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ON DUOPOLY AND COMPENSATION GAMES IN THE CREDIT RATING INDUSTRY

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ABSTRACT—Credit rating agencies are important institutions of the global capital markets. If they had performed properly, the financial crisis of 2008–2009 would not have occurred, and the course of world history would have been different. There is a near universal consensus that reform is needed, but none as to the best approach. The problem has not been solved. This Article offers the simplest fix proposed thus far, and it is contrarian. This Article accepts the central role of rating agencies in the regulation of bond investments, the realities of a duopoly, and the issuer-pay model of compensation. The status quo is the baseline. While not ideal, this much-maligned state is still well suited for robust competition leading to more accurate credit ratings. The role of regulation should be to create the conditions necessary to induce competition. This Article proposes that a small, recurring portion of revenue earned by the largest rating agencies should be ceded to fund a pay-for-performance bonus, and that the agencies should compete for this bonus on a periodic winner-take-all basis. This modest, at-the-margin bonding mechanism would significantly affect incentives and outcomes: conflict of interest and implicit coordination would be minimized; competition would increase; the quality of ratings would improve. Furthermore, this funding scheme can promote the incubation of smaller new competitors through a program of "shadow competition," creating a competitive information market on credit ratings. Since regulation would only be required to assess performance and would not change the fundamental industrial organization, this proposal has the advantage of simplicity and feasibility.

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INTRODUCTION 86
I. HISTORICAL BACKGROUND AND REVIEW OF PRIOR PROPOSALS 91
A. The Bond Market and the Credit Rating Industry 91
B. Poor Performance and Its Causes 93
C. Regulatory Responses 99
D. Review of Prior Proposals 102
II. PROPOSAL FOR A COMPENSATION COMPETITION 113
A. Properly Conceptualizing Competition and Incentive 113
B. Mandating Pay-for-Performance 114
C. Financial and Economic Analyses 118
D. Toward a Robust Secondary Market 124
III. POTENTIAL OBSTACLES TO IMPLEMENTATION 126
A. Coordination and Collusion 126
B. Standard for Performance Assessments 127
C. Regulatory Foundation Laid by Dodd–Frank 132
D. Political Reality of Regulation 134
CONCLUSION 136

INTRODUCTION

Credit rating agencies are vital to the global economy. They assign credit ratings to bond issues and issuers, and most public bonds carry a credit rating, which is a probabilistic assessment of the risk of default. Credit ratings impact the price at which bonds are issued in their primary market and traded in secondary markets, and the assessment of risk in the portfolios of investors. These factors are directly linked to the regulation of bond investors such as banks, broker–dealers, insurers, and investment funds.

Although rating agencies are some of the most important institutions of the global capital markets,[1] they have long been criticized for providing inaccurate credit ratings.[2] Some of their failures, like downgrading Enron's debt to "junk" status only days before its bankruptcy filing, have been spectacular.[3] These past lapses now seem like peccadillos when compared

[1] *See generally* HERWIG M. LANGOHR & PATRICIA T. LANGOHR, THE RATING AGENCIES AND THEIR CREDIT RATINGS: WHAT THEY ARE, HOW THEY WORK, AND WHY THEY ARE RELEVANT (2008) (providing an overview of the business of credit rating).

[2] *See* Frank Partnoy, *The Siskel and Ebert of Financial Markets?: Two Thumbs Down for the Credit Rating Agencies*, 77 WASH. U. L.Q. 619 (1999).

[3] Claire A. Hill, *Rating Agencies Behaving Badly: The Case of Enron*, 35 CONN. L. REV. 1145, 1145 (2003).

to the catastrophic failure to properly rate structured finance instruments[4] during the run-up to the financial crisis of 2008–2009. The narrative is well known and generally accepted. The systematic overrating of mortgage-backed securities, collateralized debt obligations, and other complex structured finance debt instruments inflated valuations and investor demand, reduced the perception of risk, and permitted wholesale investments in de facto junk bonds by regulated financial institutions that were required to invest only in "investment grade" securities.[5] Like a pandemic, these overrated and overpriced "toxic" securities infected the balance sheets of many large financial institutions and triggered a global economic contagion. The financial crisis almost certainly would not have occurred had rating agencies performed properly.[6] Rating agencies are important monitors of the global financial industry. The importance of their vigilance and the policy implications of their failure cannot be overstated.

Reform of the credit rating industry is one of the most important unresolved agendas of post-financial crisis market regulation. Congress, the Securities and Exchange Commission (SEC), the securities industry, and scholars are actively scrutinizing the problem. With the recent explosion of commentary and analysis by scholars[7] and government agencies[8] seeking to

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[4] The basic attribute of structured finance is the creation of securities through financial engineering, which is required because the issuer's financing needs require a "tailor-made product or process." FRANK J. FABOZZI, HENRY A. DAVIS & MOORAD CHOUDHRY, INTRODUCTION TO STRUCTURED FINANCE 1 (2006).

[5] *See* LANGOHR & LANGOHR, *supra* note 1, at 74–78 (defining "junk" and investment grade bonds).

[6] FIN. CRISIS INQUIRY COMM'N, THE FINANCIAL CRISIS INQUIRY REPORT: FINAL REPORT OF THE NATIONAL COMMISSION ON THE CAUSES OF THE FINANCIAL AND ECONOMIC CRISIS IN THE UNITED STATES xxv (2011) [hereinafter FINANCIAL CRISIS INQUIRY REPORT] ("This crisis could not have happened without the rating agencies."); *see also* Lawrence J. White, *The Credit-Rating Agencies and the Subprime Debacle*, 21 CRITICAL REV. 389, 396 (2009) ("It is clear that the credit rating agencies were at the center of the subprime debacle.").

[7] *See, e.g.*, Lynn Bai, *On Regulating Conflicts of Interest in the Credit Rating Industry*, 13 N.Y.U. J. LEGIS. & PUB. POL'Y 253 (2010); John C. Coffee, Jr., *Ratings Reform: The Good, the Bad, and the Ugly*, 1 HARV. BUS. L. REV. 231, 234 (2011); Thomas J. Fitzpatrick, IV & Chris Sagers, *Faith-Based Financial Regulation: A Primer on Oversight of Credit Rating Organizations*, 61 ADMIN. L. REV. 557 (2009); Mark J. Flannery, Joel F. Houston & Frank Partnoy, *Credit Default Swap Spreads as Viable Substitutes for Credit Ratings*, 158 U. PA. L. REV. 2085 (2010); Claire A. Hill, *Limits of Dodd–Frank's Rating Agency Reform*, 15 CHAP. L. REV. 133 (2011); Claire A. Hill, *Regulating the Rating Agencies*, 82 WASH. U. L.Q. 43 (2004); Claire A. Hill, *Why Did Anyone Listen to the Rating Agencies After Enron?*, 4 J. BUS. & TECH. L. 283 (2009); Claire A. Hill, *Why Did Rating Agencies Do Such a Bad Job Rating Subprime Securities?*, 71 U. PITT. L. REV. 585 (2010); John Patrick Hunt, *Credit Rating Agencies and the "Worldwide Credit Crisis": The Limits of Reputation, the Insufficiency of Reform, and a Proposal for Improvement*, 2009 COLUM. BUS. L. REV. 109; Yair Listokin & Benjamin Taibleson, *If You Misrate, Then You Lose: Improving Credit Rating Accuracy Through Incentive Compensation*, 27 YALE J. ON REG. 91 (2010); Lois R. Lupica, *Credit Rating Agencies, Structured Securities, and the Way Out of the Abyss*, 28 REV. BANKING & FIN. L. 639 (2009); Timothy E. Lynch, *Deeply and Persistently Conflicted: Credit Rating Agencies in the Current Regulatory Environment*, 59 CASE W. RES. L. REV. 227 (2009); Jeffrey Manns, *Downgrading Rating Agency Reform*, 81 GEO. WASH. L. REV. 749 (2013); Jeffrey Manns, *Rating Risk After the Subprime Mortgage Crisis: A User*

shape the ultimate reform, the sense of urgency for reform of the credit rating industry is palpable. Proposals include promoting more competition among rating agencies, imposing greater civil liability, changing rating agency compensation structures from issuer-pay to user-pay models, and substituting credit ratings with market metrics.

Although we do not have a consensus on the fix,[9] the problem has been identified. In the Sarbanes–Oxley Act,[10] Congress first acknowledged the problem of rating agencies as they related to the corporate governance and accounting failures of the era. In the Dodd–Frank Wall Street Reform and Consumer Protection Act (Dodd–Frank Act), Congress again recognized the problem of rating agencies as they related to the financial crisis.[11] In this eight-year legislative arc, a consensus has formed that the core problem is the relationship between compensation and incentive. This is seen in the Dodd–Frank Act, which requires studies of "alternative means for compensating nationally recognized statistical rating organizations that would create incentives for accurate credit ratings."[12] In singling out compensation for study, Congress correctly recognized the link among compensation, incentive, and quality of credit ratings. It has

Fee Approach for Rating Agency Accountability, 87 N.C. L. Rev. 1011 (2009); Frank Partnoy, *Historical Perspectives on the Financial Crisis: Ivar Kreuger, the Credit-Rating Agencies, and Two Theories About the Function, and Dysfunction, of Markets*, 26 YALE J. ON REG. 431 (2009); Joseph A. Grundfest & Evgeniya E. Hochenberg, *Investor Owned and Controlled Rating Agencies: A Summary Introduction* (Rock Ctr. for Corporate Governance, Working Paper No. 66, 2009; Stanford Univ. Law Sch. Law & Econ. Olin, Working Paper No. 391, 2009), *available at* papers.ssrn.com/sol3/papers.cfm?abstract_id=1494527.

[8] *See, e.g.*, U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-12-240, CREDIT RATING AGENCIES: ALTERNATIVE COMPENSATION MODELS FOR NATIONALLY RECOGNIZED STATISTICAL RATING ORGANIZATIONS (2012) [hereinafter GAO 2012 REPORT]; U.S. SEC. & EXCH. COMM'N, 2011 SUMMARY REPORT OF COMMISSION STAFF'S EXAMINATIONS OF EACH NATIONALLY RECOGNIZED STATISTICAL RATING ORGANIZATION [hereinafter SEC SEPT. 2011 REPORT] (as required by Section 15E(p)(3)(C) of the Securities Exchange Act of 1934); U.S. SEC. & EXCH. COMM'N, ANNUAL REPORT ON NATIONALLY RECOGNIZED STATISTICAL RATING ORGANIZATIONS (2011) [hereinafter SEC JAN. 2011 REPORT] (as required by Section 6 of the Credit Rating Agency Reform Act of 2006); U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-10-782, SECURITIES AND EXCHANGE COMMISSION: ACTION NEEDED TO IMPROVE RATING AGENCY REGISTRATION PROGRAM AND PERFORMANCE-RELATED DISCLOSURES (2010) [hereinafter GAO 2010 REPORT]; U.S. SEC. & EXCH. COMM'N, REPORT ON THE ROLE AND FUNCTION OF CREDIT RATING AGENCIES IN THE OPERATION OF THE SECURITIES MARKETS (2003) [hereinafter SEC REPORT ON ROLE AND FUNCTION OF CREDIT AGENCIES] (as required by Section 702(b) of the Sarbanes–Oxley Act of 2002).

[9] A number of commentators have previously provided thoughtful critiques of these reform proposals, and their strengths, weaknesses, and feasibility have been well analyzed. *See, e.g.*, Coffee, *supra* note 7, at 251–71 (providing an overview of the reform choices); Fitzpatrick & Sagers, *supra* note 7, at 592–608 (same).

[10] Sarbanes–Oxley Act of 2002, Pub. L. No. 107-24, 116 Stat. 745.

[11] Pub. L. No. 111-203, 124 Stat. 1376, 1872–90 (to be codified in scattered sections of 12 and 15 U.S.C.).

[12] *Id.* § 939F(b)(4), 124 Stat. at 1889; *see also id.* § 939D(a), 124 Stat. at 1888 (requiring GAO to study "alternative means for compensating . . . to provide more accurate credit ratings").

signaled a willingness to reform the compensation scheme for credit rating agencies and has already given the SEC significant authority to regulate compensation,[13] but thus far there has been no feasible reform proposal.[14] This Article responds to Congress's clarion call to resolve this essential problem of industrial organization.[15] It proposes a simple, contrarian solution to positively link compensation and incentive.

Unlike all other reform proposals, my proposal accepts the status quo of the much-maligned industry organization as a baseline reality. This Article does not argue for fundamental reconfiguration of the industry or regulation. It leaves intact the role of the major rating agencies in the regulation of financial institutions and investment portfolios. It assumes the continued existence of a duopoly and accepts the much-criticized issuer-pay model, in which the issuer of the debt security pays for the rating. With the luxury of starting from scratch, these conditions may not be the ideal model,[16] but the world is imperfect and wishful thinking is not a policy proposal. In proposing concrete reforms, the pragmatist should acknowledge the realities of a preexisting multi-billion dollar credit rating industry and a $150 trillion credit market[17] that depends heavily on credit ratings. From a regulatory-feasibility perspective, the simplest path forward requires the least amount of structural change to large, complex institutions and capital markets; and perhaps this counterintuitively leads to the most effective reform.

The basic problem is this: industry concentration coupled with the issuer-pay model reduces the incentive to compete and perform. Since incentive is the condition necessary to induce competition, the problem can be fixed by implementing a structured compensation scheme overlaid onto the issuer-pay model. The simplest solution is to establish a mandatory pay-for-performance compensation scheme in which a fixed percentage of accrued revenue is ceded to fund a performance bonus. At periodic intervals, the regulator should award the bonus to the best performing rating agency for the period on a winner-take-all basis. Proper incentive is achieved through mandatory participation in a compensation competition. This idea requires minimal regulatory intrusion into the industry. The

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[13] *See id.* § 939F(d), 124 Stat. at 1888.

[14] *See infra* Part I.D (identifying the problems with the current proposals).

[15] *See* Fitzpatrick & Sagers, *supra* note 7, at 565 (noting that the problem is one of industrial organization). Industrial organization is the branch of economics dealing with the structure of industries and the behavior of firms in the market. DONALD RUTHERFORD, ECONOMICS: THE KEY CONCEPTS 114–15 (2007).

[16] *See* Hill, *Regulating the Rating Agencies*, *supra* note 7, at 84 ("The concentrated market structure in the rating agency industry and the barriers to entry clearly cause some deviations from the 'ideal' of a fully competitive market.").

[17] *See* CHARLES ROXBURGH ET AL., MCKINSEY GLOBAL INST., MAPPING GLOBAL CAPITAL MARKETS 2011, at 3 (2011) [hereinafter MCKINSEY REPORT], *available at* http://www.mckinsey.com/Insights/MGI/Research/Financial_Markets/Mapping_global_capital_markets_2011 (data as of 2010).

proposal benefits from simplicity, administrability, and economic feasibility. It can fundamentally reform the industry with minimal disruption, even though the rating agencies themselves may not like it.

Part I explains the problem in the industrial organization, describes the regulatory responses, and briefly summarizes prior reform proposals. Part II sets forth the proposal, including issues related to implementation. After establishing the basic scheme, it offers a glimpse of the next step in the evolution of a more robust market for credit ratings, which is the creation of a competitive information market for credit ratings through a program of "shadow competition" among a broader cohort of rating agencies. Part III discusses the obstacles to implementing the proposal. It argues that the potential problem of collusion and the difficulty of formulating a standard for assessment are not insurmountable impediments. Instead, the politics of Wall Street regulation constitute the most formidable challenge to implementation.[18]

[18] The scope of my analysis is limited to advancing the conceptual framework of the regulation and demonstrating its feasibility. This Article does not provide a detailed constitutional analysis of the proposal, but I note a few factors that may be relevant in such an analysis. Credit rating agency reform obviously involves the authority of Congress to regulate interstate commerce as it did in enacting the Credit Rating Agency Reform Act of 2006 and the Dodd–Frank Act of 2010. The proposal here can be couched as a condition of receiving a regulatory license from the SEC. It could be structured as a fee, refundable upon demonstration of performance. It could be structured as a tax with a back-end monetary incentive. *See* Nat'l Fed'n of Indep. Bus. v. Sebelius, 132 S. Ct. 2566, 2593–601 (2012) (holding that the individual mandate to purchase health insurance of the Patient Protection and Affordable Care Act was a valid exercise of Congress's taxing power); New York v. United States, 505 U.S. 144, 171–74 (1992) (holding that the Low-Level Radioactive Waste Policy Act's monetary and access incentive provisions, including the awarding of collected surcharges, were valid). While the proposal may have in mind the three specific firms that currently dominate the credit rating market, it could be couched in neutral language with regulation addressing only the largest firms: for example, firms having market share in credit ratings of 10% or more. This would capture only the duopoly of Moody's Investors Service (Moody's) and Standard & Poor's rating service (S&P), plus Fitch Ratings (Fitch), since the other SEC-designated nationally recognized statistical rating organizations (NRSROs) collectively have about 3% of the market share. *See* Wal-Mart Stores, Inc. v. City of Turlock, 483 F. Supp. 2d 987, 1022 (E.D. Cal. 2006) (holding that a city ordinance prohibiting "Discount Superstore" with specific characteristics did not violate equal protection or dormant commerce principles); Retail Indus. Leaders Ass'n v. Fielder, 435 F. Supp. 2d 481, 501 (D. Md. 2006) (holding that a state statute requiring employers of specified criteria that spend less than 8% of total wages on health insurance to pay the difference to the state did not violate equal protection). Any legislative or regulatory proposal may invoke the Commerce Clause, taxing power, due process, equal protection, and neutrality principles, as the enactment of meaningful regulation such as the Dodd–Frank Act or the Credit Rating Agency Reform Act would. This Article is limited to setting forth the compensation scheme to optimize performance from an economic and game theory perspective.

I. HISTORICAL BACKGROUND AND REVIEW OF PRIOR PROPOSALS

A. The Bond Market and the Credit Rating Industry

Long-term debt and equity fund the long-term capital needs of corporations.[19] In 2010 the global bond market had outstanding bonds of $108 trillion, as compared to the equity market of $54 trillion.[20] This ratio of debt to equity is not surprising. Academic theories in corporate finance support the view that debt, when properly used, can be value enhancing.[21] There is a "pecking order" in external financing, and firms prefer to issue the least risky securities first, which is debt.[22] The credit market is enormously important to the global capital markets and the smooth functioning of a market economy.

Publicly traded bonds are rated.[23] A credit rating is necessary because many financial institutions, the primary investors of bonds, are limited in the amount of risk they can assume in their portfolios. A credit rating is an opinion provided by a rating agency for a fee[24] on the credit risk or creditworthiness of the bond issue, which reflects the probability of default of that bond.[25] It places the issue or issuer on an ordinal scale of credit ratings. Among the major rating agencies, their alphanumeric rating scales are very similar. The major taxonomical division in ratings is between "investment grade" and "speculative grade,"[26] and within each are finer divisions of ratings.[27] Importantly, a credit rating is not an opinion on the

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[19] *See* ROBERT J. RHEE, ESSENTIAL CONCEPTS OF BUSINESS FOR LAWYERS 231–32 (2012).

[20] MCKINSEY REPORT, *supra* note 17, at 2. These figures do not include nonsecuritized bank loans, which add another $49 trillion in outstanding debt. *Id.*

[21] *See* RICHARD A. BREALEY, STEWART C. MYERS & FRANKLIN ALLEN, PRINCIPLES OF CORPORATE FINANCE 418–33 (10th ed. 2011); Michael C. Jensen & William H. Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure*, 3 J. FIN. ECON. 305 (1976); Franco Modigliani & Merton H. Miller, *Corporate Income Taxes and the Cost of Capital: A Correction*, 53 AM. ECON. REV. 433 (1963).

[22] BREALEY, MYERS & ALLEN, *supra* note 21, at 462.

[23] LANGOHR & LANGOHR, *supra* note 1, at 23; Hill, *Regulating the Rating Agencies*, *supra* note 7, at 46–48.

[24] The typical fee for a corporate bond issue is in the range of 4–5 basis points. LANGOHR & LANGOHR, *supra* note 1, at 413. Because structured finance instruments are more complex, the fees are generally higher. *Id.*; SEC JAN. 2011 REPORT, *supra* note 8, at 22. One basis point is 1/100th of a percent, and thus 100 basis points equals 1%. The finer division represented by basis points is necessary in some areas of finance, particularly bonds.

[25] *See* LANGOHR & LANGOHR, *supra* note 1, at 24 (providing definitions from the three leading rating agencies). "The term 'credit rating' means an assessment of the creditworthiness of an obligor as an entity or with respect to specific securities or money market instruments." Credit Rating Agency Reform Act of 2006 § 3(a)(60), Pub. L. No. 109-291, 120 Stat. 1327, 1328.

[26] Bonds in this latter category are called "junk" or "high-yield" bonds.

[27] For investment grade, S&P and Fitch provide these ordinal ratings: AAA, AA+, AA, AA–, A+, A, A–, BBB+, BBB, BBB–. Moody's rates the same categories with slightly different nomenclature: Aaa, Aa1, Aa2, Aa3, A1, A2, A3, Baa1, Baa2, Baa3. Ratings continue with speculative-grade ratings of

value of the bond.[28] Like the value of stocks, the value of bonds may depend on a number of intrinsic and extrinsic factors. A credit rating obviously affects value: higher rated bonds should be priced higher and offer lower yields, and vice versa. But the value of a bond also incorporates other market factors such as the prevailing interest rate environment, macroeconomic factors, and transitory financial market movements, all of which may move bond prices and yields as well as yield spreads among classes of bonds. However, value and creditworthiness are distinct. A credit rating is an opinion only on the probability of default, the essence of creditworthiness.[29]

While rating agencies provide opinions in private transactions, they de facto regulate investments and serve a public gatekeeping function.[30] The use of credit ratings has been pervasive in regulation of investments.[31] An example is the regulation of bank capital, which among other things employs credit ratings.[32] Another example is Rule 2a-7 of the Investment Company Act, which provides that a money market fund shall "present minimal credit risks" as may be determined by credit rating.[33] Still another example is the use of ratings to regulate the investment portfolios of insurance companies.[34] The financial crisis has proved that the network of information intermediation among issuers, investment bankers, rating agencies, and investors imparts externalities on the broader society. Thus, credit ratings are a public good.[35]

The credit rating industry is highly concentrated.[36] The three largest rating agencies are Moody's Investors Service (Moody's), Standard &

BB+ and Ba1, going down to C and D levels. *See* LANGOHR & LANGOHR, *supra* note 1, at 47, 74–78 (describing ordinal rankings). Bonds rated below BBB– and Baa3 are junk bonds. *Id.* at 44–45.

[28] *Id.* at 64–72.

[29] *Id.* at 24.

[30] Stephen Choi, *Market Lessons for Gatekeepers*, 92 NW. U. L. REV. 916, 934 (1998); John C. Coffee, Jr., *Gatekeeper Failure and Reform: The Challenge of Fashioning Relevant Reforms*, 84 B.U. L. REV. 301, 302 (2004).

[31] *See* LANGOHR & LANGOHR, *supra* note 1, at 430–39. As of March 5, 2013, a Westlaw search of the term "investment grade" produced 524 hits in state statutes and administrative regulations databases, and 115 hits in C.F.R. and U.S.C. databases. The term "Moody's or Standard /2 Poor!" produced 879 hits in state statutes and administrative regulations databases, and 90 hits in C.F.R. and U.S.C. databases.

[32] 12 C.F.R. pt. 3, app. A (2013); *id.* pt. 225, app. G; *id.* pt. 1750, subpt. B, app. A; *see also* SEC JAN. 2011 REPORT, *supra* note 8, at 11–12 (noting the incorporation of the concept of "investment grade" in the Federal Deposit Insurance Act as well as other federal statutes and regulations).

[33] 17 C.F.R. § 270.2a-7 (2012).

[34] *See, e.g.*, ARIZ. REV. STAT. ANN. § 20-544 (2002) (providing that an insurer may invest in bonds "which have received an investment grade rating").

[35] *See* LANGOHR & LANGOHR, *supra* note 1, at 429 ("It is clear that today's CRA industry presents plenty of public interest externalities.").

[36] *See* SEC JAN. 2011 REPORT, *supra* note 8, at 6–7. Economists measure market concentration using the Herfindahl–Hirschman Index, "calculated by squaring the market share of each firm competing in the market and then summing the resulting number." *Id.* Based on this calculation, the

Poor's Rating Service (S&P), and Fitch Ratings (Fitch). As of 2010, the market shares based on the number of ratings provided are: S&P 42%, Moody's 37%, Fitch 18%, and the other seven SEC-designated nationally recognized statistical rating organizations (NRSROs) add up to about 3%.[37] Together, Moody's and S&P are typically seen as a duopoly or partner-monopoly,[38] but this status is not quite correct because Fitch is a smaller but significant third competitor. The industry is somewhere between a duopoly and an oligopoly. In this paper, I call this arrangement a "duopoly plus" to reflect that Moody's and S&P have dominant market shares but Fitch cannot be ignored.

B. Poor Performance and Its Causes

Systemic poor performance of rating agencies poses deep problems of public policy and economics. Most recently, rating agencies systematically overrated highly speculative structured finance securities backed by mortgages underwritten during the housing bubble.[39] The results were catastrophic. By 2010, over 90% of the subprime mortgage-backed securities issued between 2006 and 2007 with triple-A ratings had been downgraded to junk bonds by Moody's and S&P.[40] This 90% error rate is breathtaking for an industry that rates bonds on very fine ordinal grades. During this period, rating agencies engaged in egregiously lax and irresponsible business practices, and there was a systematic failure of due diligence by the entire industry.[41] If rating agencies had rated these securities as junk bonds, the financial crisis would not have occurred

HHI for the credit rating industry is 3495, implying that there are approximately 2.86 equally sized firms, which approximates the actual duopoly plus state of the industry. *Id.*; *see also* U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, HORIZONTAL MERGER GUIDELINES § 5.3, at 19 (2010) (indicating that a score of 3495 is a highly concentrated market).

[37] SEC SEPT. 2011 REPORT, *supra* note 8, at 6. This high level of concentration has been a historical fact of the credit rating industry. SEC JAN. 2011 REPORT, *supra* note 8, at 11.

[38] SEC JAN. 2011 REPORT, *supra* note 8, at 10–11; JOHN C. COFFEE JR., GATEKEEPERS: THE PROFESSIONS AND CORPORATE GOVERNANCE 284 (2006); Fitzpatrick & Sagers, *supra* note 7, at 569–70.

[39] Coffee, *supra* note 7, at 236–41; Fitzpatrick & Sagers, *supra* note 7, at 581 & n.89.

[40] Eric S. Pendergraft, *Section 933(b): Nimble Private Regulation of the Capital Market Gatekeepers*, 39 FLA. ST. U. L. REV. 511, 515 (2012). In 2006, Moody's assigned triple-A ratings on thirty mortgage-related securities per day, and 83% of these securities were ultimately downgraded. FINANCIAL CRISIS INQUIRY REPORT, *supra* note 6, at xxv. For a definition of junk bonds, see *supra* notes 26–27 and accompanying text.

[41] *See* Coffee, *supra* note 7, at 242–46 (providing account and analysis). Recently, the U.S. Department of Justice sued Standard & Poor's for fraud related to the latter's ratings of mortgage-related bonds during the financial crisis. Complaint for Civil Money Penalties and Demand for Jury Trial, United States v. McGraw-Hill Cos., No. CV13-00779 (C.D. Cal. Feb. 4, 2013); *see also* Mary Williams Walsh & Andrew Ross Sorkin, *U.S. Accuses S.&P. of Fraud in Suit on Loan Bundles*, N.Y. TIMES, Feb. 5, 2013, at A1. In this complaint, the United States avers that S&P engaged in a scheme to defraud investors. Complaint, *supra*, § VI, at 28–115.

because investor demand would have collapsed due to regulatory restrictions on investments, thus breaking the securitization pipeline that fueled the housing bubble.

The problems of the credit rating industry have many causes. Commentators have well documented the major factors, which have been generally accepted as the cause of the problem. The following is a summary of their findings and analyses.

1. Conflict of Interest.—Rating agencies are said to have an inherent conflict of interest arising from the issuer-pay fee structure,[42] which is the predominant form of compensation in the credit rating industry.[43] The issuer pays the fee for the credit rating service, rather than the bond investor or a subscriber to rating information. Since a high rating reduces the issuer's cost of debt, the potential for a conflict of interest is obvious. Issuers and investment bankers, the argument goes, can "shop" for ratings, and this competition for business can compromise the objectivity of rating agencies.[44] With that said, the conflict of interest argument is more nuanced as there is a counterargument. The issuer-pay model is not unique to rating agencies, as accountants, lawyers, investment bankers, and consultants are also paid by issuers.[45] And, since obtaining multiple ratings per issue is the standard market practice, issuers may not really have leverage,[46] or the leverage may be weak at best. Empirical evidence indirectly supports this point as fees for credit ratings have significantly increased from 2001 to 2007, suggesting that, at least with respect to pricing, issuers did not have the "shop elsewhere" leverage against rating agencies.[47]

2. Lack of Competition.—Rating agencies do not compete so much as they coexist in a profitable market.[48] There are three reasons that competition is lacking. First, the market is heavily concentrated, thus reducing competiveness. Market concentration "permits these nominal

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[42] *See* SEC JAN. 2011 REPORT, *supra* note 8, at 16–17, 19; Fitzpatrick & Sagers, *supra* note 7, at 582; Listokin & Taibleson, *supra* note 7, at 99; Lupica, *supra* note 7, at 662. Some commentators have also suggested that individual credit analysts have conflicts of interest arising from employment opportunities with issuers or investment banks. *See* Jess Cornaggia et al., Revolving Doors on Wall Street (Mar. 22, 2013) (unpublished manuscript), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2150998.

[43] As of 2011, seven of the ten NRSROs operated under the issuer-pay model, and the issuer-pay model constituted approximately 99% of the total outstanding credit ratings issued by NRSROs. SEC JAN. 2011 REPORT, *supra* note 8, at 6. The NRSROs appear to be trending even more toward the issuer-pay compensation model. SEC SEPT. 2011 REPORT, *supra* note 8, at 9.

[44] Fitzpatrick & Sagers, *supra* note 7, at 586; Listokin & Taibleson, *supra* note 7, at 99.

[45] Coffee, *supra* note 7, at 255.

[46] COFFEE, *supra* note 38, at 286.

[47] LANGOHR & LANGOHR, *supra* note 1, at 414; *see also infra* note 192 (noting that Warren Buffett invested in Moody's because of its pricing power).

[48] Coffee, *supra* note 7, at 231; *see also* Hill, *Limits of Dodd–Frank*, *supra* note 7, at 146 ("What is needed in the moderate term is vigorous competition.").

competitors to shirk, engaging in less effort and research than if there were true active competition."[49] Second, competition is further muted by the industry custom of obtaining multiple ratings from different rating agencies.[50] The vast majority of new bond issues carry multiple ratings.[51] Quite literally, then, the competition among firms can be characterized as typically "win–win." Third, there are no really good substitutes for a credit rating. Although bond investors frequently conduct analysis of bonds independent of credit ratings, the regulatory facet of a credit rating is difficult to substitute. These aspects of rating agencies ensure a level of sustained business irrespective of quality.

3. Ineffectiveness of Reputation Capital.—Reputation capital does not sufficiently incentivize performance. In a competitive market, reputation capital may ensure a certain level of quality and incentive, but it does not incentivize performance well when two firms have cornered the market for a necessary service.[52] One would think that after the failures related to the financial crisis of 2008–2009, the reputations of rating agencies would have been damaged, but the businesses of Moody's and S&P have not been hurt by reputational concerns in the wake of the financial crisis. They are enjoying healthy profits. For example, after the financial crisis, Moody's net income has continued to grow significantly: $402 million (2009), $507 million (2010), $571 million (2011), and $690 million (2012).[53] The 2012 earnings are almost at the same level Moody's achieved in 2007 ($701 million), at the apex of the credit bubble and rating agency revenues.[54] At least for the moment, the profitability of the major rating agencies is primarily a function of market environment and investors' appetite for fixed income securities, which dictate the demand for rating services.[55] Only Moody's, S&P, and Fitch are large enough to

[49] COFFEE, *supra* note 38, at 285.

[50] *See id.* at 286 (noting the "well-established norm that two ratings are necessary").

[51] *See* COFFEE, *supra* note 38, at 286; LANGOHR & LANGOHR, *supra* note 1, at 54; Fitzpatrick & Sagers, *supra* note 7, at 569 & n.38. In a 1999 survey of issuers, 97.4% bought credit ratings from multiple rating agencies: "[a]bout three-quarters hire[d] two rating agencies and one-fifth hired three or more" rating agencies. LANGOHR & LANGOHR, *supra* note 1, at 54–55.

[52] *See* Fitzpatrick & Sagers, *supra* note 7, at 582 ("While it is commonly argued that they will thereby be penalized when the poor quality of their information is disclosed, that argument presumes competitive markets.").

[53] Moody's Corp., Annual Report for the Fiscal Year Ended Dec. 31, 2012 (Form 10-K), File No. 001-14037, at 65 [hereinafter 2012 Moody's Corporation Form 10-K]; Moody's Corp., Annual Report for the Fiscal Year Ended Dec. 31, 2011 (Form 10-K), File No. 001-14037, at 64 [hereinafter 2011 Moody's Corporation Form 10-K].

[54] Moody's Corp., Annual Report for the Fiscal Year Ended Dec. 31, 2007 (Form 10-K), File No. 001-14037, at 46.

[55] *See* SEC JAN. 2011 REPORT, *supra* note 8, at 13 (noting that the market share of rating agencies in structured finance has not declined despite the systemic failure of the leading rating agencies in this sector, but that the overall market demand for asset-backed and mortgage-backed securities has declined due to the lack of investor confidence in the integrity of these securities).

meet the aggregate demand of the bond market. Most scholars have been skeptical that reputation alone optimally incentivizes quality performance.[56]

4. Larger Perspective on Reputation Capital.—Reputation capital does not depend on only historical instances of large, egregious errors. It is based on a collection of factors. It incorporates a rating agency's past record of good performance, adequacy of resources to provide ratings across an enormous bond market, and longevity and history of the firm. "Economies of scale and sunk costs may be economic factors which may favor the larger, more established rating agencies."[57] Commentators have suggested that there are important first-mover advantages[58] and reputational "stickiness"[59] that have enduring competitive benefits. These factors are highly relevant to reputation, though critics of rating agencies sometimes fail to credit them. Even if the three rating agencies performed poorly, their overall reputations may still be better than those of their competitors in the eyes of issuers.

5. Regulatory Barriers.—Regulatory barriers also protect rating agencies from competitors. Financial regulators require institutional investors and broker–dealers to obtain credit ratings for debt securities in their investment portfolios for the purpose of prudential-based regulation of investment activities and risk bearing.[60] However, fearing fly-by-night rating agencies, the SEC has parsimoniously granted the NRSRO status.[61] This regulatory philosophy effectively froze out new rating agencies from the market for credit ratings.[62] These regulatory barriers have protected the duopoly plus structure, stifled competition among rating agencies, and diminished the importance of reputation capital. Nominally, these regulatory barriers have been somewhat lowered due to the liberalization of

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[56] *See* Bai, *supra* note 7, at 270; Fitzpatrick & Sagers, *supra* note 7, at 589–90; Hunt, *supra* note 7, at 155–81; Manns, *Rating Risk*, *supra* note 7, at 1048–50. *But see* Steven L. Schwarcz, *Private Ordering of Public Markets: The Rating Agency Paradox*, 2002 U. ILL. L. REV. 1, 1–2 ("Rating agencies are already motivated to provide accurate and efficient ratings because their profitability is directly tied to reputation.").

[57] SEC JAN. 2011 REPORT, *supra* note 8, at 12.

[58] *See* COFFEE, *supra* note 38, at 284 ("Logic suggests that there should be a significant barrier, because reputational capital cannot be acquired overnight."); Coffee, *supra* note 7, at 248 ("Overall, this pattern suggests that there are important 'first mover' advantages because reputational capital is hard to acquire and goes to the first firms in the field. If licensing power alone could explain the dominance of the Big Three, then the newer members of the SEC's NRSRO club should be sharing in a collective oligopoly.").

[59] *See* Hill, *Why Did Rating Agencies Do Such a Bad Job*, *supra* note 7, at 604 ("Thus, it would seem that even if no rating agency had a regulatory license, stickiness might keep investors with the major agencies even regardless of disastrous performance.").

[60] Coffee, *supra* note 7, at 246–47.

[61] *Id.* at 247; White, *supra* note 6, at 391–92. Section 4 of the Credit Rating Agency Reform Act of 2006 required rating agencies that desired the NRSRO status to be registered with the SEC.

[62] White, *supra* note 6, at 392.

the NRSRO license procurement process.[63] There are now eleven NRSROs.[64] However, the major NRSROs continue to receive regulatory rent.[65]

6. Natural Barriers.—Aside from regulatory barriers, newer and smaller rating agencies confront natural barriers to market entry. Large rating agencies provide broad coverage of the bulk of the global capital market, which includes an enormous credit market (over $150 trillion),[66] and systematize credit information through a similar, if not uniform, set of credit ratings. This information platform is important to investors and regulators. There is a positive network effect to size and scale—i.e., one cannot discount the benefit of having the broad spectrum of bonds and issuers in the very large credit market be rated under presumably a common methodology of firms that can handle such a large task. Newer and smaller rating agencies are disadvantaged because they lack this broad capability. Because they are smaller and have less financial resources, they also cannot compete as well for professional talent. And, if they do compete with the larger rating agencies, the latter could simply buy out the competition to maintain the current state of industry concentration, unless the M&A market is proscribed by law.[67] Forces stronger than the SEC's ability to grant more NRSRO licenses are at work in perpetuating an uncompetitive industry.[68]

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[63] *See infra* Part I.C.

[64] They are HR Ratings de México, S.A. de C.V., Egan-Jones Rating Company, Realpoint LLC, LACE Financial Corp., A.M. Best Company, Inc., DBRS Ltd., Fitch, Inc., Japan Credit Rating Agency, Ltd., Moody's Investors Service, Inc., Rating and Investment Information, Inc., and Standard & Poor's Ratings Services. *Nationally Recognized Statistical Rating Organizations ("NRSROs")*, U.S. SEC. & EXCHANGE COMMISSION, http://www.sec.gov/divisions/marketreg/ratingagency.htm (last visited Nov. 21, 2013). The SEC's website has the commission orders granting each rating agency its NRSRO status. *Id.*

[65] *See* RUTHERFORD, *supra* note 15, at 181 (defining "economic rent" as "a return aris[ing] from the factor of production being in short supply").

[66] *See supra* note 20 and accompanying text.

[67] That Moody's and S&P would defend their competitive position is certain. Indeed, Moody's has explicitly stated its strategy: "Moody's will make investments to defend and enhance its core businesses in an attempt to position the Company to fully capture market opportunities resulting from global debt capital market expansion and increased business investment spending." 2012 Moody's Corporation Form 10-K, *supra* note 53, at 12. It is easy to see how Moody's and S&P could acquire competitive threats as a part of corporate strategy.

[68] *See* Coffee, *supra* note 7, at 248 ("This continuity suggests that the Big Three's dominance cannot be adequately explained by the regulatory powers the SEC allocated to them under its NRSRO system, as their market power both preexisted and survived the period in which they alone had licensing power."); Fitzpatrick & Sagers, *supra* note 7, at 570 ("But it seems likely that even if NRSRO rules were to be repealed, entry now would be severely impeded by the need to establish reputation as a seasoned CRO.").

7. Complexity of Modern Finance.—The complexity of modern financial markets has increased significantly.[69] For much of their history, rating agencies analyzed plain vanilla corporate bonds of issuers whose capital structure was composed of debt and equity.[70] While the technical aspects of credit analysis can certainly be quite complicated and large errors occur (e.g., the case of Enron), much of this analysis can be done through fundamental analysis of financial statements.[71] In the past several decades, credit analysis has become more difficult as financial markets and securities instruments have become more complex. Structured finance securities such as mortgaged-backed securities and collateralized debt obligations are much more complicated in structure and valuation than simply the straight debt obligation of a company with an ordinary balance sheet, a history of financial performance, and projections of future performance.[72] Complexity is the handmaiden of uncertainty. With greater complexity, the task of the rating agencies has become more difficult.[73]

8. Implicit Collusion with Investors.—Lastly, a "dirty secret,"[74] or what John Coffee has dubbed a "sinister danger,"[75] is that investors also implicitly wanted overrated securities during the credit rating bubble. Many financial institutions are regulated as to the types of investments they can make and have capital requirements for particular portfolios of investments.[76] Inflated credit ratings permitted regulated investors and

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[69] *See* Robert J. Rhee, *The Madoff Scandal, Market Regulatory Failure and the Business Education of Lawyers*, 35 J. CORP. L. 363, 363 (2009) ("In the past several decades, the financial markets have seen geometric growth in complexity.").

[70] *See* Robert J. Rhee, *Terrorism Risk in a Post-9/11 Economy: The Convergence of Capital Markets, Insurance, and Government Action*, 37 ARIZ. ST. L.J. 435, 497 (2005) (tracing the rise of securitization to the 1970s).

[71] For example, simple financial ratios on profitability, liquidity, and solvency can be performed with information from audited financial statements. *See* RHEE, *supra* note 19, at 79–83.

[72] SEC JAN. 2011 REPORT, *supra* note 8, at 10 (noting increased financial complexity as a factor in the increase in the demand for credit ratings).

[73] *See id.*; Hill, *Why Did Anyone Listen to the Rating Agencies*, *supra* note 7, at 284.

[74] *See* Aaron Lucchetti, Kara Scannell & Craig Karmin, *SEC Aims to Rein In the Role of Ratings*, WALL ST. J., June 24, 2008, at C1 ("The dirty secret of some bond investors is that they simply bought securities with the highest yield for a given rating, which is why they snapped up complicated securities tied to subprime mortgages. Those securities often got high ratings but yielded more than other, more standard securities with the same rating.").

[75] *See* Coffee, *supra* note 7, at 259 ("[T]here is the even more sinister danger that many institutions (in particular, money market funds) wanted inflated ratings so that they could earn the higher returns from riskier securities. To hold such higher yielding securities, it was necessary for them to be able to rely on the stability of the rating and the unlikelihood of a post-issuance rating downgrade."); *see also* Jess Cornaggia & Kimberly J. Cornaggia, Does the Bond Market Want Informative Credit Ratings? (Feb. 2, 2011) (unpublished manuscript), *available at* http://business.nd.edu/uploadedFiles/Academic_Centers/Study_of_Financial_Regulation/pdf_and_documents/Does_the_Bond_Market_Want_Informative_Credit_Ratings.pdf (arguing that rating agencies were slow to downgrade ratings to serve institutional desires to hold risky securities).

[76] *See supra* notes 32–34 and accompanying text.

portfolios to invest in risky securities that were expected to produce greater yields.[77] In this sense, incorrectly rated securities were real options[78] to evade the letter and spirit of the prudential regulation, and like all options they benefitted the holder to the extent the investor was not naïve. Thus, inflated ratings permit greater discretion in investment activities to pursue profitable yields.

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This litany of causal factors shows that the industrial organization of the credit rating industry is uniquely problematic. Rating agencies are not optimally organized to provide the highest quality credit ratings, and the problem has been difficult to solve. A major problem has been the inadequate link between compensation and proper incentive. The public policy implications are several. Since competition is not vigorous, there is less incentive to improve and innovate even as financial instruments and capital markets have become more complex, requiring ever more diligent and competent rating services. When the industry exists as a duopoly plus in which the regulatory and competitive barriers to market entry are high, and when the need for credit ratings is substantial, the effectiveness of a reputation market as a bond on performance is questionable at best. The lack of robust competition and proper bonding of performance will continue to undermine the quality of credit ratings even as they continue to play an important role in an increasingly complex capital market.

C. Regulatory Responses

In both the United States and Europe, rating agencies were not directly regulated until 2006.[79] Instead, rating agencies were indirectly regulated by the SEC and regulators of financial institutions through the regulation of investments and capital structure.[80] Although the NRSRO designation was important, the SEC never officially defined the status or the procedure to obtain it and was parsimonious in granting the designation.[81] Since the Sarbanes–Oxley Act, which required the SEC to conduct a study of the

[77] *See* Coffee, *supra* note 7, at 234 ("But in choosing between these options, a dirty little secret about credit ratings must be recognized; investors have biases of their own, and many want inflated and stable credit ratings that allow them to hold risky securities.").

[78] A real option is an option that is embedded in a particular situation or choice and that can be analyzed and valued from the perspective of option-pricing theory. BREALEY, MYERS & ALLEN, *supra* note 21, at 253–55.

[79] Coffee, *supra* note 7, at 246.

[80] *Id.* at 246–47.

[81] *Id.*

rating agencies but did not otherwise regulate them,[82] Congress has enacted two statutes that substantially regulate rating agencies.

The Credit Rating Agency Reform Act of 2006 created a regulatory framework for the provision of NRSRO status.[83] The statute granted the SEC rulemaking powers with respect to the regulation of conflict of interest, disclosure, performance monitoring, and annual reporting requirements.[84] However, it denied the SEC the power to "regulate the substance of credit ratings or the procedures and methodologies by which any nationally recognized statistical rating organization determines credit ratings."[85] In Congress's view, the SEC lacked the required expertise to regulate credit rating and financial models.[86] Pursuant to the statute's grant of power, the SEC promulgated a number of rules governing the NRSRO application procedure,[87] recordkeeping, disclosure, reporting of information and experience data,[88] regulation of abusive practices and conflicts of interest,[89] and competition among NRSROs.[90]

The Dodd–Frank Act is the other major legislation.[91] The statute enhanced the potential liability of rating agencies. Section 939G of the statute enhances accountability by exposing rating agencies to greater liability. It exposes rating agencies to potential liability under Section 11 of the Securities Act of 1933.[92] Section 933 provides that the enforcement and penalty provisions of the Securities Act of 1933 shall apply to statements made by a rating agency to the same extent as registered public accounting

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[82] Sarbanes–Oxley Act of 2002, Pub. L. No. 107-204, 116 Stat. 745, 797 (Section 702 requires the SEC to "conduct a study of the role and function of credit rating agencies in the operation of the securities market"); *see* SEC REPORT ON ROLE AND FUNCTION OF CREDIT AGENCIES, *supra* note 8.

[83] Credit Rating Agency Reform Act of 2006, Pub. L. No. 109-291, 120 Stat. 1327.

[84] *Id.* § 4, 120 Stat. at 1329–38 (amending the Securities Exchange Act of 1934 by inserting § 15E).

[85] *Id.* 120 Stat. at 1332 (inserting § 15E(c)(2) of the Securities Exchange Act of 1934).

[86] Coffee, *supra* note 7, at 247.

[87] 17 C.F.R. § 240.17g-1 (2012).

[88] *Id.* §§ 240.17g-2, 240.17g-3, 240.17g-7.

[89] *Id.* §§ 240.17g-4, 240.17g-5, 240.17g-6.

[90] *Id.* § 240.17g-5(a)(3). Rule 17g-5(a)(3) provides equal access to information and data disclosed to the rating agency by the issuer in a structured finance transaction to other NRSROs.

[91] *See generally* Aline Darbellay & Frank Partnoy, *Credit Rating Agencies Under the Dodd–Frank Act*, 30 BANKING & FIN. SERVICES POL'Y REP. 1 (2011) (providing overview of Dodd–Frank's provisions on credit rating agencies).

[92] 15 U.S.C.A. § 77k(a) (West 2009). Section 11 permits civil liability for false statements and omissions in a registration statement, subject to certain due diligence defenses of persons subject to liability. *Id.* § 77k(a)–(b). Previously, SEC Rule 436(g) provided that credit ratings were not considered a part of the registration statement "prepared or certified by a person within the meaning of sections 7 and 11 of the [1933] Act." 17 C.F.R. § 230.436(g)(1). The purpose of Rule 436(g) was to exclude rating agencies from civil liability under Section 11. Disclosure of Security Ratings in Registration Statements, 46 Fed. Reg. 42,024, 42,024 (Aug. 18, 1981). However, Section 939G of Dodd–Frank provides that "Rule 436(g) . . . shall have no force or effect." Dodd–Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, § 939G, 124 Stat. 1376, 1890 (2010).

firms and securities analysts.[93] It imposes liability on rating agencies that knowingly or recklessly failed to conduct a reasonable investigation of the rated security or to obtain reasonable verification of factual elements.[94]

In addition to enhanced liability, the Dodd–Frank Act provides the SEC more regulatory powers to enhance the quality of credit ratings. The statute creates an Office of Credit Rating tasked with supervisory and monitoring functions.[95] The SEC has the power to revoke the NRSRO status for specific classes of securities.[96] Rating agencies are subject to new regulations on maintenance of data and information on performance and controls, reporting of results and operations, internal governance, conflict of interest, and whistle-blowing protections.[97] The Dodd–Frank Act also removes some statutory references to credit ratings[98] and requires a study of the regulatory reliance of credit ratings.[99]

A legislative arc is apparent in the Sarbanes–Oxley and the Dodd–Frank acts. Sarbanes–Oxley mandated the SEC to conduct a broad study of the credit rating industry, including the role of credit rating agencies, the importance of that role, any impediments to accurate credit ratings, any barriers to market entry, and any conflicts of interest.[100] Dodd–Frank is more targeted in mandating a study. The statute requires the GAO and the SEC separately to study how alternative compensation models can increase the accuracy of credit ratings.[101] Congress has now focused on the relationship between compensation and incentives.

The regulatory reforms of Sarbanes–Oxley and Dodd–Frank have improved the credit rating industry. The improvements, however, have been incremental and have not changed the fundamental dynamics of the industry.[102] The core aspects of the problem remain: a duopoly plus, issuer-

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[93] Dodd–Frank Act § 933, 124 Stat. at 1883–84.

[94] *Id.*

[95] *Id.* § 932(a)(8), 124 Stat. at 1877.

[96] *Id.* § 932(a)(3)(I), 124 Stat. at 1874. "The Commission may temporarily suspend or permanently revoke the registration of a nationally recognized statistical rating organization with respect to a particular class or subclass of securities, if the Commission finds, on the record after notice and opportunity for hearing, that the nationally recognized statistical rating organization does not have adequate financial and managerial resources to consistently produce credit ratings with integrity." *Id.*

[97] *Id.* §§ 932, 934, 124 Stat. at 1872–84. The SEC has implemented some of these mandates, as seen in scattered provisions in Rules 17g-1 through 17g-7, but there are more rules to come.

[98] *Id.* § 939, 124 Stat. at 1885–87.

[99] *Id.* § 939A, 124 Stat. at 1887.

[100] Sarbanes–Oxley Act of 2002, Pub. L. No. 107-204, § 702, 116 Stat. 745, 797.

[101] Dodd–Frank Act, §§ 939D, 939F.

[102] *See* Hill, *Limits of Dodd–Frank*, *supra* note 7, at 142 (noting that the 2006 statute "did not prevent rating agencies from disastrously misrating subprime mortgage securities"); Manns, *Downgrading Rating Agency Reform*, *supra* note 7, at 749 (arguing that legal reforms "have fallen far short").

pay model, industry custom of multiple ratings, and high natural barriers to market entry even as regulatory barriers have been somewhat lowered.[103]

Although the new regulations have not fundamentally changed the industry or erected an entirely new regulatory edifice, they should not be underestimated. As I show *infra* Part III.B., the new regulations have laid the groundwork to implement an alternative compensation scheme of the sort proposed in this Article.[104]

D. Review of Prior Proposals

Over the years, there have been a number of proposals advanced to fix the problems of the credit rating industry. These proposals can be organized into three methodology-based categories of reform: reconfigure the industry structure that has created a duopoly plus and stifled competition, create disincentives and enhanced accountability through increased liability, and create positive incentives through alternative compensation schemes. A number of commentators have provided thoughtful critiques of these proposals,[105] and this Article does not repeat that exercise here. For useful background information, I briefly summarize these proposals and critiques.

1. Proposals to Reconfigure the Industrial Organization.—The boldest proposal is a nationalization of the credit rating industry or some substantial functions thereof. It has been proposed that the government can organically create its own ratings capability, or publicly fund rating agencies.[106] Whichever way a public takeover is executed, the proposal of the government providing credit ratings is problematic. Nationalization would result in unprecedented intrusion into the pricing mechanism of the financial markets by the government,[107] and would contradict a century-old market regulatory policy of abstaining from substantive assessments of

[103] "The problem is that there is no ready alternative. Moreover, the market norms of using ratings from rating agencies—indeed, particular rating agencies—will not disappear even if the statutory and regulatory references are removed [as mandated by the Dodd–Frank Act]." Hill, *Limits of Dodd–Frank*, *supra* note 7, at 144.

[104] *See infra* Part III.C.

[105] *See* Coffee, *supra* note 7, at 251–71; Fitzpatrick & Sagers, *supra* note 7, at 592–608.

[106] *See* GAO 2012 REPORT, *supra* note 8, at 8–9 (summarizing a proposal for random selection of rating issuances by a ratings clearinghouse); Milosz Gudzowski, *Mortgage Credit Ratings and the Financial Crisis: The Need for a State-Run Mortgage Security Credit Rating Agency*, 2010 COLUM. BUS. L. REV. 245 (proposing a government rating agency); Lupica, *supra* note 7, at 671 (proposing that the government oversee the rating process and impose penalties such as loss of NRSRO status and impose monetary fines for poor performance); Lynch, *supra* note 7, at 300–01 (proposing that rating agencies be publicly funded).

[107] *See* Coffee, *supra* note 7, at 260–61 (noting the dangers of a "public" rating agency and potential political problems).

investment opportunities.[108] Rating government-issued bonds is a major part of the rating agencies' business. As recently as spring 2011, S&P downgraded the United States from AAA to AA+, the first time that the creditworthiness of the U.S. government has been called into question.[109] What would a public or government rating agency do under these circumstances? The joint power of the government to regulate securities and investments, assign ratings, and affect valuations in the market may be too great of an intrusion into private investment decisions and runs the substantial risk of injecting political considerations into the workings of the capital markets.[110] The potential for mischief, particularly for government issuers, government-sponsored entities, or favored industries, would be significant. The notion of a nationalized credit rating industry or substantial functions thereof is not a good idea, and it is hard to imagine how such a reform is politically feasible.

Another suggestion is to promote a free market philosophy of spurring greater competition by creating more rating agencies in the industry.[111] This idea sounds good in the vacuum of abstraction, but the idea of organically growing more rating agencies does not work absent the existence of a specific set of favorable conditions, which is the challenge.

First, although the SEC has liberalized the granting of NRSRO licenses, the eight smaller rating agencies have a minute portion of the market share. Natural barriers to entry hinder the organic growth of rating agencies, and there may be nothing that can be done about this situation in the short to intermediate term.

Second, a free market solution is a bad idea without concurrent reform of the issuer-pay compensation model. Without compensation reform,

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[108] It is axiomatic that the predominant regulatory philosophy in securities regulation is disclosure of information and not assessment of the investment opportunity. Basic Inc. v. Levinson, 485 U.S. 224, 230 (1988); Santa Fe Indus., Inc. v. Green, 430 U.S. 462, 477–78 (1977).

[109] *See United States of America Long-Term Rating Lowered to 'AA+' Due to Political Risks, Rising Debt Burden; Outlook Negative*, STANDARD & POOR'S (Aug. 5, 2011, 8:13 PM), http://www.standardandpoors.com/ratings/articles/en/us/?assetID=1245316529563. Moody's has also signaled a potential downgrade. *See Announcement: Moody's Updates on Rating Implications of US Debt Limit, Long-Term Budget Negotiations*, MOODY'S INV. SERV. (June 2, 2011), http://www.moodys.com/research/Moodys-Updates-on-Rating-Implications-of-US-Debt-Limit-Long?docid=PR_220066 ("Whether the outlook on the [U.S. government's credit] rating would be stable or negative would depend upon whether [there is] meaningful progress toward substantial and credible long-term deficit reduction.").

[110] Coffee, *supra* note 7, at 260–61. "[M]ore importantly, serious doubt exists that a 'public' rating agency could give a negative (or 'junk') rating to an important or politically-favored local firm. Consider whether over the last decade a U.S. 'public' rating agency would have dared to rate the bonds of General Motors (G.M.) as 'junk' (or non-investment grade)." *Id.* at 260.

[111] *See* Grundfest & Hochenberg, *supra* note 7, at 5 (proposing that investors create their own rating agency that must provide a rating for every issue); Hill, *Regulating the Rating Agencies*, *supra* note 7, at 85 (proposing "gradually to increase the number of NRSROs and . . . for new firms to establish their reputations and perhaps carve out some niches").

greater competition runs the real risk of a classic "race to the bottom" as many rating agencies compete for fees and engagements. This was the poisonous dynamic we saw in the Enron debacle among professional advisers and gatekeepers.[112] A pure competition for engagements may have the unintended opposite effect.

Third, a free market solution runs into constraints in the labor market. Credit analysts and rating agencies are not an infinite resource. Indeed, the Dodd–Frank Act implicitly recognizes the limited labor market and the potential that rating agencies may not have appropriately trained employees.[113] Creating and sustaining a successful business enterprise is very difficult, especially in the Wall Street financial services industry. High-level financial services work requires significant investments in human capital and a critical mass of highly skilled financial professionals. The competitive labor market may not support the organic growth of new rating agencies of substantial size and scale.[114]

Fourth, if competition by smaller rating agencies ever increases, a reasonably foreseeable response by Moody's, S&P, and Fitch would be to compete vigorously or to acquire the competitors.[115] We would not expect these firms to simply stand by as other competitors eat into their market share. The M&A market, unless proscribed, will perpetuate market concentration. Thus, for all of these reasons the idea of a free market of competition is easier assumed than actualized.[116]

2. Proposals to Reduce the Reliance on Credit Ratings.—Another suggestion to reconfigure the industrial organization is to substitute credit ratings with market metrics such as credit (yield) spreads and credit default swap (CDS) spreads, thus eliminating the problem by marginalizing the rating agencies.[117] A credit (yield) spread is the difference in yields of

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[112] *See generally* COFFEE, *supra* note 38, at 29 (explaining that Enron's outside consulting firm acquiesced to their dubious accounting policies out of a fear that "the deep-pocketed client would shift its consulting business at the drop of a hat"); MALCOLM S. SALTER, INNOVATION CORRUPTED: THE ORIGINS AND LEGACY OF ENRON'S COLLAPSE 211 (2008) (quoting one of the first business journalists to challenge Enron's strategy and results, who explained that Enron "was one of the highest fee-paying companies on Wall Street, so everybody wanted their business. And firms were willing to do whatever it took to get that business. The money came far ahead of the ethics.").

[113] Section 936 provides that the SEC shall issue rules designed to ensure that credit analysts meet "standards of training, experience, and competence necessary to produce accurate ratings." Dodd–Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, § 936, 124 Stat. 1376, 1885 (2010).

[114] *See supra* note 57.

[115] *See supra* note 67.

[116] *See* SEC JAN. 2011 REPORT, *supra* note 8, at 16 ("[B]ecause of the importance of reputation, the difficulty in establishing a reputation quickly, and other economic factors, it may take some time before the impact of increased competition can be observed.").

[117] Flannery, Houston & Partnoy, *supra* note 7; Hill, *Regulating the Rating Agencies*, *supra* note 7, at 85–86; Partnoy, *supra* note 2, at 624.

bonds from specific risk-free benchmarks such as treasury instruments of the same duration.[118] A CDS is essentially bond insurance in which the protection buyer will pay a premium (or spread) to an insurer to protect against default, and if a default occurs the insurer pays the difference between the face value of the debt and its market value.[119] Credit and CDS spreads are measures of value and price. The basic argument is that credit (yield) spreads and CDS spreads incorporate into the price of bonds and bond insurance the likelihood of default, and that the market is better at quickly incorporating new information than rating agencies. The proposal to use market metrics as a substitute for credit ratings is not without criticism.[120]

The argument to marginalize the use of credit ratings through a substitute ultimately depends on whether credit ratings provide some regulatory or informational utility. Some have argued that credit ratings are not useful.[121] Some have questioned whether reliance on rating agencies can be justified by empirical data or theory.[122] However, others have suggested that rating agencies are useful on two grounds. First, they correct a problem of asymmetric information in the credit market by acting as an independent information intermediary, thus correcting the "lemon" problem.[123] Second, rating agencies reduce the net costs of regulation by relieving investors and regulators from the burdens of erecting a complex infrastructure to analyze bond investments.[124]

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[118] BREALEY, MYERS & ALLEN, *supra* note 21, at 579.

[119] *Id.* at 580.

[120] *See, e.g.*, LANGOHR & LANGOHR, *supra* note 1, at 440 (concluding that this idea is "ill-conceived" and "unsubstantiated").

[121] *See* Jonathan R. Macey, *The Politicization of American Corporate Governance*, 1 VA. L. & BUS. REV. 10, 21–24 (2006) (arguing that rating agencies provide no useful informational value to the capital markets); Partnoy, *supra* note 2, at 624.

[122] *See* Fitzpatrick & Sagers, *supra* note 7, at 581–85 (arguing that there is little theoretical or empirical support for the existence of rating agencies).

[123] *See* COFFEE, *supra* note 38, at 287–88; Arnoud W.A. Boot, Todd T. Milbourn & Anjolein Schmeits, *Credit Ratings as Coordination Mechanisms*, 19 REV. FIN. STUD. 81 (2006); Listokin & Taibleson, *supra* note 7, at 95–97; *see also* George A. Akerlof, *The Market for "Lemons": Quality Uncertainty and the Market Mechanism*, 84 Q.J. ECON. 488 (1970); Michael Rothschild & Joseph Stiglitz, *Equilibrium in Competitive Insurance Markets: An Essay on the Economics of Imperfect Information*, 90 Q.J. ECON. 629 (1976). The "lemon" problem occurs when there is information asymmetry on the quality of a good sold on the market between buyers and sellers, and a resulting mismatch on pricing of the item for sale. The basic thesis is that buyers, not knowing whether the good is a quality item or a "lemon," will price the good offered for sale at a lower price than the seller of a quality item would sell, thus resulting in a market in which "lemons" are sold and quality items are withdrawn. Some commentators have argued that there is a potential "lemon" problem in the bond market because issuers and investors stand in a position of information asymmetry concerning credit quality. Listokin & Taibleson, *supra* note 7, at 95–97. Rating agencies are said to correct this problem because they act as a neutral third-party information intermediary. *Id.*

[124] COFFEE, *supra* note 38, at 288.

In addition to these two justifications, I also suggest that rating agencies serve a useful information-sorting function. Start with the proposition that the credit market is much larger than the equity market,[125] and that investors must analyze this enormous market. Rating agencies organize information on issues and issuers with a broad taxonomical brush, which is their rating system. Like any form of organization, this systematic categorization is useful, though it may be rough or imperfect. Each investor can then apply its limited resources to make finer investment analyses. By maintaining an organization of the credit universe, rating agencies create a common information platform resulting in greater efficiency in the analysis of creditworthiness. In more concrete terms, the three major rating agencies deploy almost four thousand bond analysts,[126] and the entire credit market is sorted under a common organization. Despite the current problems of the credit rating industry, the system of credit ratings has a market rationale. Clearly, if rating agencies provide useful service as a matter of empirical fact or theory, then, flaws notwithstanding, the argument to substitute away (eliminate) credit ratings would be diminished considerably in light of the fact that the substitute would represent a new, untested regulatory scheme as an alternative to an existing useful scheme.

The theoretical case that rating agencies are useless is far from clear. The argument is belied by the empirical facts that rating agencies do exist, have shareholders who invest in them to the tune of tens of billions of dollars, and are relied upon by investors in the market. The critics have not explained why the market or the government continues to massively misallocate resources if indeed the business of credit ratings is a useless enterprise. One would think that the collective delusion on the usefulness of credit rating would have been finally shattered by the experience in the financial crisis, and yet it is far from clear that all constituents have come to this conclusion.

Another basic problem is that while the creditworthiness of a bond is highly relevant to the value of bonds and bond insurance, market valuations and creditworthiness are different concepts and cannot be conflated as one.[127] The market value of a bond depends on both exogenous and endogenous factors.[128] Default risk is clearly an important factor in value. However, valuations are subject to market-influenced factors such as the

[125] *See infra* Part I.A (showing the size of the bond market); *infra* note 208 and accompanying text (showing the number of outstanding issues covered by rating agencies).

[126] *See* SEC SEPT. 2011 REPORT, *supra* note 7, at 8 (showing that ten NRSROs employed 3990 credit analysts, and that the three largest rating agencies employed 3598 credit analysts).

[127] "Credit ratings *grade* credit risk. . . . [R]atings don't value the instrument. They couldn't, because default risk is only one factor of security risk. The other factor that drives the market value of the obligation is *market risk* . . . ." LANGOHR & LANGOHR, *supra* note 1, at 82–83.

[128] *Id.* at 67.

prevailing interest rate environment and transitory market conditions.[129] Historically, yield spreads have narrowed and contracted, in the same way that stock markets have meandered in a random walk through peaks, valleys, and plateaus of the financial markets,[130] whereas the "intended cycle-neutrality of ratings is one of the contributors to the stability of ratings."[131] These are some of the complications that need to be sorted through when we envision a scheme in which a yield spread in the range of *x*% to *y*% is said to be correlated to a specific ordinal grade of creditworthiness, particularly when these yield spreads will change in absolute values and in relative terms. We do not know in what way CDS spreads or yield spreads, which are continuously subject to market dynamics, should translate into the equivalent of credit ratings for the purpose of regulating investment portfolios and financial institutions. These same concerns also apply to the substitution of CDS spreads for credit ratings since CDS spreads are also a measure of price and value.[132]

Market volatility and unpredictability, which affect credit spreads, may produce regulatory uncertainty and instability to the extent credit ratings affect the regulation of investments across a wide sector of investors and financial institutions. Because markets are never static, there would be a continuous need to monitor markets and assignments of credit ratings; this means that there must be a large, analytic infrastructure in place, funded by someone, to do these things. If rating agencies are displaced, there must be some governmental body or private vendor that continuously monitors financial data for hundreds of thousands of bond issues outstanding and applies a set of uniform standards in matching CDS spreads or yield spreads at any given moment to analyze the investment portfolios of regulated investors. Even if credit ratings are replaced with market metrics, someone must monitor the portfolios of regulated investors based on market metrics, and this must be done continuously since markets

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[129] *Id.* at 71. "Hence, ratings and spreads suitably adjust in a reasonably consistent way after some time, yet significant variability in the relationship remains." *Id.* at 72.

[130] BREALEY, MYERS & ALLEN, *supra* note 21, at 579 fig. 23.2 (showing historical data for yield spreads of Aaa, Baa, and high-yield bonds as compared to 10-year Treasuries); *see* LANGOHR & LANGOHR, *supra* note 1, at 65 (showing data on fluctuating credit spreads over time and commenting that "[t]hese spreads are neither constant over time nor identical for all bonds"). For example, in an easy credit environment or a credit bubble of the kind that led to the housing bubble and the financial crisis, we would expect to see yield spreads contract, and in a tight credit market we would see widening of credit spreads. *See* BREALEY, MYERS & ALLEN, *supra* note 21, at 579 fig. 23.2 (see the period from 2003 to 2008 and the dramatic widening of the credit spreads).

[131] LANGOHR & LANGOHR, *supra* note 1, at 80.

[132] For example, during the financial crisis, the CDS spreads of Boeing, General Electric, Disney, and Dow Chemicals, which all traded within a narrow band of within 100 basis points, became increasingly volatile, trading in a range of approximately 700 to 100 basis points. This was a remarkable display of volatility for blue chip companies, even though only one of them, General Electric through its division GE Capital, can arguably be said to be at its core a financial services firm. *See* BREALEY, MYERS & ALLEN, *supra* note 21, at 580 fig. 23.3.

are dynamic. Thus, rating agencies would be replaced with another set of monitors.

3. Proposals to Enhance Liability.—In the fields of criminal law and torts, liability can be used to incentivize proper behavior.[133] Traditionally, rating agencies have been successful in defending against liability.[134] Rating agencies have a judicially recognized First Amendment defense on the basis that they are merely providing an opinion on a public matter.[135] Absent actual malice, bad faith, or similar malfeasance, they can credibly argue that they should be protected from onerous potential liability whenever an issuer defaults and ex post fault is found in the agency's rating process or exercise of judgment.[136] Recently, however, liability risk has increased. The Dodd–Frank Act exposed rating agencies to Section 11 liability for material misstatements in the registration statement.[137] Also, a federal district court has permitted fraud claims to proceed to trial against rating agencies for misleading ratings for structured finance bonds issued in the time period of the financial crisis.[138]

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[133] *See, e.g.*, WILLIAM M. LANDES & RICHARD A. POSNER, THE ECONOMIC STRUCTURE OF TORT LAW (1987); Gary S. Becker, *Crime and Punishment: An Economic Approach*, 76 J. POL. ECON. 169 (1968).

[134] *See* Bai, *supra* note 7, at 286–90 (describing key cases).

[135] *See* Compuware Corp. v. Moody's Investors Servs., Inc., 499 F.3d 520, 529 (6th Cir. 2007); *In re* Enron Corp. Sec., Derivative & "ERISA" Litig., 511 F. Supp. 2d 742, 817–26 (S.D. Tex. 2005); Jefferson Cnty. Sch. Dist. No. R-1 v. Moody's Investor's Servs., Inc., 988 F. Supp. 1341, 1347 (D. Colo. 1997), *aff'd*, 175 F.3d 848, 858 (10th Cir. 1999).

[136] *See* Anschutz Corp. v. Merrill Lynch & Co., 690 F.3d 98, 114–15 (2d Cir. 2012) (holding that investors failed to present a claim for negligent misrepresentation and demonstrate privity of contract with the rating agencies); Ohio Police & Fire Pension Fund v. Standard & Poor's Fin. Servs. LLC, 700 F.3d 829, 833 (6th Cir. 2012) (dismissing complaint for negligent misrepresentation); First Equity Corp. of Fla. v. Standard & Poor's Corp., 869 F.2d 175, 180 (2d Cir. 1989) (holding that rating agency is not liable for incorrect information); *In re* Republic Nat'l Life Ins. Co., 387 F. Supp. 902, 905 (S.D.N.Y. 1975) (holding that rating agency has no duty to verify statistical information relied upon to provide rating).

[137] Dodd–Frank Wall Street and Consumer Protection Act, Pub. L. No. 111-203, § 939G, 124 Stat. 1375, 1890 (2010). Previously, rating agencies were exempted under SEC Rule 436(g). Rating agencies can still shield themselves from liability because Section 11 requires the naming and consent of the expert. Section 11 requires that the expert "with his consent [has] been named as having prepared or certified any part of the registration statement," and that the "written consent" of named experts be filed with the registration statement. 15 U.S.C. §§ 77k(a)(4), 77g(a) (2006); *see In re* Lehman Bros. Mortg.-Backed Sec. Litig., 650 F.3d 167, 183 n.11 (2d Cir. 2011) (noting that despite the repeal of Rule 436(g), rating agencies must still satisfy the naming and consent requirements of Section 11). In light of this, Moody's and other rating agencies have announced that they will not consent to the disclosure of their ratings in the registration statements of new issues. *See* 2011 Moody's Corporation Form 10-K, *supra* note 53, at 18.

[138] *See* King Cnty., Wash. v. IKB Deutsche Industriebank AG, 863 F. Supp. 2d 288, 305–12 (S.D.N.Y. 2012) (holding that credit ratings were subject to an actionable theory of misrepresentation); Abu Dhabi Commercial Bank v. Morgan Stanley & Co., 888 F. Supp. 2d 431, 440 (S.D.N.Y. 2012) (denying in part summary judgment motions by Moody's and S&P on fraud claims of some plaintiff investors); Abu Dhabi Commercial Bank v. Morgan Stanley & Co., 651 F. Supp. 2d 155, 176 (S.D.N.Y.

Liability for malfeasance, such as fraud and bad faith, as a policy matter is a given. But liability based on negligence or error cannot be a significant part of fundamental reform. There is a structural issue. Compensation cannot be the theory of liability based on fault.[139] Typical deals in the bond market can be enormous, sometimes into the billions of dollars.[140] As of 2010, the bond market was capitalized at $108 trillion.[141] The parent companies of Moody's and S&P have combined market capitalizations of about $14 billion and $15 billion, respectively.[142] This is a maximum value exposure-to-market capitalization ratio of 4500-to-1. Of course, this ratio is not "value at risk" in the sense of the formal financial measure;[143] the probability of the entire bond market being devalued to zero would be nil. But even if the ratio overstates the matter quite a bit, it gives a sense of proportion. The larger point is that "a single case could produce a billion dollar (or greater) judgment,"[144] thus crippling these firms that serve a vital market function.[145] Unlike most areas covered by accident law, there is no liability insurance, and hedging the credit risk is impossible due to simple economics: the revenue generated from rating is far less than the CDS spread (in other words, the cost of insurance is greater than the revenue generated from the activity insured against).[146]

If deterrence is the only plausible theory of liability, there is not yet a coherent theory to impose liability on the credit rating industry. Liability for bad faith and intentional malfeasance is an easy, undisputed issue. When fraud is involved, rating agencies should not be able to hide behind the First Amendment or contractual doctrines. But the much harder

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2009) (rejecting a First Amendment defense for ratings of structured financed securities). It is worth noting that these three trial court cases have all been handled by District Court Judge Shira Scheindlin.

[139] Coffee, *supra* note 7, at 252–53.

[140] For example, Apple Inc. recently made a $17 billion bond issue. Katy Burne & Mike Cherney, *Apple's Record Plunge into Debt Pool*, WALL ST. J., May 1, 2013, at C1.

[141] *See supra* note 20.

[142] *McGraw Hill Financial, Inc. (MHFI)*, YAHOO! FIN., http://finance.yahoo.com/q?s=MHFI&ql=0 (last visited Nov. 21, 2013); *Moody's Corp. (MCO)*, YAHOO! FIN., http://finance.yahoo.com/q?s=MCO&ql=1 (last visited Nov. 21, 2013).

[143] "Value at risk" or VaR is defined as "the maximum loss that can be incurred with a given probability." SERGIO M. FOCARDI & FRANK J. FABOZZI, THE MATHEMATICS OF FINANCIAL MODELING AND INVESTMENT MANAGEMENT 748 (2004).

[144] Coffee, *supra* note 7, at 252.

[145] *See* Lawrence A. Cunningham, *Too Big to Fail: Moral Hazard in Auditing and the Need to Restructure the Industry Before It Unravels*, 106 COLUM. L. REV. 1698, 1700–01 (2006) (noting that after Arthur Andersen, the federal government has been reluctant to prosecute other accounting firms for fear of destroying the limited number of large accounting firms, as the Enron prosecution did for Arthur Andersen).

[146] The typical fee for a corporate bond issue is in the range of 4–5 basis points. LANGOHR & LANGOHR, *supra* note 1, at 413. On the other hand, CDS spreads are far in excess of this level even for blue chip companies. *See* BREALEY, MYERS & ALLEN, *supra* note 21, at 580 fig. 23.3 (showing CDS premium rates).

question is whether there is common space between a theory of deterrence and liability based on negligence, incompetence, or laziness (i.e., the worst types of conduct that would still be excusable under the business judgment rule in corporate law[147]), such as demonstrable errors of judgment and analysis or lack of effort based on some objective standard. From a cost–benefit framework for analyzing accidents,[148] the point at which the marginal benefit of better credit ratings equals the marginal cost of precautions is not immediately clear. One could reasonably guess that this calculation weighs in favor of additional marginal investment in precautions because the cost of the harm (potentially billions of dollars in bond values at stake) is so great. But this could mean that the theory of deterrence may result in liability up to the point of diminishing the rating agencies as viable investments by shareholders. The implication could mean that rating agencies should be pure public goods without a profit motive, but this cannot be the answer unless one is willing to accept the extreme view that rating agencies should be nationalized. The threat of monetary sanctions must be calibrated to affect incentives, proper performance, and financial viability of these important firms. One suspects that in a high-volume, multi-trillion dollar industry with billions of dollars in fees earned annually, getting a theoretically correct calibrated level of sanctions right would be a difficult endeavor for regulators and courts. A properly calibrated legal standard may not be consistent with the operation of private firms in this area.

4. Proposals to Impose Alternative Compensation Models.—Several other proposals seek to impose the proper incentives on rating agencies

[147] *See, e.g.*, *In re* Caremark Int'l Inc. Derivative Litig., 698 A.2d 959, 967 (Del. Ch. 1996) ("[W]hether a judge or jury considering the matter after the fact, believes a decision substantively wrong, or degrees of wrong extending through 'stupid' to 'egregious' or 'irrational,' provides no ground for director liability, so long as the court determines that the process employed was either rational or employed in *a good faith* effort to advance corporate interests."); Gagliardi v. TriFoods Int'l, Inc., 683 A.2d 1049, 1052 (Del. Ch. 1996) ("If, however, corporate directors were to be found liable for a corporate loss from a risky project on the ground that the investment was too risky (foolishly risky! stupidly risky! egregiously risky!—you supply the adverb), their liability would be joint and several for the whole loss . . . ."); WILLIAM T. ALLEN ET AL., COMMENTARIES AND CASES ON THE LAW OF BUSINESS ORGANIZATION 231 (4th ed. 2012) ("[D]isinterested directors who act deliberately and in good faith should never be liable for a resulting loss, no matter how stupid their decisions may seem ex post."); Edward B. Rock & Michael L. Wachter, *Islands of Conscious Power: Law, Norms, and the Self-Governing Corporation*, 149 U. PA. L. REV. 1619, 1672 (2001) (suggesting that directors will not be held liable for "pretty dumb" decisions); Lynn A. Stout, *In Praise of Procedure: An Economic and Behavioral Defense of* Smith v. Van Gorkom *and the Business Judgment Rule*, 96 NW. U. L. REV. 675, 676 (2002) ("[I]t shields directors who follow the requisite procedures from liability even when they make reckless, foolish, and downright stupid decisions."). *See generally* Robert J. Rhee, *The Tort Foundation of Duty of Care and Business Judgment*, 88 NOTRE DAME L. REV. 1139 (2013) (arguing that tort principles have a role to play in corporation law).

[148] *See* LANDES & POSNER, *supra* note 133, at 55–60; STEVEN SHAVELL, ECONOMIC ANALYSIS OF ACCIDENT LAW 19–21 (1987).

through change in compensation as the key to reform.[149] One proposal is to empower the government to make the engagement decisions for issuers.[150] This was embodied in the Franken Amendment to the Dodd–Frank Act, which was never passed. It would have required a government agent to choose the rating agency for structured finance issues, though the issuer would remain free to select a second rating agency.[151] The Franken Amendment was watered down in the Dodd–Frank Act to a provision requiring the SEC to study the feasibility of a scheme,[152] but Congress gave the SEC the power to adopt such a scheme if the latter deemed it necessary and appropriate.[153] This proposal would minimize the inherent conflict of interest because issuers no longer have the power to "shop" for ratings. However, it poses a new problem. It is unclear how a government agent would select the engagement—randomly, sequentially, or through some assessment of quality, perhaps. On a deeper level, since the assignment of engagements would determine market share, how would the market share of each firm be determined? Market share could become ossified if assignments were made based on current market share. Alternatively, the government agent, upon determining the relative quality of firms, could alter market share in favor of one firm over the other. Neither option is palatable for obvious reasons.

Another proposal is to switch to an investor-pay model.[154] An investor-pay model comes in different varieties, such as a mandatory subscription-based model or a user-fee model.[155] Proposals in this vein are problematic for a number of reasons. An investor-pay model would simply reverse the polarity of the current structural bias in favor of the issuer toward a bias in favor of bondholders or subscribers.[156] Instead of overrated bonds, we may have underrated bonds. Furthermore, as noted above, some commentators have even suggested that bondholders actually wanted overrated bonds.[157]

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[149] *See* Listokin & Taibleson, *supra* note 7, at 94; Manns, *Downgrading Rating Agency Reform*, *supra* note 7, at 794.

[150] *See* Coffee, *supra* note 7, at 256 (describing the model). A variant of this proposal is to assign engagements randomly or by rotation. These variations confront the same problems. Also, "the problem with such a system is that it creates little incentive for rating agencies to compete based on the quality of their ratings." *Id.* at 258.

[151] *See id.* at 257–58 (describing the amendment); Hill, *Limits of Dodd–Frank*, *supra* note 7, at 146–47 (same).

[152] Dodd–Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, § 939F(b)(2), 124 Stat. 1375, 1889 (2010).

[153] *Id.* § 939F(d).

[154] *See, e.g.*, Grundfest & Hochenberg, *supra* note 7 (proposing an investor-owned rating agency); Manns, *Rating Risk*, *supra* note 7 (proposing a user-fee model).

[155] *See* GAO 2012 REPORT, *supra* note 8, at 9–14 (providing summary of alternative compensation models).

[156] *See* Coffee, *supra* note 7, at 255 ("Investors also have biases that can create conflicts for rating agencies . . . .").

[157] *See supra* Part I.B.

There is a question of whether the incentive created by an investor-pay model would produce the most accurate ratings.

A deeper problem is that a user-fee or subscription-based model may not be economically feasible for rating agencies.[158] Rating agencies cannot capture the full economic value of their product because once credit ratings are disclosed to some paying investors, there will always be free riders,[159] or the costs of rating services may be reduced by agreements to share ratings among users or subscribers. These business problems prompted rating agencies to change their business models to an issuer-pay model.[160] Commentators have argued that rating agencies "probably could not persist at their current scale of operations without the issuer-pays model, and may not survive its loss."[161] A fundamental change in the compensation model mandates a dramatic change in the business models of large, publicly held rating agencies that have existed for a long time, which is no small matter.

In perhaps the most creative proposal on the compensation front, some commentators have proposed that rating agencies be paid with the debt they rate.[162] An economic stake tied to performance would incentivize rating agencies to provide higher quality ratings. While debt compensation might reduce the incentive to overrate the issue, an economic stake in the issue may incentivize rating agencies to underrate the issue. This proposal correctly frames the larger perspective: the link between compensation and incentive, and at the same time the infeasibility of moving away from the issuer-pay model as a matter of practicality and politics of regulation. However, the proposal is infeasible. It does not work if rating agencies could sell the debt and the right to receive the debt immediately.[163] If they are subject to a lockup, this obligation would create significant business and financial problems.[164] Depriving rating agencies of cash revenue may significantly disrupt operations.[165] Rating agencies are not in the business of

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[158] *See* Coffee, *supra* note 7, at 255; Fitzpatrick & Sagers, *supra* note 7, at 571–72.

[159] *See* Coffee, *supra* note 7, at 255; Fitzpatrick & Sagers, *supra* note 7, at 582; *see also* LANGOHR & LANGOHR, *supra* note 1, at 412.

[160] *See* Coffee, *supra* note 7, at 255 & n.66; Fitzpatrick & Sagers, *supra* note 7, at 571–72; Gudzowski, *supra* note 106, at 254–55. Due to financial difficulties, the rating agencies changed their business model to the issuer-pay compensation model during the 1940–1960 time period. Fitzpatrick & Sagers, *supra* note 7, at 571–72.

[161] Fitzpatrick & Sagers, *supra* note 7, at 571. Fitzpatrick and Sagers further note that the decline of equity security research by investment banks evinces the infeasibility of subscription-based compensation models of securities research operations. *Id.* at 571–72 & n.46; *see also* Coffee, *supra* note 7, at 259 ("Securities analysts have similarly found investors resistant to paying for investment advice.").

[162] *See* Listokin & Taibleson, *supra* note 7, at 94.

[163] Coffee, *supra* note 7, at 254.

[164] *See id.* at 253–54 (noting liquidity problems).

[165] For example, in 2012 Moody's incurred operating expenses of $1.65 billion, most of which were paid in cash. MOODY'S CORP., 2012 ANNUAL REPORT 65 (2012), *available at* http://files.shareholder.com/downloads/MOOD/2476041436x0x643051/E0E15B0E-744C-44CD-B56B-

holding a portfolio of bonds.[166] Even if they were required to hold a portfolio of debt, much of the envisioned incentive could be undermined through hedging strategies on the portfolio of bonds held by the rating agencies, unless these investment activities were concomitantly prohibited.

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The above overview demonstrates that the problem of credit rating agencies has been difficult to fix. Many of the proposals are sweeping in scope and call for dramatic reconfiguration of the industry or regulatory scheme. Others simply would not work. As such, these previous proposals raise serious questions of feasibility and practicability. The problem of credit rating agency incentive has not been fixed.

II. PROPOSAL FOR A COMPENSATION COMPETITION

A. Properly Conceptualizing Competition and Incentive

In addressing the problems of the credit rating industry, the goal of regulation should not be to radically restructure a preexisting, multi-billion dollar industry. Instead, with minimal intrusion, the law should create the *necessary conditions* to stimulate robust competition where currently the market does not work well due to cozy cooperative relationships among nominal competitors. In this respect, proper incentive is the condition precedent to robust, positive competition.

The basic problem is not the lack of strong competition per se. Competition can be good or bad. Many competitors working under an issuer-pay model would run the risk of devolving into a race to the bottom to gain business from issuers.[167] In parsimoniously granting NRSRO status, the SEC may have been right to be concerned about negative competition among fledgling firms without strong history, resources, or reputation capital.[168] Strong competition is good only if it incentivizes a race to excel. Competition is not the end, but is the means.

CF72F02CD9B7/MCO_2012_Annual_Report_vFINAL.pdf. The balance sheet shows that Moody's had only $555 million of accounts payable. *Id.* at 67.

[166] *See* Coffee, *supra* note 7, at 254 n.64 (noting that the proposal could convert rating agencies into "inadvertent" investment companies subject to the Investment Company Act of 1940).

[167] *Compare* Coffee, *supra* note 7, at 247 (noting that the SEC was parsimonious in granting NRSRO status because "it feared that new and 'fly-by-night' rating agencies would be more generous in awarding investment grade ratings and thereby lead a race to the bottom"), *with* D. Daniel Sokol & James A. Fishkin, *Antitrust Merger Efficiencies in the Shadow of the Law*, 64 VAND. L. REV. EN BANC 45, 68–69 (2011) (suggesting that the evidence is mixed on whether industry concentration in banking tends to stabilize or destabilize the financial markets).

[168] *See supra* note 61 and accompanying text.

Any reform measure must solve the incentive problem. Reputation capital notwithstanding, there is not a strong incentive to improve the quality of credit ratings when the market is concentrated among a few competitors whose business interests are well protected by regulatory licenses, natural barriers to entry, and the benefits of market share—a cozy, profitable arrangement for rating agencies.

Poor quality credit ratings are not the inevitable outcome of a concentrated industry. Positive, robust competition can be achieved if the incentives are properly structured. Consider a simple analogy in sports. Competition can be fierce either when there are many competitors, e.g., a golf championship or a marathon, or when there are just two competitors, e.g., a chess or tennis match. In the latter, competition is fierce because it is structured as a winner-take-all, zero-sum game. The problem in the credit rating industry is that all three major firms consistently and concurrently win since the engagement of one is not done to the exclusion of the others and usually involves an engagement of the others as well.[169] From a game theory perspective, the firms stand more in a cooperative posture with each other than in a competitive one because they are essentially partner monopolists.[170]

The game must change from a win–win to a win–lose outcome—or at least a portion of the game must be so.

B. Mandating Pay-for-Performance

A pay-for-performance mechanism in compensation would foster vigorous competition among Moody's, S&P, and Fitch. This claim assumes that firms do not like to lose when forced to compete, the outcome of which is directly connected to profits. This assumption is empirically sound.

The problem in the credit rating industry is similar to the problem of corporate governance, where some scholars have argued that executive pay is not as strongly linked to performance as it could be. The idea of pay-for-performance has broad support, at least in the academy, in the field of executive compensation.[171] Prominent scholars have argued that the disjunction between pay and performance has led to inefficiency and real

[169] I do not advocate the elimination of the double-engagement industry practice for three reasons: (1) double engagements provide additional information to the market, (2) a rule of single engagement does not diminish the concern of structural bias in the issuer-pay model, and (3) the number of engagements seems to be an appropriate private choice and there are insufficient reasons for government intrusion into the choice of an issuer seeking a second opinion. *See* LANGOHR & LANGOHR, *supra* note 1, at 63 ("As long as each one provides its own judgment about it—independent and in different ways from its competitors—the combined information to the market in the split ratings should be valuable extra information to investors.").

[170] *See* SEC JAN. 2011 REPORT, *supra* note 8, at 16 (describing Moody's and S&P as a "partner-monopoly"); Hill, *Limits of Dodd–Frank*, *supra* note 7, at 138.

[171] *See* LUCIAN BEBCHUK & JESSE FRIED, PAY WITHOUT PERFORMANCE: THE UNFULFILLED PROMISE OF EXECUTIVE COMPENSATION (2004).

costs for corporations.[172] In the credit rating industry, a pay-for-performance scheme does not naturally arise due to the unique aspects of the credit rating industry: a duopoly plus industrial organization, issuer-pay compensation model, and industry practice of using multiple rating agencies in a single issue.[173] Each factor undermines competitiveness with easy profits and regulatory rents; collectively they suppress the incentive to excel. Accordingly, the condition for competition through pay-for-performance incentives must be created through regulatory mandate.

My proposal assumes that the industrial structure and practices remain the same. It does not depend on a radical move away from the issuer-pay model. The amount of fees, payment forms, and other transactional considerations remain private matters. However, rating agencies should be made to bond their performance. This can be accomplished without a heavy-handed regulatory intrusion. Only a marginal adjustment to the issuer-pay model is needed. The pay-for-performance scheme entails the creation of a mandatory performance bonus. It is a hybrid public–private compensation scheme. For the portion of the revenue not ceded, the compensation scheme would be determined by private actors, but the ceded revenue would constitute a publicly administered compensation plan.

To start, I limit participation to Moody's, S&P, and Fitch (I later show how participation can be expanded to promote and incubate other rating agencies[174]). The three rating agencies would submit a small portion of their revenue to fund a bonus pool of deferred compensation, an incentive bonus. For illustrative purposes, let's assume a bonus pool based on a small 5% of accrued revenue.[175] At regular intervals,[176] the performance of each agency would be statistically evaluated by an independent agency based upon regulatory disclosure requirements that for the most part are already in place.[177] If insufficient, these requirements can be supplemented with additional SEC rules, but the regulatory oversight of the rating agencies would be limited to independent confirmation of performance.[178] Upon evaluation, the best performer is identified and the incentive bonus would be awarded on a winner-take-all basis.

This scheme has a technical problem that must first be solved. As suggested, the contribution must be based on a fixed percentage of revenue,

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[172] *See id.*

[173] *See supra* Part I.B.

[174] *See infra* Part II.D.

[175] *See infra* Part II.C (providing data and analysis showing how 5% is feasible).

[176] The data must be sufficient to make a reasonable determination of statistical performance. Thus, a multiyear period is probably needed.

[177] *See* 17 C.F.R. § 240.17g-2 (2012) (providing for the maintenance of data and information on credit ratings and experience); *id.* § 240.17g-3 (providing for annual financial reports to SEC).

[178] This scheme would be in addition to other forms of regulation already in place, including liability under the securities laws. *See supra* Part I.C.

and not on a common flat contribution of $*X*. Each firm is different in size and earns different revenue amounts in any given year.[179] A fixed contribution does not work because the amount has relative value to each firm, and thus incentives and financial effects are not symmetric. This is less of a problem between Moody's and S&P, which are comparable in scale, but Fitch is a much smaller firm.[180] Since Fitch is a significant player, it must be a part of the scheme. The contribution must be a fixed percentage of revenue, which would result in different contribution amounts by each firm. This rule creates its own technical problem: how do we equitably and symmetrically allocate the bonus in light of the different contributions made?

The scheme should permit different levels of contribution in a three-way game, but always maintain a 1-to-1 payout ratio. There is a simple solution to the problem. The condition is met only when there are two concurrently played subgames within the larger competition. The "main game" would involve a three-way competition with the bonus amount calculated as three times the contribution of the smallest player. The "side game" would involve a two-way competition with the bonus amount calculated as the contribution in excess of the main-game allocation. Since the side game would be between the two larger players only, the ceded revenue is capped at the revenue contribution of the second-largest player. In a multiplayer game, these rules maintain a 1-to-1 payout ratio as to all players, thus maintaining fairness and symmetry of economic stakes.[181]

An example illustrates how the proposed rules work. Assume that 5% of revenue for *S*, *M*, and *F* are 120, 100, and 50. Since *S* is the largest player, it can only contribute 100, which is the contribution of the second-

[179] *See infra* Table 4 and note 184.

[180] In 2012, Moody's earned revenue of $1958 million, and S&P earned revenue of $2034 million. 2012 Moody's Corporation Form 10-K, *supra* note 53, at 38; The McGraw-Hill Cos., Annual Report for the Fiscal Year Ended Dec. 31, 2012 (Form 10-K), File No. 001-1023, at 28 [hereinafter 2012 McGraw-Hill Form 10-K]. In 2011, Fitch earned revenue of €525.7 million, which at a $1.30-to-€1.00 exchange rate is $683 million. FIMALAC, ANNUAL REPORT 2011, at 102 (2012). (At the time of this writing, Fimalac's 2012 annual report was unavailable.)

[181] This scheme is similar to the payout rules in no-limit poker. *See* DAVID SKLANSKY, THE THEORY OF POKER 3–4 (4th ed. 2007). In no limit poker, a player can bet any amount she has at the table, but if the opponent has a smaller sum at the table, the "action" (play) between the two is only for the smaller sum wagered between the two players. *Id.* The player with the greater funds can make additional bets with other players who can match her bets. For example, suppose players *A*, *B*, and *C* have, respectively, 100, 80, and 60 at the table. Player *A* cannot "chase away" *B* and *C* from a hand just because she has greater funds at the table to wager. If *A* bets "all in" with 100, *B* and *C* can "call" the bet, but they can only bet the table stakes of 80 and 60. The main pot is for 180, which is the contribution of 60 from each player. The amount of 20 is returned to *A* since *B* can only match *A*'s bet up to 80. A side pot of 40 is created for the winner between *A* and *B* (*C* does not participate because he lacks the funds). If *C* has the best hand among the three, *C* wins 180, which is a 1-to-1 payout of the amount he bet. If *B* has the second best hand, *B* wins the side pot of 40. Player *A* is the big loser with a net loss of 80. Player *B* bet 60 and gained 40 for a net loss of 20. Player *C* bet 60 and gained 180 for a net gain of 120.

largest player, *M*. The smallest player, *F*, contributes 50. The total bonus pool is 250. The allocation is based on the following rules: the winner in the main game among *S*, *M*, and *F* gets 150; the winner in the side game between *S* and *M* gets 100. If *S* or *M* wins outright against all competitors, it would win the main and side games and thus collect 250. If *F* wins the main game, it would get 150, but since *F* did not contribute to the side game it is precluded from this game. There would still be a side game between *S* and *M*, who have staked additional funds, for the 100.

We can apply these simple allocation rules to a compensation competition among Moody's, S&P, and Fitch. Suppose firms *S*, *M*, and *F* earn these revenues: *S*(*s*), *M*(*m*), and *F*(*f*) where $s > m > f$. Since *S* earns the most revenue of the three players, it needs to contribute only *m*, the contribution of the second-largest player. In each competition period, the payoffs and losses can be generalized as follows:

TABLE 1: MODEL OF PAYOUTS

			Players	
			S or *M*	*F*
Payoff	Main	Win	2m – f	3f
		Loss (when *S* or *M* wins)	m	f
	Side	Net Win/Loss	2m – 2f	not applicable

There would always be a three-way "main game" in which Moody's, S&P, and Fitch compete for these stakes: (1) if Fitch wins, three times Fitch's contribution; or (2) if Moody's or S&P wins, the entire bonus pool. If Fitch wins the main game, there would always be a "side game" between Moody's and S&P for the contributions they made into the bonus pool in excess of Fitch's bonus.

The side game can yield a net win or a net loss, depending on the size of Fitch's contribution relative to those of Moody's and S&P. Under current financial performance measures, winning the side game would result in a net gain because Fitch's contribution would be much smaller. However, if the three competitors are similar sizes, winning the side game may result in a net loss.

For example, assume that the ceded revenues are $S = 100$, $M = 100$, $F = 40$ (thus, the total bonus pool is 240), and that *F* wins the main game and *S* wins the side game. The results would be:

TABLE 2: EXAMPLE OF POSITIVE PAYOUT FROM SIDE GAME

	S	*M*	*F*
Awards	120	0	120
Ceded revenue	–100	–100	–40
Net gain / loss	+20	−100	+80

Since the side-game allocation between *S* and *M* is large enough to offset the loss of ceded revenue, *S* is a net winner even though it lost the main game.

Now, assume that the ceded revenues are $S = 100$, $M = 100$, $F = 80$ (thus, the total bonus pool is 280), and again *F* wins the main game and *S* wins the side game. The results would be:

TABLE 3: EXAMPLE OF NEGATIVE PAYOUT FROM SIDE GAME

	S	*M*	*F*
Awards	40	0	240
Ceded revenue	–100	–100	–80
Net gain / loss	–60	−100	+160

Here, even after winning the side game, *S* is a net loser because *F* has won most of the bonus pool by winning the main game.

Thus, the side game is meaningful to the two losers of the main game, and the winner can either net a gain or mitigate a loss, depending on the smaller competitor's contribution of ceded revenue.

Under the above rules, all three rating agencies will always have "skin in the game." The game is perfect from the perspective of symmetric incentives and equities among players of disparate wealth contributions. Importantly, the competition is zero sum and the "awards" are self-funded.

C. Financial and Economic Analyses

The creation of a bonus pool raises two questions: (1) What is the financial effect of the proposal? (2) What is the economic theory of the incentive? The financial analysis goes to the issue of economic and business feasibility, which in turn is relevant to legal feasibility as well. The economic analysis goes to the issue of efficiency. I will address these issues in turn.

1. Financial Effects of the Proposal.—In the above discussion, I use an illustrative bonus amount of 5%. Based on public information found in

the annual reports of Moody's Corporation and McGraw Hill (S&P's parent company), we can get a sense of the monetary stakes involved. In the following table, I provide simple data on financial and valuation metrics for each firm.[182]

TABLE 4: FINANCIAL DATA ON MOODY'S AND S&P

Parent Companies ($ million)	McGraw Hill	Moody's Corp.
Market capitalization (as of 3/6/13)	13,320	11,250
Revenue	4,450	2,730
Operating income	1,211	1,077
Firm value/operating income multiple	11.7 x	11.9 x
Credit Rating Business Units ($ million)	**S&P**	**Moody's**
Revenue	2,034	1,958
Operating profit	849	947
Operating profit margin	*42%*	*48%*

Firm value is defined as market capitalization plus long-term debt.[183] Operating income is claimed by equity and debt capital providers. Accordingly, the multiple of firm value to operating income provides a metric of valuation based on how much equity and debt are valued based

[182] *See* 2012 McGraw-Hill Form 10-K, *supra* note 180, at 28, 49, 51; 2012 Moody's Corporation Form 10-K, *supra* note 53, at 38, 65, 67; FIMALAC, ANNUAL REPORT 2011, *supra* note 180, at 102. At the time of this writing (and as of July 6, 2013), Fimalac's 2012 annual report was unavailable, and thus 2011 figures are used. Moody's is a part of Moody's Corporation, a publicly traded company (NYSE: MCO). S&P is a part of McGraw Hill Financial, Inc., a publicly traded corporation (NYSE: MHFI). Fitch is 50% owned by Fimalac, S.A., a publicly traded French company (Euronext Paris: FIM), and 50% owned by Hearst Corp. On March 22, 2013, McGraw Hill Companies sold its educational publishing business, and reorganized as McGraw Hill Financial. Market capitalization figures were from yahoo.com/finance as of the specific date, and for McGraw Hill the market capitalization is the pre-restructuring figure. The revenue and operating profit figures are the segmentation results of the credit rating business units, which are found in the Form 10-Ks, and not the consolidated results of the parent companies. Fitch is not included in these calculations because Moody's and S&P each are more than twice as big as Fitch. A comparison of Moody's and S&P, the two duopolists, suffices to illustrate the point. One observation needs to be noted. The United States' civil action against McGraw Hill, filed on February 4, 2013, significantly depressed the stock prices of both McGraw Hill and Moody's. On February 1, Moody's and McGraw Hill closed at $55.35 and $58.34. YAHOO! FIN., http://finance.yahoo.com (last visited Nov. 21, 2013) (providing historic stock prices). On February 5, Moody's and McGraw Hill closed at $45.09 and $44.92. These declines in share price lower the valuation multiples.

[183] I used firm value to operating income as the valuation metric rather than price to earnings because McGraw Hill was undergoing a restructuring to create McGraw Hill Financial (see *supra* note 182) that made its net income figures unreliable. *See* 2012 McGraw-Hill Form 10-K, *supra* note 180, at 5–7 (describing the restructuring process); The McGraw-Hill Cos., Annual Report for the Fiscal Year Ended Dec. 31, 2011 (Form 10-K), File No. 001-1023, at 9 [hereinafter 2011 McGraw-Hill Form 10-K] (same).

on each dollar of operating income. This multiple, an average of 11.8x operating income, is used to determine how much equity value is deducted or gained from losing or winning the compensation game.

Based on the above data and method, Moody's and McGraw Hill would each cede approximately $98 million in revenue in any given year (5% of Moody's 2012 revenue, which is only slightly less than S&P's revenue). If either Moody's or S&P wins, the revenue gained would be $196 million from their ceded revenues plus Fitch's contribution of $34 million.[184] Assume that operating expenses would be unaffected by a 5% revenue charge because the same amount of operating expenses would be needed to generate 100% of the revenue irrespective of subsequent ceding of revenue.[185] This means that for Moody's and S&P the total annual stake in the compensation game would be $230 million in potential augmentation to operate income, or $132 million net of the ceded revenue. These incentives alone constitute a large pot of money—and significant incentive to win the competition on a recurring basis.

Based on these simple assumptions, if either Moody's or S&P were to continually lose the competition to the other such that it would incur a perpetual loss of 5% ceded revenue, and if the valuation multiples remain static, the implied loss of equity value would be approximately $1156 million (= $98 million × 11.8). On the other hand, if a firm earns the performance bonus on a perpetual basis by continually beating the other and the multiples remain static, it would add to its equity value approximately $1557 million (= $132 million × 11.8). The theoretical range of potential value change would be a spread of about $2.7 billion.[186]

This $2.7 billion spread range is only a theoretical outer limit because we do not expect perpetual losses for either firm. In a robust competition, no firm will always win or lose. The actual range of potential valuation effects will be much tighter (perhaps a negligible sum for the reasons explained below). Nevertheless, in any competition period there would be substantial economic stake in winning the rating competition. For a firm that consistently wins the competition, the market will eventually factor in a performance expectation that will result in a valuation premium relative to the other two firms.

Since a ceding of revenue deducts from the top line, and winning creates variance in profitability, a question is whether there are valuation

[184] FIMALAC, ANNUAL REPORT 2011, *supra* note 180, at 102. Fitch earned revenue of €525.7 million, and its 5% contribution is calculated as: €525.7 × 5% × $1.30/€1.00 = $34.2 million. *Id.*

[185] I relax this assumption in the economic analysis that follows because changing incentives may change resource allocation decisions in the firms, which may affect profit and loss.

[186] In all likelihood, if a firm continues to lose the competition, valuation would adjust in a way that discounts the expected return of the ceded revenue and the multiple would contract as the market would see the firm as inferior to the winner, which would likely receive a multiple premium. Thus, the theoretical range would be greater than $2.7 billion, which assumes static valuations.

implications of imposing this potential financial cost on firms. The valuation calculation must consider the incremental variability of earnings and cash flow resulting from the competition. Increased variance would negatively affect the firm's cost of capital such that we may see a potential valuation contraction for both firms. If so, the competition may not necessarily be a zero-sum game. Moody's and McGraw Hill may suffer a combined decrease in market value. The loss net market value of the combined firms would result in a social cost on one side of the ledger, which must be considered as a cost of regulation.

However, it is unlikely that we would see a net loss in value for two reasons. First, the 5% is always ceded, which means that the mandatory contribution reduces revenue but does not add variance to a firm's financial results. The ceded revenue is a fixed obligation like overhead. Since variance results when a firm wins the bonus, it is skewed toward positive outcomes. Second, exposure to risk from the competition can be reduced to zero through perfect hedging. A shareholder needs to buy one share each in the three firms of the duopoly plus to fully invest in the credit rating sector. This investment strategy perfectly diversifies the unique risk of each firm with respect to the bonus. In other words, a diversified investor would assume no greater volatility of earnings or cash flow due to the zero-sum nature of the compensation game.[187] Thus, there is no significant loss of value from the proposal.

The next question is whether the 5% figure is feasible as a business proposition. The answer is clearly "yes." A review of the financial performances of Moody's and S&P shows that there is substantial room to impose a mandatory contribution. Below are the 2012 revenue, operating profit, and operating margin of Moody's, S&P, Goldman Sachs, Accenture, Lazard, and FTI Consulting.[188] These firms operate in different industry sectors, but they provide significant professional advisory services. Goldman Sachs is a leading investment bank, and Accenture, Lazard, and FTI are leading advisory businesses. The following table provides financial data on these companies as compared to Moody's and S&P.[189]

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[187] If Fitch is introduced into consideration, an investor can easily invest in the three firms as a unit, thus reducing variance of cash flow to zero.

[188] More detailed information about these companies is available on their company websites and Form 10-Ks. I selected Accenture, Lazard, and FTI because these firms represent a wide range of consulting practices. Accenture is a large firm with a strategic-management and technology focus. Lazard is an investment bank, but its primary business is M&A advisory services. FTI provides a wide array of services including economic and litigation consulting. The FTI operating profit was adjusted to add back $110.3 million of a goodwill impairment charge recognized in 2012. FTI Consulting, Inc., Annual Report for the Fiscal Year Ended Dec. 31, 2012 (Form 10-K), File No. 001-14875, at 79 [hereinafter 2012 FTI Form 10-K].

[189] 2012 FTI Form 10-K, *supra* note 188, at 79; The Goldman Sachs Grp., Inc., Annual Report for the Fiscal Year Ended Dec. 31, 2012 (Form 10-K), File No. 001-14965, at 117; Accenture plc, Annual Report for the Fiscal Year Ended Aug. 31, 2012 (Form 10-K), File No. 001-34448, at F-4; LAZARD, 2012 ANNUAL REPORT 77 (2013).

TABLE 5: COMPARISON OF FINANCIAL DATA

FY2012 ($ million)	Revenue	Operating Profit	Margin
Moody's	1,958	947	48.4%
S&P	2,034	849	41.7%
Goldman Sachs	34,163	11,207	32.8%
Accenture	29,778	3,872	13.0%
Lazard	1,912	124	6.5%
FTI Consulting	1,577	169	10.7%

Moody's and S&P have high operating profit margins compared to the above leading firms. Keep in mind that they are different businesses, but the different levels of financial performance are stark. A ceding rate of 5% would have significant impact on any business (of course), but the important takeaway is that on the whole the rating agencies would not be financially threatened in any way. Indeed, if the operating profits of advisory services are the benchmark (7%–13%), the rating agencies could cede as much as 25% of revenue and still be within the range of financial feasibility. Thus, there is a small impact on margins and financial operations, but as the above analysis also shows, the rating agencies would have substantial economic incentive to win the game because 5% ceded revenue is still a lot of money at stake.

2. Economic Theory of the Proposal.—We see that there is wide financial room to mandate participation. This raises the question of whether there is a theory of the optimal level of ceded revenue. The first principle is business feasibility. We should not impose an amount that risks financial distress. This is not a great concern because rating agencies enjoy such healthy profits. That Fitch is significantly smaller in terms of revenue and profits does not present a problem because the equities can be made to be symmetric with equal-allocation rules.

The more serious question concerns the relationship between private profits and public gains. Due to the lack of competition, rating agencies have not exerted the sufficient effort or insufficiently invested in the business to provide the best credit ratings, or both.[190] Clearly, since they do

[190] *See supra* notes 41, 49 and accompanying text (providing accounts of lack of diligence); *see also* Charles W. Murdock, *The Dodd–Frank Wall Street Reform and Consumer Protection Act: What Caused the Financial Crisis and Will Dodd–Frank Prevent Future Crises?*, 64 SMU L. REV. 1243, 1303 (2011) ("What is particularly shocking is the lack of due diligence done by the rating agencies in connection with issuing AAA ratings, from which they collected hefty fees."); Steven L. Schwarcz, *Marginalizing Risk*, 89 WASH. U. L. REV. 487, 514 n.157 (2012) ("[R]ating agencies have not historically engaged in due diligence, focusing solely on risk assessment from information provided.").

not stand to lose business, these investment decisions have been profitable; but equally clearly, they have resulted in public harms. Thus, we should explore the relationship among the cost of effort and investment, social benefit of better credit ratings, and the incentive to make the investment based on short-term consideration of winning the bonus and the long-term financial and reputational consideration of losing consistently to other competitors. Applying a standard cost–benefit analysis, we can set the bonus such that the marginal benefit of better quality outcomes equals the increased investment of effort and capital, capped at the point of significant increase in the risk of financial distress. This is a simple principle, but achieving it may be more difficult.

This calculus is a bit more complicated because the cost–benefit analysis from a social welfare perspective is dependent on the private incentives of rating agencies in determining whether to make the investment necessary to win. The variables of this private cost–benefit analysis that drive each firm's behavior are: (1) the probability distribution of winning based on incremental efforts made, (2) the expected value of investment and return, (3) game theoretic considerations on opposing firms' efforts to win and their iterative effects on one's expected value, and (4) costs of "opting out" of the game by taking the 95% of revenue and conceding any effort to win by not investing in any effort at all. From a game perspective, the competition can be played competitively or perhaps cooperatively in which players agree to make the minimal investments to maintain the status quo. For reasons explained *infra* Part III.A., I do not think that the interactions will lead to collusive behavior. The rating agencies would not collusively agree to "opt out" because this arrangement would be highly unstable. Where the equilibrium lies in these calculations when all of these factors are considered is difficult to predict.

The above sets forth the economic theory of the incentive amount. In practice, policymakers must make a qualitative judgment based on findings of facts on the level of investments already made, the amount of investments that can be made, and the potential benefits in higher quality ratings. Intuitively and without more data of the kind that would be relied upon by policymakers, the optimal point is in the range of feasibility based on 2012 financial measures of 5% to 25%. It seems that within this range, greater investments would yield greater marginal returns on investments as measured by quality of ratings. If the rating agencies choose to compete through increased investments in credit ratings, profits may decline. Reduced profitability may be a private loss, but not a social cost if the return on more accurate credit ratings exceeds the cost of additional investment in human capital.[191] The difference between the current rating

[191] Rating agencies might have strategically chosen not to compete against investment banks for human capital, and as a result the necessary investments were not made toward achieving "state of the art" quality in credit ratings. *See* Hill, *Regulating the Rating Agencies*, *supra* note 7, at 81.

agency profit levels and lower profits in the investment banking and advisory industries may represent the regulatory rents rating agencies earn from the current state of the industrial organization.[192]

D. Toward a Robust Secondary Market

The above proposal applies only to the duopoly plus. In this section, I suggest that the same structure can be used to promote a robust secondary market for credit ratings among newer, less-established rating agencies. The core idea here is that competition can be enhanced by creating an information market on credit ratings in which other rating agencies can make financial bets against the bonus pool.

The market would work like this. Any smaller or newer NRSRO interested in issuing a rating would be given the same information as a rating agency that has been engaged by the issuer to provide a rating. Some regulatory precursors are already in place. Rule 17g-5 mandates an equal access obligation for ratings of structured finance securities.[193] If an issuer provides a rating agency information for a structured finance instrument, it must make the same information available to other NRSROs to enable them to issue their own ratings. This rule was intended to foster competition among NRSROs.[194] The Dodd–Frank Act eliminates the exemption rating agencies enjoyed from Regulation FD,[195] which requires that when an issuer discloses material, nonpublic information to certain individuals or entities (generally, securities market professionals, such as stock analysts) the issuer must also make public disclosure of that information.[196] Thus, some of the key regulations to achieve information access and parity have already been implemented.

With the necessary information, any rating agency can provide an unsolicited credit rating. Frequently, newer and smaller rating agencies are compelled to provide unsolicited credit ratings to break into the market and establish a reputation.[197] Consistent with current market practice, the issuer would not otherwise be forced to pay for the rating from a rating agency it has not engaged, and the rating agency would incur its own costs in

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[192] This may explain why famed investor Warren Buffett made a substantial investment in Moody's. *See* FINANCIAL CRISIS INQUIRY REPORT, *supra* note 6, at 207 ("Buffett said that he invested in the company because the rating agency business was 'a natural duopoly,' which gave it 'incredible' pricing power—and 'the single-most important decision in evaluating a business is pricing power.'").

[193] 17 C.F.R. § 240.17g-5 (2012).

[194] Coffee, *supra* note 7, at 248. "Of the 318,056 outstanding credit ratings for asset-backed securities" at the time of measurement, "all but 17,604 [were] issued by" firms other than the duopoly plus. SEC JAN. 2011 REPORT, *supra* note 8, at 7.

[195] Dodd–Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, § 939B, 124 Stat. 1375, 1887–88 (2010).

[196] *See* 17 C.F.R. § 243.100. The exemption for rating agencies is found in 17 C.F.R. § 243.100(b)(2)(iii).

[197] *See* LANGOHR & LANGOHR, *supra* note 1, at 410, 423–26.

providing the rating. However, the rating would become a part of a portfolio of ratings that would be evaluated against the ratings provided by Moody's, S&P, and Fitch. If the rating agency outperforms these big three agencies that are mandated to participate in the bonus pool, it would be paid back its expenses plus profit based on a reasonable rate of return from the bonus pool.[198] The remainder of the bonus pool would go to the winner of the main competition among the duopoly plus. This bonus would constitute a subsidy to newer and smaller competitors that have taken risks and proven their worth.

This incubation program has several functions. First, it permits smaller competitors to compete in the information market even without engagements from issuers and their investment bankers. They are not economically frozen out, but they are also not undeserving beneficiaries of a subsidy, either. The competition is not a free ride to the smaller competitors since they are providing free rating services with only the hope of recovering expenses and profit upon outperforming larger, more established competitors. Second, smaller rating agencies confront high natural barriers to market entry. They may be uncompetitive in the labor market for finance professionals. New rating agencies also face a Catch-22 situation in which they must have a reputation for competence, adequacy of resources, longevity, and experience to get engagements.[199] Thus far, the SEC has not been able to resolve these problems. A program of shadow competition provides opportunities for smaller rating agencies to gain experience and a history of success, thus building the essential reputation capital that is needed to obtain regular engagements from issuers. Third, a more robust information market on credit ratings is superior to a state of less information. This is why issuers seek double ratings. It is logical that the credit market would benefit from multiple assessments of a particular issue's creditworthiness issued by rating agencies with an incentive to provide the most accurate rating.

An incubation program is a pathway for smaller rating agencies to learn, grow, and compete. Eventually they may graduate to the "big leagues" and earn a seat at the main compensation game. Even though reputation and client lists take time to develop, there is precedent for such a move. Fitch was once a smaller firm, but it has gained significant market share through a specialization in international and structured finance issues.[200] Also, A.M. Best is a small firm, but has a very good reputation in

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[198] The setting of rate of return or a reasonable profit is seen in other contexts. For example, the rates of profit for public utilities are regulated. *See, e.g.*, State *ex rel.* Mo. Gas Energy v. Pub. Serv. Comm'n, 186 S.W.3d 376 (Mo. Ct. App. 2005).

[199] *See* Coffee, *supra* note 7, at 234 ("Quite simply, the 'Catch-22' for new entrants is that it is nearly impossible to obtain clients unless one has a track record for reliable ratings, yet such a track record is difficult to generate unless one first has clients.").

[200] *See* LANGOHR & LANGOHR, *supra* note 1, at 398–402 (describing the growth of Fitch).

the special niche of insurance businesses. Smaller firms can grow to be significant competitors, but they require incubation, business opportunities with economic rewards, and a track record of success.

This secondary market would enhance competition by enlarging the pool of competitors.[201] It would diminish the importance of the size and financial strength of the three largest rating agencies because the smaller rating agencies need not be engaged by issuers to compete against the big rating agencies and they could compete at the level possible for their financial condition. Here again, all players would be playing for stakes fixed as a function of their individual financial conditions, thus giving each player a chance to earn its proportional payout in the game. A secondary market would create a situation in which the largest rating agencies could lose a portion of their combined revenue to an outside rating agency.

III. POTENTIAL OBSTACLES TO IMPLEMENTATION

A. Coordination and Collusion

In light of the duopoly plus industry structure, one concern may be whether rating agencies would implicitly coordinate or collude.[202] When forced to compete for economic gain, the three rating agencies may be tempted to take a "one for you, one for me" collusive approach to the bonus payment. Forced competition requires greater effort and quite probably greater investments that reduce profit. In a zero-sum game, the desire to maintain the status quo and signal détente would be great. This is not a serious concern.

At the firm level, tacit coordination may appear possible due to the limited number of competitors, but as a practical matter such a feat would be difficult to execute. The situation here is not akin to price fixing in which only a few decisions by a few actors would be needed to coordinate with other firms. In a rating agency, such centralized decisionmaking does not exist. Each rating agency has over a thousand credit analysts and supervisors,[203] and each rating requires a credit committee of various compositions of analysts, all of whom (analysts and committees) would presumably be exercising independent judgments on many thousands of bond issues and monitoring of outstanding issues. In the business of credit ratings, coordinating collusion cannot occur absent an explicitly illegal, broadly disseminated (thus easily discoverable) edict from the executive suite or the boardroom.

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[201] *See id.* at 424 (suggesting that unsolicited ratings "provide a check against ratings shopping").

[202] *See generally* ROBERT C. MARSHALL & LESLIE M. MARX, THE ECONOMICS OF COLLUSION: CARTELS AND BIDDING RINGS (2012) (providing economic analyses of anticompetitive behavior).

[203] SEC SEPT. 2011 REPORT, *supra* note 8, at 8; SEC JAN. 2011 REPORT, *supra* note 8, at 8.

Even if there is an illicit conspiracy to undermine the competition from the top, the execution at the bottom would be very difficult. Such top-down coordination cannot work when there are thousands of decision points in each firm that must then be coordinated with those of several other firms. Coordinating performance and statistical outcomes, many of which are subject to uncertainty and market forces, would be practically infeasible even with tacit coordination. The complexity of coordination increases with each player added to the competition.

A misstep in any coordinated action would quickly unravel a coalition. Assume a coordinated "one for you, one for me" agreement to maintain the status quo. Each firm may be tempted to cheat in light of the large financial payoff in any given year from the performance bonus, or each agent within the firm may have reasons to not abide by the firm objective, such as employee performance bonuses and career merits. A collusive, tacit agreement among three players would be highly unstable, and would likely devolve into active competition once the pattern of "one for you, one for me" is broken due to cheating, miscalculation, or some exogenous factor leading to unintended or unexpected outcomes. When rating agencies are forced to compete on merit, the possibility of collusion with so many moving parts is unlikely.

B. Standard for Performance Assessments

In the field of executive compensation, a pay-for-performance compensation scheme requires the promulgation of a standard to measure performance. This is easier said than done. Among other issues, there are questions as to the metric to be measured, the method for measurement, and the timing of measurement and compensation. The complexity of the problem is high. A similar but more difficult problem confronts the proposal here: how does an agency determine "the winner" of pay for performance? This problem of performance measurement is more difficult than in the context of executive compensation because there are, quite literally, thousands of data points on performance. I do not offer or advocate a specific assessment protocol. The purpose of this Article is to present the conceptual framework for reform. Experts in statistics and data analysis would be required to recommend and implement a technical protocol. However, the problem of performance measurement is not insurmountable. I offer the following thoughts on implementation.

First, the assessment criteria must be based on accuracy and not on downward deviations of issues from ratings. The focus should not be on how many issues were overrated since it would impose a bias toward underrated securities resulting in significant detriment to issuers and a systemic increase in the cost of debt. The magnitude of the error should count but not directionality. Timeliness is also an important consideration.

It does the investor no good for a rating agency to downgrade the debt of company on the eve of bankruptcy, as was the case in Enron.[204] Thus, directional correctness and timeliness are the two most important factors in formulating the assessment criteria.

Second, the evaluating criteria must be broadly based, covering performance along all asset classes including difficult-to-rate structured finance instruments. This requirement would not open up the possibility of gaming by the rating agencies through calculated changes in the business mix, such as not entering the structured finance market on account of the difficulty of rating issues. The mathematics of profitability do not lead to rating agencies manipulating their business mix to game the overall performance review since the ceded revenue is a small portion of the fees earned. In other words, it would be unlikely that a rating agency would give up 95% of a highly profitable business line to enhance its chances of winning the 5% bonus pool, particularly since complex instruments such as structured finance bonds generate significantly higher profit margins.[205]

Third, an assessment of performance should hinge substantially on statistical data on performance. Competent experts would be required to propose a statistical method to measure the quality of performance. There are many such experts in the academy and the financial profession. The SEC could also solicit the three largest rating agencies as well as various constituents of the capital market, including bond investors, to provide proposed rules and comments on the issue of assessment. The most difficult part of assessment is formulating the standard based on the criteria of correctness and timeliness. There is no doubt that various constituents may differ in opinions, including the rating agencies themselves, but like most things requiring expert opinion and judgment I have confidence that a rational, defensible standard can be set. That standard could be as simple as providing a universal standard based on the probability of default assigned to each rating, and an assessment could be made based on deviations from the "correct" standard as weighted by the number of issues and time. Reporting of credit ratings and defaults can be automated and much of the data analysis can then be performed with the use of technology and algorithms. Indeed, I anticipate that the data analysis part of the process would be far easier than formulating and achieving a consensus on the precise algorithm for assessment.

Fourth, although the assessment should be primarily based on quantitative measures of performance, the SEC could add additional qualitative factors toward a weighted scorecard of best performance. Such factors can include compliance with rules and regulations, independent

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[204] "Indeed, the principal recent criticism of credit-rating agencies has been that they have been reactive, rather than proactive, belatedly responding to negative information that has been publicly released, but seldom anticipating any serious decline." COFFEE, *supra* note 38, at 285.

[205] *See supra* note 24.

assessments of governance, management of conflict of interest, and quality of internal controls, all of which were issues addressed in both the Credit Rating Agency Reform Act of 2006 and the Dodd–Frank Act and implemented in SEC rules. The SEC or some other body can engage in determination of these qualitative factors. For example only, it might be reasonable for the final assessment to be based on 80% quantitative performance assessment and 20% compliance-based judgment. One need not fret too much over what the proper weight should be. It would be an exercise in asking why a set in tennis is based on winning six games and not four or eight.[206] Why is any given sport or game scored the way it is? The point is that the standard should define the meaning of excellent performance, and the rating agencies must meet the standard. A part of that standard should be judged on compliance.

Fifth, the critical question for implementation is this: can data analysis reveal "the winner"? Yes, because there is an enormous volume of statistical data.[207] The following is data on outstanding credit ratings reported by NRSROs to the SEC in 2011[208]:

[206] There may be a historic reason why a tennis set is based on six games, but the general point still holds true. Indeed, tennis rules for determining the winner vary in significant ways. For sets, the rules for any tournament can provide that a player must win a set by at least two games, or she must win a tiebreaker based on the first person to reach a specified number of points. For matches, the rules can provide that a match is based on three or five sets. Regardless of which rules are in play, players and spectators generally accept the rules as determining the best player on that day, and more importantly one presumes that players compete equally vigorously irrespective of the specific criteria for judging the winner.

[207] *See generally* LANGOHR & LANGOHR, *supra* note 1. Indeed, the rating agencies approved by the SEC are called "nationally recognized *statistical* rating organizations." Dodd–Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, § 932(a)(3)(I), 124 Stat. 1375, 1874 (2010) (emphasis added).

[208] SEC SEPT. 2011 REPORT, *supra* note 8, at 6.

TABLE 6: DATA ON OUTSTANDING RATINGS AS OF 2011

	S&P	Moody's	Fitch	Other NRSROs	*Total*
Financial institutions	54,000	61,581	61,550	32,207	*209,338*
Insurance companies	8,200	4,540	1,657	5,391	*19,788*
Corporate issuers	44,500	30,285	13,385	11,116	*99,286*
Asset-backed securities	117,900	101,546	64,535	18,480	*302,461*
Government issuers	965,900	841,235	363,897	14,694	*2,185,726*
Total	*1,190,500*	*1,039,187*	*505,024*	*81,888*	*2,816,599*

Since there are so many outstanding, maturing, and defaulting issues at any given time, there is an enormous volume of data from which we can cull reasonable inferences on performance. Furthermore, the task of statistical analysis is made much easier by the fact that the industry custom is a multiple-rating system. It would be a much harder task, though by no means impossible, to determine which rating agency performed better if each rated mutually exclusive sets of securities. However, there is great overlap among the top three agencies. For instance, from 1976 to 2006, 62,496 new domestic issuances of nonconvertible debt were credit rated, and of these 98.2% were multiple rated: 67.3% by two rating agencies, and 30.8% by all three agencies.[209] Consider another example: in a representative sample of 2514 corporate bonds outstanding at the end of March 1997, Moody's had ratings on 92.5% and S&P 90.7%.[210] The three rating agencies substantially overlap in work performed such that side-by-side comparisons of performance outcomes are possible. Since there are so many outstanding, maturing, and defaulting issues at any given time, there would be no problem of gathering a dataset of ratings based on issues expiring and defaulting within defined periods of time from which periodic quality assessments could be performed.

Sixth, the compensation competition is a repeat game, occurring at regular intervals. This interval need not be yearly, and in fact a multiyear interval of, for example, 3–5 years seems reasonable. The competition could be based on only the bond or debt issues expiring or defaulting during that period. These issues would be examined against the performance of the issue, initial rating assigned, and changes in rating. Each rating agency would be evaluated on the performance of the entire portfolio of expired and defaulting issues against the objective performance standards set for each credit rating, which is now required under the Dodd–Frank Act.[211]

[209] LANGOHR & LANGOHR, *supra* note 1, at 54.

[210] *Id.*

[211] § 938, 124 Stat. at 1885; *see infra* Part III.C.

Lastly, perhaps the most serious criticism of the proposal is what may be called the perfectionist's challenge—the argument that any statistical analysis, however sophisticated, would not be capable of determining the "true winner." There would be too many technical difficulties, such as problems of data sampling, fluidity of credit ratings over time, different portfolios of covered bond issues, and numerous other factors that make identifying the best performer imperfect at best. To this criticism, a fair response might be, "*le mieux est l'ennemi du bien*."[212]

Epistemological certainty is not needed to implement the policy objective. The standard for assessment should be reasonably fitted to the objective so that, like any performance bonus, the risk of arbitrariness is mitigated. But errors, defined as deviations from the epistemological truth, do not undermine the policy goal. If there is objective application of a rational standard, we expect that any "errors" would average out for each player. Since the compensation game is a classic repeat-play game, the mathematical expectation from an imperfect standard would be zero. In the long run, the risk of error is diversified away.

Errors are simply a part of the real world, including the legal process. One accepts that any standard of evaluation may be imperfect and thus subject to criticism. Many types of evaluative processes are far less quantitatively driven than the proposal here and subject to the discretion of individual judgment: just to name a few, the typical performance evaluations of employees including those of CEOs, tenure reviews of academics, strategic considerations in business planning, medical evaluations, and judgments in figure skating competitions. Virtually the entire panorama of human endeavors and observations is subject to imperfect evaluations and subjective probability assessments. Consider the core aspect of the legal process in civil actions—the preponderance of the evidence standard of proof.[213] Based on this standard, we recognize that the legal process produces many "errors" from the perspective of some

[212] "Dit que le mieux est l'ennemi du bien." ("The best is the enemy of the good.") M. DE VOLTAIRE, LA BÉGUEULE, CONTE MORAL A3 (Geneva 1772). The aphorism attributed to this quote is that we should not let the lack of perfection get in the way of implementing something that is a net good. A related concept is the "nirvana fallacy," which embodies the idea that we should not compare a superior, implausible solution to an inferior, plausible solution. *See* Harold Demsetz, *Information and Efficiency: Another Viewpoint*, 12 J.L. & ECON. 1, 1 (1969) ("The view that now pervades much public policy economics implicitly presents the relevant choice as between an ideal norm and an existing 'imperfect' institutional arrangement. This *nirvana* approach differs considerably from a *comparative institution* approach in which the relevant choice is between alternative real institutional arrangements.").

[213] *See* Robert J. Rhee, *A Price Theory of Legal Bargaining: An Inquiry Into the Selection of Settlement and Litigation Under Uncertainty*, 56 EMORY L.J. 619, 638, 642 (2006) (noting that "objective probability of legal case assessment is impossible" and that "[l]egal actions cannot be described in the narrow, symmetric manner that is required for measurement").

ontological truth.[214] We seek reasonable outcomes based on objective application of a rational standard of evaluation.

"Who is the winner?" is the penultimate question. It serves the ultimate inquiry: "Are the players incentivized?" From this perspective, a perfect assessment standard is not needed to serve this policy end. If a rational standard is applied objectively, the rating agencies subject to a performance evaluation will be incentivized to produce accurate credit ratings for the purpose of winning the competition. That there is some uncertainty in the process would produce more incentive to win by a clearer margin; thus, any potential for "errors" may actually benefit the end. On this point, economic analysis of incentives in the field of torts has significant application. Scholars have shown that uncertainty in litigation outcomes can lead to overcompliance.[215] The basic argument is that if uncertainty is distributed normally around the optimal standard of care, and if the uncertainty is not too great, the legal rule will have an overdeterrence effect.[216] Similarly, if there is some uncertainty surrounding the determination of the winner, the rating agencies may be incentivized to work harder to clear the margin of victory. Thus, the policy objective is served when the standard of evaluation is sufficiently connected to the criterion of accuracy, though perfect accuracy is not needed.

C. Regulatory Foundation Laid by Dodd–Frank

The proposal requires that a regulator collect the ceded revenue, assess performance, and award the bonus. Regulation must create an agency body to oversee the program, and must mandate rating agencies to collect and maintain data on performance. In this respect, the regulatory foundation necessary to implement the proposal has already been laid, which makes the implementation of the proposal easier and more feasible.

The Dodd–Frank Act mandates the regulatory framework necessary to collect, maintain, and report data on performance. The rating agencies must provide ratings based on a common system of ratings, including the designation of alphanumeric ratings and the criteria applicable to each rating. The rating agencies already use very similar rating symbols.[217]

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[214] *See* Robert J. Rhee, *The Application of Finance Theory to Increased Risk Harms in Toxic Tort Litigation*, 23 VA. ENVTL. L.J. 111, 155 (2004) ("But it does not shake the foundation of our legal system to say that errors, defined as deviations from the omniscient truth, occur frequently by the very nature of the adversarial system.").

[215] *See* John E. Calfee & Richard Craswell, *Some Effects of Uncertainty on Compliance with Legal Standards*, 70 VA. L. REV. 965, 965 (1984); Richard Craswell & John E. Calfee, *Deterrence and Uncertain Legal Standards*, 2 J.L. ECON. & ORG. 279, 280 (1986).

[216] Craswell & Calfee, *Deterrence and Uncertain Legal Standards*, *supra* note 215, at 299; *see* Tom Baker et al., *The Virtues of Uncertainty in Law: An Experimental Approach*, 89 IOWA L. REV. 443, 449–64 (2004) (arguing that uncertainty of sanction may lead to greater deterrence).

[217] *See supra* note 27.

Section 938 of the Dodd–Frank Act, titled "Universal Ratings Symbols," requires the SEC to implement rules and procedures that:

> (1) [A]ssess the probability that an issuer of a security or money market instrument will default, fail to make timely payments, or otherwise not make payments to investors in accordance with the terms of the security or money market instrument;
> (2) clearly define and disclose the meaning of any symbol used by the [NRSRO] to denote a credit rating; and
> (3) apply any symbol described in paragraph (2) in a manner that is consistent for all types of securities and money market instrument for which the symbol is used.[218]

There will be a universal standard against which the performance of rating agencies can be judged and assessed. The statute also imposes a regulatory reporting and disclosure structure, which has been partially implemented through SEC rules.[219] If additional rules are required to produce a set of statistical disclosures, this can be done through the auspice of the Dodd–Frank Act's mandate.

With respect to an independent body or board that would evaluate performance and award the incentive bonus, the Dodd–Frank Act created a structure that could fill this role. Section 932 creates an Office of Credit Ratings within the SEC.[220] Its charge is "to promote accuracy in credit ratings issued by nationally recognized statistical rating organizations; and . . . to ensure that such ratings are not unduly influenced by conflicts of interest."[221] The statute mandates that the staff should have knowledge and expertise in debt instruments, and that the Office of Credit Ratings should conduct annual examinations of NRSROs.[222] If additional expertise or input is needed, the Office of Credit Ratings could be composed of regulators, academics, and disinterested industry professionals who would be tasked with analyzing performance and making recommendations as to the award of bonus, and could incorporate additional methods such as an industry survey of investors and other knowledgeable constituents.

Commentators are correct to note that neither the Credit Rating Agency Reform Act of 2006 nor the Dodd–Frank Act has transformed the regulation of the credit rating industry or fixed the problem in some

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[218] Dodd–Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, § 938, 124 Stat. 1375, 1885 (2010).

[219] 17 C.F.R. §§ 240.17g-2, 240.17g-3 (2012).

[220] § 932, 124 Stat. at 1872, 1877 (amending Section 15E of the Securities Exchange Act of 1934, now codified at 15 U.S.C. § 78o-7 (2006)).

[221] *Id.* at 1877.

[222] *Id.* Matters to be examined are whether the rating agencies conduct business in accordance with the established policies and methodologies, manage conflicts of interest, implement ethics policies, exercise internal supervisory controls, have appropriate corporate governance, and monitor the activities of credit analysts. *Id.*

fundamental way.[223] However, it may be too early to write off these statutes as failed exercises in correcting a difficult problem. The Credit Rating Agency Reform Act of 2006 at least reduces regulatory barriers to entry. And, the Dodd–Frank Act in particular has enabled at least some of the process-based rules necessary to administer a pay-for-performance compensation scheme. In this respect, the two statutes, while not fixing the problem directly, have enacted the regulatory precursors to fundamental reform based on greater positive competition and correctly aligned incentives to perform.

D. Political Reality of Regulation

The economic and administrative feasibility of the proposal here are well within the realm of practical possibility. More than the potential for collusion or difficulties of performance metric, the political reality of effective regulation is the chief impediment to reform of the credit rating industry. In any regulation affecting corporate and Wall Street interests, there is always the reality of political feasibility.[224] Although no one denies that better quality credit ratings are clearly a public good, there would be significant political opposition to effective regulation. The idea of regulatory capture has long been recognized.[225]

Obviously the three rating agencies would oppose any attempt to put any contingencies on accrued revenue, however small. They would want to keep their rents. The proposal here means that the leading rating agencies would have to work harder and incur more costs and investments in human capital to improve the quality of their products and services—the value of this cost representing a component of the regulatory rent they earn from the current industrial organization. The political voices of Moody's, S&P, and Fitch would be significant.

Other powerful voices would speak against mandated competition. Investment banks and corporate issuers, which yield greater political clout than the three rating agencies, would be opposed as well. Several factors are at work. First, and obviously, issuers like overrated bond issues because they lower their costs of borrowing. From an issuer's perspective, a lenient rating agency is better for business than an objective one. Second, the oft-cited conflict of interest ultimately arises from the implicit threat that

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[223] *See supra* note 102 and accompanying text.

[224] *See* John C. Coffee, Jr., *The Political Economy of Dodd–Frank: Why Financial Reform Tends to Be Frustrated and Systemic Risk Perpetuated*, 97 CORNELL. L. REV. 1019 (2012) (arguing that politics have become a major factor in financial regulation); Stavros Gadinis, *From Independence to Politics in Financial Regulation*, 101 CALIF. L. REV. 327 (2013) (same); *see also* Adam J. Levitin, *Bankrupt Politics and the Politics of Bankruptcy*, 97 CORNELL L. REV. 1399 (2012) (arguing that politics play a major role in states' financial distress).

[225] *See* George J. Stigler, *The Theory of Economic Regulation*, 2 BELL J. ECON. & MGMT. SCI. 3, 3 (1971) ("A central thesis of this paper is that, as a rule, regulation is acquired by the industry and is designed and operated primarily for its benefit.").

issuers and their investment bankers might channel rating business to more lenient rating agencies (in reality, investment bankers are the ones who would wield this sword since they manage the issues). This is a real source of power, and it is rational to believe that investment banks would have a business interest in maintaining the status quo of this leverage. Third, higher rated bonds are arguably easier to manage in the issuance process, again making the jobs of investment bankers easier. It is plausible to think that the greater the credit risk, the greater will be the market scrutiny of the issue in the underwriting and sales process. Fourth, systemically higher credit ratings can increase the overall demand for bonds because they relax the regulatory restrictions on bond investments. Investment banks and corporate issuers benefit from this greater demand.

Lastly, as mentioned above, the "dirty little secret" of the problem of credit ratings is that investors also benefit from overrated bonds.[226] While the bond market may have its proverbial "moms and pops" and other unregulated investors, institutional investors are the major players. There is a real agency cost associated with the "dirty little secret." Institutional investors and bond portfolio managers may desire a freer hand on investment choices, risk assumption, and desired yields on investments. This is not to suggest that bond investors like being fooled into bad investments. A credit rating is one important factor in determining the "true" value of a bond, but there are other factors that sophisticated investors can consider. As a number of commentators have noted, credit ratings do not always correlate with bond yields, credit, or CDS spreads.[227] The capital markets also incorporate information on the credit quality of a bond. This suggests that there is a tradeoff for some bond investors: a freer hand in pursuing greater yields on investments at the price of less accurate credit ratings.

With all this said, the political picture is not so bleak. Even as some bond investors may have conflicting interests, many institutional investors actually rely on a credit rating system that provides broad coverage of the bond market.[228] The flip side to the argument that there is an agency cost is that the fidelity of many agents is true to the principal. There are many institutional bond investors that desire a more accurate credit rating system. This is the premise of many proposals that would have a user- or subscriber-pay model, and their underlying assumption about the interests of many bond investors is not necessarily wrong. Long-term players in the bond market, such as insurance companies, rely on credit ratings. "Only a small subset of institutional investors have the 'in-house' capacity to undertake a serious analysis of the creditworthiness of debt securities,

[226] *See supra* notes 74–75 and accompanying text.

[227] *See* Fitzpatrick & Sagers, *supra* note 7, at 592–608; Partnoy et al., *supra* note 7.

[228] *See* Coffee, *supra* note 7, at 263 (noting that "it is arguable that many sophisticated institutional investors relied on Moody's and S&P because there was no one better to rely upon").

while many funds compete by economizing on such expenses."[229] The bond market needs the credit rating system, and it is quite plausible that a sufficient subset of the bond investor community wants greater accuracy in credit ratings to offset some of the countervailing political pressures.

Credit rating agencies exist because they provide a quantum of value in intermediating information in the capital markets and serve a quasi-regulatory role. If the benefits of these functions were outweighed by the costs of a continuously compromised credit rating system, the future of rating agencies would be bleak. This is a possibility recognized by the rating agencies themselves,[230] but this logic of utility and existence is not deductive conclusion. We must be aware that there is a powerful political coalition that has a significant economic interest in maintaining the status quo, inherent flaws and costs notwithstanding.

CONCLUSION

A lesson can be learned from legendary football coach Vince Lombardi, who taught his players: "Winning is not everything—but making the effort to win is."[231] This lesson is important in life, in markets, and in regulation. Credit rating agencies suffer from a lack of competition and a will to do better than other agencies, which diminishes the quality of credit ratings. If competition in fact does not exist, regulation should induce it. Large numbers of competitors are not needed to achieve robust, positive competition. Contrary to accepted wisdom, an industry of three firms can be competitive under the right conditions. The condition for competition is created when a portion of compensation is redirected from consideration for services rendered to pay for performance. This Article proposes a winner-take-all bonus scheme that augments the issuer-pay model. The same funding scheme can be used to increase further competition by incubating new and smaller rating agencies that would be allowed to participate in a bonus pool. The bonus pool need not be large relative to revenue. Even a modest, at-the-margin change can create the necessary conditions for robust, positive competition.

A compelling rationale supports a mandated, hybrid public–private compensation scheme. Credit ratings are more than just the opinions of a private actor; they are a public good. Rating agencies enjoy a regulatory license that necessitates their service and gives them market status, and the credit rating system exists in a capital market that creates significant network externalities. Rating agencies are private firms that report to shareholders, but they also serve a public gatekeeping role. The main goal

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[229] Coffee, *supra* note 7, at 263–64.

[230] *See* 2011 McGraw-Hill Form 10-K, *supra* note 183, at 9–10 (discussing increased regulation as a risk factor for the company); 2011 Moody's Corporation Form 10-K, *supra* note 53, at 16–17 (same).

[231] *Famous Quotes by Vince Lombardi*, VINCE LOMBARDI, http://www.vincelombardi.com/quotes.html (last visited Nov. 21, 2013).

of regulation should be to change the incentives by altering the relationship among rating agencies. By mandating a self-funded bonus pool, each firm is forced to post a bond on good performance and a winner-take-all tournament is created. At least with respect to the bonus, rating agencies will not be oligopolists but will instead be competitors. A change in the relationship will change behavior.

This proposal is economically and administratively feasible. Unlike other proposed reforms, it does not require a fundamental transformation of the industrial organization and regulatory framework. It maintains the duopoly plus industry organization and the issuer-pay model. This contrarian perspective is the proposal's principal benefit. Under my proposal, it is fair to say that as much as 95% of the status quo would be preserved. The reform is economically feasible and administrable in a fair, coherent way. As with all reform of Wall Street, the greatest barrier to reform is the politics of regulation and the alignment of interests. In this regard, there would be a sufficient constituency of bond investors who would be interested in seeing an improvement in the quality of credit ratings as evinced by the passages of the Credit Rating Agency Reform Act of 2006 and the provisions relating to rating agencies in the Dodd–Frank Act. Although these statutes did not fundamentally change the credit rating industry, they laid the foundation necessary to implement the reform proposal advanced in this Article.