) have national recognition, which means that the rating firm is recognized as an issuer of credible and reliable ratings by the predominate users of securities ratings in the U.S.;

[39] Apparently, it was understood that the raters would be Moody's, S&P, and Fitch, the three incumbents.

[40] In January 1999 it "upgraded" Thomson BankWatch from a specialist NRSRO to a general-purpose NRSRO. In December 2000 Thomson BankWatch was absorbed into Fitch.

(2) have adequate staffing, financial resources, and organizational structure to ensure that it can issue credible and reliable ratings of the debt issuers, including the ability to operate independently of economic pressures or controls by companies that it rates and a sufficient number of staff members qualified in terms of education and experience to evaluate an issuer's credit thoroughly and competently;

(3) use systematic ratings procedures that are designed to ensure credible and accurate ratings;

(4) have adequate contacts with the managements of issuers, including access to senior level management of issuers; and

(5) have internal procedures to prevent mis-use of non-public information and compliance with such procedures.

The SEC has taken no action on these proposals, and seems in no hurry to do so. In the interim, however, the supply-limiting effect of the de facto ban on new NRSRO designations remains intertwined with the demand-enhancing effect of the safety-and-soundness regulation discussed above. It is not surprising that Moody's can earn such handsome profits in this environment.

C. An appraisal of regulation.

It is easy to be sympathetic to the SEC's plight. Financial regulators (including the SEC) have created a demand for ratings, but (except for the SEC) have not themselves specified the identities and qualifications of the raters. In the absence of any "certifying of the certifiers" there would be nothing to prevent the establishment of bogus "rating" firms who would indiscriminately offer investment grade ratings to any security at any time. The functioning of this aspect of safety-and-soundness regulation would be undermined.

Accordingly, so long as regulators use ratings as indicators of safety, someone will have to "certify the certifiers". It is to the SEC's credit that it realized that this task had to be done. But this is not a task that is within the SEC's normal area of expertise. The agency's lack of enthusiasm for

the task is understandable -- but it is unfortunate, since it has raised the serious barrier to entry described above.

There is, however, a straightforward and superior alternative: Safety-and-soundness regulators could cease relying on the rating firms for safety judgments and instead could directly limit financial institutions' asset risks by bringing market-based information immediately into the process -- by specifying limits or capital requirements on assets' yield spreads directly rather than by specifying them indirectly through rating requirements.[41] Without the rating requirements by financial regulators, the SEC would not have to certify NRSROs, and the rating firms' fates -- incumbent and entrant alike -- would be left to the financial markets, where they belong. The participants in the financial markets, on their own, would decide whether and which rating firms provide enough help in piercing the asymmetric information fog of these markets so as to justify the firms' costs and fees.

If financial regulators insist on continuing to delegate these safety determinations to the rating firms, however, then someone will have to be the certifier of the certifiers; and the SEC is probably as good a candidate as any. But then the SEC must cease being an artificial barrier to entry and must make a good faith effort certify as NRSROs all capable candidates.

In this context, then, what criteria should the SEC use to certify NRSROs, and how do its 1997 proposed criteria measure up? The answer to the first question will help answer the second. Since the need to certify NRSROs rests on the regulators' delegation of safety decisions to the rating firms and on the possibility that bogus rating firms could indiscriminately distribute favorable ratings, the SEC must make judgments about the accuracy/efficacy/competency of a rating firm with respect to the relevant safety issues. Since the rating firms focus on the likelihood of default

[41] This has been proposed by Partnoy (1999). If yield spreads by themselves are not a sufficient indicator of safety, other measures -- e.g., price volatility -- could be included as well. The crucial element is that the regulators themselves should determine the criteria rather than delegating the decisions to rating firms.

with respect to specific securities and the safety-and-soundness regulators appear to be satisfied in relying on those judgments, the SEC will have to assess a rating firm's performance in this regard.[42] Another way of stating this proposition is that the SEC must judge the outputs of the rating firms.

Against this standard, the SEC's 1997 proposed criteria do not hold up well. The "national recognition" criterion appears to be an indirect market test of performance: if a rating firm was not performing well, it might cease to retain a national following. But in the current context of only three general-purpose rating firms and a substantial regulation-driven demand for those firms' rating services, a national following for the current incumbents is all but guaranteed; and the task of a new or small rating firm to attract national recognition is made substantially harder than it otherwise would be by its lack of a NRSRO designation while three incumbents have NRSRO designations. Further, foreign credit rating firms may have substantial expertise abroad; but their lack of U.S. "national recognition" dooms their prospects for NRSRO designation. In essence, the "national recognition" criterion creates a "Catch 22" barrier to entry.

The remaining four criteria (adequate resources; systematic procedures; adequate contacts; internal procedures) are measures of inputs, not output. Smaller firms or firms with innovative rating technologies will be at a disadvantage if judged by these criteria.

In sum, if the SEC cannot or is unwilling to exit from the NRSRO designation field, then it must become serious about certifying qualified firms, and it must re-focus its criteria toward output-oriented measures.

Implications for the BIS proposal.

The BIS proposal will clearly increase greatly the demand for ratings. But the proposal

[42] If this task seems too onerous for the SEC, then the agency ought seriously to consider the alternative: specify safety requirements directly, and exit the "certifying the certifiers" role. Such action might inspire other safety-and-soundness regulators similarly to specify their safety requirements directly.

leaves open the crucial issue of certification of credit rating firms that currently bedevils the U.S. Extended regulation/certification of credit rating firms by the SEC and by its counterparts abroad does not seem to be a sensible direction for bank regulation to go, especially since there are feasible alternatives.

First, to the extent that a bank's borrower has traded debt securities outstanding, the pricing/spreads of those securities should be directly incorporated into the capital requirement for the bank's loans to that borrower. Second, bank regulators should require that all banks use market value accounting (MVA) for all of their assets, liabilities, and off-balance-sheet items, in place of the largely backward-looking cost-oriented accounting system of generally accepted accounting principles (GAAP) that prevails today.[43] MVA reports ought to be expected from banks on a far more frequent basis than the current end-of-quarter basis; after all, banks do not get into trouble solely on the last day of each quarter. The eventual goal in a digital era ought to be real-time reporting. Third, as a supplement to MVA, bank regulators must require forward-looking stress tests to be part of banks' capital requirements. Stress tests ought to be part of the auditor's obligation.[44] The accounting profession ought to be able to look to the Financial Accounting Standards Board (FASB) in the U.S and/or the International Accounting Standards Committee for guidance in developing stress-test standards. Fourth, subordinated debt ought to be part of banks' required capital structure.

[43] See White (1991a, 1991b, 1998) for further discussion.

[44] Since accountants are already certified, no new regulatory/certification mechanisms would be necessary.

VII. Conclusion

The industrial organization of the credit rating industry is an important area for future research, especially in the international arena. This essay has only scratched the surface.

Nevertheless, the analysis of this paper has revealed the important role that regulation plays in this industry: by increasing the demand for ratings, and by limiting the supply of rating firms. The Basel proposal will only exacerbate the demand for ratings but not solve the problem of how credit rating firms should be certified.

There is a better way. It would make more extensive use of market information. It would use market spreads directly as indicators of the riskiness of assets, and it would use market value accounting, forward-looking stress tests, and subordinated debt as vital components of the process of determining adequate capital for banks.

These suggestions do not mean that the credit rating firms should be prevented from playing a continuing role in helping issuers and investors pierce the fog of asymmetric information. But that role should be determined by the market participants themselves, not by additional regulation that artificially increases demand and restricts supply. The latter is a recipe for shortages and rents. This is not a welcome prospect.

References

Altman, Edward I. and Anthony Saunders, "An Analysis and Critique of the BIS Proposal on Capital Adequacy and Ratings," Department of Finance, Stern School of Business, New York University, January 2000, mimeo.

Bank for International Settlements, Basel Committee on Banking Supervision, "Credit Ratings and Complementary Sources of Credit Quality Information," Working Paper No. 3, August 2000.

Benston, George J., "Accounting Numbers and Economic Values," Antitrust Bulletin, 27 (Spring 1982), pp. 161-215.

Carlton, Dennis W. and Jeffrey M. Perloff, Modern Industrial Organization, 2nd edn. New York: HarperCollins, 1994.

Cantor, Richard and Frank Packer, "The Credit Rating Industry," Journal of Fixed Income, 5 (December 1995), pp. 10-34.

Ederington, Louis H., and Jess B. Yawitz, "The Bond Rating Process," in Edward I. Altman, ed., Handbook of Financial Markets and Institutions, 6th edn. New York: John Wiley & Sons, 1987, pp. 23-1 - 23-7.

Figlewski, Stephen and Lawrence J. White, "Orange County: Don't Blame Derivatives," SternBusiness, 1 (Spring 1995), pp. 30-35.

Fisher, Franklin M., "The Misuse of Accounting Rates of Return: Reply," American Economic Review, 74 (June 1984), pp. 509-517.

Fisher, Franklin M. and John J. McGowan, "On the Misuse of Accounting Rates of Return to Infer Monopoly Profits," American Economic Review, 73 (March 1983), pp. 82-97.

Fridson, Martin S., "Why Do Bond Rating Agencies Exist?" Extra Credit (Merrill Lynch), November/December 1999.

Jewell, Jeff and Miles Livingston, "A Comparison of Bond Ratings from Moody's S&P and Fitch," Financial Markets, Institutions, & Instruments, Vol. 8, No. 4, August 1999.

Jorion, Philippe, Big Bets Gone Bad: Derivatives and Bankruptcy in Orange County. San Diego: Academic Press, 1995.

Partnoy, Frank, "The Siskel and Ebert of Financial Markets: Two Thumbs Down for the Credit Rating Agencies," Washington University Law Quarterly, 77 No. 3 (1999), pp. 619-712.

Scherer, F.M. and David Ross, Industrial Market Structure and Economic Performance. 3rd ed. Boston: Houghton-Mifflin, 1990.

White, Lawrence J., The S&L Debacle: Public Policy Lessons for Bank and Thrift Regulation. New York: Oxford University Press, 1991a.

White, Lawrence J., "The Value of Market Value Accounting for the Deposit Insurance System," Journal of Accounting, Auditing, and Finance, 6 (April 1991b), pp. 284-301.

White, Lawrence J., "Getting a Grip on Capital," Secondary Mortgage Markets, 15 (July 1998), pp. 1, 54-59.

White, Lawrence J., "Bank Regulation in the U.S.: Lessons from the 1980s and 1990s," Japan and the World Economy, (forthcoming 2000).

Wilson, Richard S., Corporate Senior Securities: Analysis and Evaluation of Bonds, Convertibles and Preferreds. Chicago: Probus, 1987.