

# Games Commissions Play: 2x2 Games of International Securities Regulation

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## I. INTRODUCTION

In recent years, the internationalization of securities markets has accelerated in pace and broadened in scope, due in part to advances in telecommunications and computer technology. A growing number of stocks are listed on several national markets, and a larger set of securities listed on a single market are nonetheless accessible to foreign traders.<sup>1</sup> Other aspects of securities trading have acquired international dimensions too: securities firms now operate in foreign countries as traders and investment advisers, and computerized stock exchanges in different nations are interconnected with data links. An example will convey the complexity of this trend: measured by foreign assets, Royal Dutch/Shell is the world's largest nonfinancial multinational corporation (has the largest percentage of foreign assets among nonfinancial multinational corporations).<sup>2</sup> It grew out of a 1907 alliance between Royal Dutch and Shell, by which the two companies merged their interests while remaining distinct entities incorporated in the Netherlands and the United Kingdom.<sup>3</sup> Royal Dutch and Shell are listed on nine stock exchanges in Europe and in the United States, and can be traded locally in each market. The integrated firm is thus subject to two different regimes of corporate law (Dutch and English) and to nine potentially different regimes of securities regulation. Consequently, investors could theoretically have up to eighteen different ways to invest in the same enterprise.

Firms like Royal Dutch/Shell pose formidable difficulties to domestic securities regulation systems. Intuitively, one could expect cooperation among all the relevant regulation authorities to emerge. But in an increasingly globalized capital market where stock exchanges vie for foreign listings and trading volume, regulators may sometimes find it hard to cooperate. On the one hand, cooperation may enhance the effectiveness of their regulatory regime; on the other hand, certain forms of regulatory cooperation could adversely affect a market that tries to acquire a

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1. For recent statistics on foreign listed stocks, see Amir N. Licht, *Regulatory Arbitrage for Real: International Securities Regulation in a World of Interacting Securities Markets*, 38 VA. J. INT'L L. 563, 566 (1998).

2. See UNITED NATIONS, WORLD INVESTMENT REPORT 1996: INVESTMENT, TRADE AND INTERNATIONAL POLICY ARRANGEMENTS tbl.3 (1996).

3. See Royal Dutch Petroleum Company, 20-F filing for 1994, at 1-4, available in LEXIS, Fedsec Library, 20-F File.

competitive edge by distinguishing itself from others. This Article looks behind this intuition and systematically assesses the prospects for such cooperation.

The internationalization of securities markets bears directly on American firms and individuals. Foreign markets may offer higher prices for firms' stocks, thus lowering their cost of capital. For these firms, securities regulation that makes it more difficult to access these markets could be a burden. For investors, foreign markets may open new opportunities to diversify their portfolios. At the same time, securities regulation is usually looked upon as a source of investor protection. It is thus not surprising that a growing number of commentators are voicing concerns about the possible adverse effects of the trend towards internationalization, and are calling for more cooperation among nations in securities regulation.<sup>4</sup>

National securities regulators have also recognized the need for greater cooperation, and a variety of efforts to achieve international cooperation in securities regulation are currently under way. The boldest of these efforts is the ongoing process of integration within the European Union (EU). This effort has already achieved impressive results in harmonizing, *inter alia*, disclosure rules and certain transaction rules.<sup>5</sup> A somewhat similar initiative was undertaken in the United States and three Canadian provinces with the establishment of the Multi-Jurisdictional Disclosure System (MJDS). Under MJDS, disclosure statements of corporations of each jurisdiction are recognized in the others.<sup>6</sup> The most ambitious effort for international cooperation is embodied in the International Organization of Securities Commissions (IOSCO), which provides the major international forum for mutual consultation and collaboration among national regulators about regulatory issues.<sup>7</sup>

Enforcement of regulatory measures has proven particularly difficult with the internationalization of securities markets. Harmonized laws that are not enforced with the same vigor in different countries are less transparent to market participants than unharmonized, manifestly different laws and thus may even be less effective than the unharmonized regime. Being fully aware of this point, the United States Securities and Exchange Commission (SEC) has accompanied its efforts to persuade foreign commissions to harmonize their laws with those of the United States with an ongoing effort to tighten the international enforcement of such laws. Thus, the SEC has been striving—with considerable success so far—to form administrative

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4. See *infra* Section II.B.

5. See *infra* text accompanying note 97.

6. See *infra* text accompanying note 125.

7. See *infra* text accompanying note 109.

connections with foreign regulators, mainly through the use of memoranda of understanding (MOUs). In recent years, this trend has broadened in scope with the involvement of IOSCO.

The picture portrayed so far may be misleading in the harmonious impression it gives. The cooperative efforts discussed above are the exception to the rule, while the general situation is one characterized by fierce competition and lack of cooperation. This international competition takes place on at least two levels. First, countries compete for inflows of investment capital. This holds true with regard to developed countries, and it is even truer with regard to emerging economies around the globe. While in the past capital inflows to emerging economies usually took the form of foreign direct investment in subsidiaries' equity and similar ventures, it is now commonplace to find growing stock exchanges in such countries, with an increasing number of firms listing their securities on them. Second, the business of securities trading is in itself profitable, so countries, and stock exchanges in particular, vie for order flow and the consequent commissions and financial activity. As a result, countries and stock exchanges might find it in their interest *not* to cooperate with their counterparts if they believe that noncooperation—or worse yet, cheating on or withdrawing from an existing agreement—is preferable. Should a country discover that its securities regulation laws are relatively more burdensome to foreign issuers, or even to its domestic issuers (thereby driving them to raise capital abroad), it will be tempted to lower its standards in order to accommodate the demands of potential issuers. That such a reaction can initiate a regulatory competition in the form of a “race to the bottom” is a well-known argument.<sup>8</sup>

Securities regulators thus face two problems in the international context. The first is the fundamental incentive not to cooperate with their colleagues to the extent that such cooperation might undermine their country's competitive position in the international markets. The second problem, seemingly inseparable from the first, is that adhering to the competitive dynamics may, in fact, operate to the detriment of their country's interests. The perceptive reader who recognizes the familiar

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8. See Joseph A. Grundfest, *Internationalization of the World's Securities Markets: Causes and Regulatory Consequences*, 1990 J. FIN. SERV. RES. 349; Joel P. Trachtman, *International Regulatory Competition, Externalization, and Jurisdiction*, 34 HARV. INT'L L.J. 47 (1993); cf. David Charny, *Competition Among Jurisdictions in Formulating Corporate Law Rules: An American Perspective on the "Race to the Bottom" in the European Communities*, 32 HARV. INT'L L.J. 423 (1991) (discussing rules of incorporation in EC member states). The phrase “a race to the bottom,” in the sense of a legislative trend toward the lowest common denominator, has been coined in the context of state competition for corporate charters in the United States. For representative samples of the growing literature on this subject, see FRANK H. EASTERBROOK & DANIEL R. FISCHER, *THE ECONOMIC STRUCTURE OF CORPORATE LAW* 212–27 (1991); ROBERTA ROMANO, *THE GENIUS OF AMERICAN CORPORATE LAW* 14–24 (1993); Lucian A. Bebchuk, *Federalism and the Corporation: The Desirable Limits on State Competition in Corporate Law*, 105 HARV. L. REV. 1435 (1992); and William L. Cary, *Federalism and Corporate Law: Reflections Upon Delaware*, 83 YALE L.J. 663 (1974).

pattern of the Prisoners' Dilemma<sup>9</sup> is not entirely mistaken. However, while the Prisoners' Dilemma proves to be a powerful heuristic model of numerous real-life situations, it is by no means the only one.

In this Article I suggest a new, broader perspective for looking at international securities regulation. I argue that in analyzing international securities regulation, the Prisoners' Dilemma is a useful paradigm in only a few of the problems that arise in practice. In many others, other 2x2 game models better depict the conflictual situation that countries face and help to assess the prospects of international cooperation in these situations. This Article thus takes a critical approach towards some of the current analyses and argues for a more fine-grained analysis. Securities regulation is not monolithic, and different issues warrant different treatments when international cooperation is considered. Unlike most of the existing scholarship, this Article does not concentrate on unilateral regulatory measures. Rather, the emphasis here is on regulatory cooperation—on the problems securities regulators face in reaching sustainable agreement and on the international regimes that may facilitate cooperation. In doing so, this Article does not reject the usefulness of unilateral approaches intended to devise better rules for conflict of laws; such rules may, indeed, lower unnecessary friction between national regulators.<sup>10</sup> However, to the extent that unilateral approaches (particularly those that call for unabated regulatory competition)<sup>11</sup> are championed as a sole solution, this Article shows how they can be misguided.<sup>12</sup>

This Article offers a unique integration of insights coming from three different sources: theories of corporate governance and securities regulation, standard game theory modeling, and international relations and regime theory analysis. It applies, in a novel way, some well-known game theory models to the field of international securities regulation. Game models of varying complexity are commonplace in analyses of international economic problems, yet international securities regulation has so far been dealt with

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9. In a Prisoners' Dilemma situation the players face a dilemma: whether to cooperate or defect. If both cooperate, both receive a medium size payoff (say, 3). If both defect, both receive a lower payoff than in mutual cooperation (say, 2). If only one defects while the rival cooperates, the defecting player receives the highest payoff (say, 4) and her rival, the unilaterally-cooperating "sucker," receives the lowest payoff (say, 1). Given such a payoff structure, each player has an incentive to defect irrespective of what she expects the other to do. *See generally* sources cited *infra* note 46 (providing insights into the theory and application of the Prisoners' Dilemma).

10. *See infra* text accompanying notes 21–23.

11. *See infra* note 23 and accompanying text.

12. This Article is not a direct response to such views. It makes clear, however, that cooperation may be needed in certain contexts of securities regulation in order to ensure that competition does not lead to inefficient or otherwise unwanted results, and it further discusses the institutional framework for such cooperation.

either under traditional conventions of international law or in a law and economics tradition by scholars who have often turned to finance theory. There is virtually no scholarship attempting to pass the issues discussed here through the prism of game theory—particularly not the strand of the game theoretic literature that has developed in international relations theory. This Article does so while paying attention to the corporate governance and capital market aspects of securities regulation problems. As an important aside, the Article aims to strengthen the budding interdisciplinary approach to international relations and international legal problems; instead of offering abstract principled arguments for such an approach, this Article demonstrates its usefulness in a concrete legal and economic context.

Following this Introduction, Part II reviews the current analyses of international securities regulation from a positive and normative perspective. Part III lays the basis for modeling international securities regulation. First, it analyzes some proposals for international securities regulation. It then argues that game theoretic models that are used in international relations analysis are especially suitable in the present context and discusses their underlying methodology and assumptions. Part IV puts forward 2x2 game models of three fundamental issue areas of international securities regulation: disclosure regulation (with special attention to accounting standards), antifraud regulation, and insider trading regulation. With respect to each issue, this Article discusses possible sources of international diversity, the economic problem underlying such diversity, and then the prospects for international cooperation and some ways to facilitate it. Part V concludes with a short agenda for further research.

## II. CURRENT ANALYSES OF INTERNATIONAL SECURITIES REGULATION

This Part provides a brief background on the legal doctrines applied to questions of international securities regulation and various reform proposals. It ends with some scenarios of possible future developments in international securities regulation. Together, these two discussions emphasize the need for a better theory of regulatory interaction in this field, which the remainder of this Article seeks to provide.

### A. *The Traditional Legal Approach*

Currently, the predominant doctrinal approach to international aspects of securities regulation in the United States is clearly unilateral. The hallmark of this unilateral approach is the extraterritorial application of American laws to foreign issues, whether they involve foreign companies, foreign transactors, or any other foreign element. In fact, under certain precedents, the American character of a case at bar may be quite tenuous

and yet be sufficient for an American court to both assert jurisdiction over it and apply American laws to it.

In a nutshell, U.S. law provides a twofold exception to the general presumption against extraterritorial application of national law.<sup>13</sup> One prong is the “conduct test” which provides for extraterritoriality if prohibited conduct in connection with a securities transaction occurred in the United States, provided that the acts occurring domestically were not merely preparatory, but rather an essential part of the misconduct.<sup>14</sup> The second prong is the more controversial “effects test,” under which adverse effects on domestic securities markets from improper foreign transactions in American securities suffice as a basis for jurisdiction.<sup>15</sup>

### B. *Calls for Cooperation*

A number of trends have rendered unilateral regulation through, *inter alia*, assertion of extraterritorial jurisdiction, more difficult to implement. First, American stock markets have faced growing competition from other stock exchanges where issuers and traders enjoyed more lax requirements than the American ones. Thus, requiring foreign issuers to fully comply with American laws has caused some issuers to stay away from American markets,<sup>16</sup> and consequently to deny American investors the benefits of international diversification of their portfolios.<sup>17</sup> In addition, in order to implement such extraterritorial regulatory measures American regulators increasingly found it necessary to obtain foreign-based information or documents—something that required assistance from their foreign counterparts.<sup>18</sup>

The outcome of these trends is reflected in the growing number of commentators who call for more international cooperation in various forms and degrees. The lowest level of cooperation is, in fact, at the unilateral

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13. See RESTATEMENT (THIRD) OF THE FOREIGN RELATIONS LAW OF THE UNITED STATES § 402 (1987) [hereinafter RESTATEMENT].

14. See *Leasco Data Processing Equip. Corp. v. Maxwell*, 468 F.2d 1326, 1337 (2d Cir. 1972).

15. See *Schoenbaum v. Firstbrook*, 405 F.2d 200, 206 (2d Cir. 1968). For a detailed discussion, see JAMES D. COX ET AL., *SECURITIES REGULATION: CASES AND MATERIALS* ch. 18 (4th ed. 1991); Michael D. Mann et al., *Oversight by the U.S. Securities and Exchange Commission of U.S. Markets and Issues of Internationalization and Extraterritorial Jurisdiction*, 29 INT'L LAW. 731 (1995).

16. See *infra* note 85.

17. See SEC, *INTERNATIONALIZATION OF THE SECURITIES MARKETS, REPORT OF THE STAFF OF THE U.S. SECURITIES AND EXCHANGE COMMISSION TO THE SENATE COMMITTEE ON BANKING, HOUSING AND URBAN AFFAIRS* ch. 7 (1987) [hereinafter SEC, *INTERNATIONALIZATION*].

18. See Michael D. Mann et al., *Developments in International Securities Law Enforcement and Regulation*, 29 INT'L LAW. 729, 730 (1995).

level; it occurs when national regulators come to acknowledge the regulatory sovereignty of other countries. At this level, some have advocated—as a minimum—for more restraint in the extraterritorial application of American law.<sup>19</sup> Such an approach echoes traditional public international law, which looks at comity among nations, reasonableness of measures, accommodating expectations, and balancing tests in general in order to reconcile conflicting national interests and sovereignties. In this vein, the SEC has promulgated several administrative measures with considerable exemptions from regulatory requirements for foreign-related transactions.<sup>20</sup>

Still at the unilateral level, there is significant scholarship that attempts to explain the problems of international securities regulation and that propose optimal rules for them. Some writers<sup>21</sup> seek to design desirable choice-of-law rules for extraterritorial application of U.S. securities laws to foreign corporations and transactors. They define a decision parameter for U.S. legislators and enforcers that, in essence, looks at the national character of the company.<sup>22</sup> They further recommend that each country—and

19. See generally Roberta S. Karmel, *The Second Circuit Role in Expanding the SEC's Jurisdiction Abroad*, 65 ST. JOHN'S L. REV. 743 (1991) (arguing that greater potential for conflict between U.S. securities law and foreign securities laws requires greater concern for comity); Note, *Predictability and Comity: Toward Common Principles of Extraterritorial Jurisdiction*, 98 HARV. L. REV. 1310 (1985) (arguing that the consequence of aggressive and inconsistent extraterritorial reach by U.S. courts has strained foreign relations with U.S. trading partners).

20. Such measures include exemptions with regard to foreign public offerings to U.S. investors, U.S. trading in foreign securities, and foreign transactions in U.S. securities. See James L. Cochrane, *Are U.S. Regulatory Requirements for Foreign Firms Appropriate?*, 17 FORDHAM INT'L L.J. S58; Roberta S. Karmel, *Living with U.S. Regulations: Complying with the Rules and Avoiding Litigation*, 17 FORDHAM INT'L L.J. S152 (1994). See generally Michael D. Mann et al., *New Approaches to Securities Regulation*, 29 INT'L LAW. 839 (1995) (listing new administrative measures).

21. See Merritt B. Fox, *Insider Trading in a Globalizing Market: Who Should Regulate What?*, 55 LAW & CONTEMP. PROBS. 263 (1992) [hereinafter Fox, *Insider Trading*]; Merritt B. Fox, *Securities Disclosure in a Globalizing Market: Who Should Regulate Whom*, 95 MICH. L. REV. 2498 (1997); Donald C. Langevoort, *Fraud and Insider Trading in American Securities Regulation: Its Scope and Philosophy in a Global Marketplace*, 16 HASTINGS INT'L & COMP. L. REV. 175 (1993) [hereinafter Langevoort, *Fraud and Insider Trading*]; see also Donald C. Langevoort, *Schoenbaum Revisited: Limiting the Scope of Antifraud Protection in an Internationalized Securities Marketplace*, 55 LAW & CONTEMP. PROBS. 241 (1992) (arguing that the prevailing extraterritoriality doctrine has become useless and problematic, and that a more radical posture of restraints is required).

22. Merritt Fox seeks to maximize global economic welfare. See Fox, *Insider Trading*, *supra* note 21. To solve the problem of decentralized decision-making, he uses a notion of a company's "nationality," determined by the residency of the largest portion of its shareholders. See *id.* For a similar attitude, see Bebchuk, *supra* note 8, at 1508. However, Fox candidly acknowledges that when "genuine" multinational corporations (MNCs) are at issue, this rule will become unworkable. See Fox, *Insider Trading*, *supra* note 21, at 302; cf. Joel P. Trachtman, *Externalities and Extraterritoriality: The Law and Economics of Prescriptive Jurisdiction* 12 (May 1995) (unpublished manuscript, on file with the author, presented at a conference on the Economic Analysis of International Law at the George Mason University School of Law, Law & Economics Center) ("A transnational corporation . . . presents special problems of prescriptive jurisdiction, simply because of its artificial personality, and malleable nationality.").

Somewhat less rigorously, Langevoort uses a notion he terms "the source" as the decision parameter, which apparently refers to the country of incorporation and its laws. Langevoort, *Fraud and Insider Trading*, *supra* note 21, at 186. Langevoort would still allow the use of the effects test to regulate foreign companies in certain egregious cases, where implicit regulatory conflicts are unlikely.



specifically the United States—should apply and enforce its securities laws on its companies, defined according to the mentioned parameters, and refrain from such enforcement with respect to “foreign” ones except, perhaps, in egregious cases. It is noteworthy that by taking a unilateral approach these scholars tackle the cooperation problem by eschewing it altogether. Other writers go even further and idealize unilateral regulation by advocating international competition in securities regulation such that an issuer would be able to opt into a particular national regime irrespective of the issuer’s country of origin.<sup>23</sup>

More significant, however, are the numerous calls for multilateral agreements that would coordinate regulatory efforts made by different countries. In a celebrated policy statement, the SEC announced that it would prefer cooperative measures to unilateral ones.<sup>24</sup> Senior SEC staff members have voiced opinions in the same vein.<sup>25</sup> Maximum coordination would be achieved through full harmonization (unification) of securities laws. This would eliminate the differences that now cause tensions and friction. Various

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*See id.*

23. See Stephen J. Choi & Andrew T. Guzman, *National Laws, International Money: Securities Regulation in Global Capital Market*, 65 *FORDHAM L. REV.* 1855, 1894 (1997); Stephen J. Choi & Andrew T. Guzman, *Portable Reciprocity: Rethinking the International Reach of Securities Regulation*, 71 *S. CAL. L. REV.* (forthcoming July 1998); see also Stephen J. Choi & Andrew T. Guzman, *The Dangerous Extraterritoriality of American Securities Law*, 17 *NW. J. INT’L L. & BUS.* 207 (1996) (advocating jurisdiction rules strictly limiting the application of U.S. laws and providing means to opt-out of the domestic regulatory system). For a pointed critique, see Roberta Romano, *Empowering Investors: A Market Approach to Securities Regulation*, 107 *YALE L.J.* 2359, 2362 (1998) (advocating a market-oriented approach of competitive federalism for securities regulation in which only the sovereign chosen by the issuer would have jurisdiction over its securities).

24. Regulation of International Securities Markets—Policy Statement of the U.S. Securities and Exchange Commission, Securities Act Release No. 33,6807, [1988–89 transfer binder] Fed. Sec. L. Rep. (CCH) ¶ 84,341, at ¶ 89,576 (Nov. 14, 1988) [hereinafter SEC, Policy Statement]. For a discussion of this important document, see Paul G. Mahoney, *Securities Regulation by Enforcement: An International Perspective*, 7 *YALE J. ON REG.* 305, 310–20 (1990).

The SEC’s position reflected a diametrical shift from its previous regulatory policy which championed unilateralism and non-compromising extraterritorial application of American law. The SEC, however, found this policy increasingly difficult and politically costly to implement in the face of foreign regulators’ objections. See Mann et al., *supra* note 18.

25. See James R. Doty, *The Role of the SEC in an Internationalized Marketplace*, 60 *FORDHAM L. REV.* S77, S83 (1992) (the author was, at the time of publication, the General Counsel to the SEC); Simon M. Lorne, *Current Trends in International Securities Regulation*, 28 *CORNELL INT’L L.J.* 453, 453 (1995) (the author was, at the time, General Counsel to the SEC); Michael D. Mann et al., *The Establishment of International Mechanisms for Enforcing Provisional Orders and Final Judgments Arising from Securities Law Violations*, 55 *LAW & CONTEMP. PROBS.* 303, 330 (1992) (calling for cooperation in enforcement) (the authors were, at the time of publication, Director and staff members of the SEC’s Office of International Affairs) [hereinafter Mann et al., *International Mechanisms*]; Michael D. Mann et al., *International Agreements and Understandings for the Production of Information and Other Mutual Assistance*, 29 *INT’L LAW.* 780, 823 (1995) (the authors were, at the time of publication, Director and staff members of the SEC’s Office of International Affairs) [hereinafter Mann et al., *International Agreements*].

arguments in this spirit have been made by scholars who hold that states in general, and regulators in particular, should enhance cooperation and assist their fellow regulators. To justify greater regulatory uniformity commentators usually invoke both the "race to the bottom" as a likely outcome of international competition where managerial opportunism is involved as well as the need to save on compliance costs. Commentators differ, however, with regard to the nature and degree of harmonization they advocate.<sup>26</sup>

### C. *Future Scenarios*

In 1990, the Office of Technology Assessment of the U.S. Congress sketched three possible scenarios for international securities markets and their regulation.<sup>27</sup> The first assumes a gradual and orderly transition in which international securities trading expands through gradual evolution, without any major economic or political disruptions or global market crashes. International regulation under this scenario was predicted to develop slowly into an effective international regulatory structure, relying mainly on IOSCO as an effective permanent organ for setting the agenda for agreements and preparatory steps. More principal issues were said to take more time to be resolved. This scenario was said to be "highly likely" and "the probable one for global securities markets."<sup>28</sup>

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26. See James D. Cox, *Regulatory Competition in Securities Markets: An Approach for Reconciling Japanese and United States Disclosure Philosophies*, 16 HASTINGS INT'L & COMP. L. REV. 149, 156-59 (1993) [hereinafter Cox, *Regulatory Competition*]; James D. Cox, *Rethinking US Securities Laws in the Shadow of International Regulatory Competition*, 55 LAW & CONTEMP. PROBS. 157, 158 (1992) [hereinafter Cox, *Rethinking US Securities*]. However, in order to ensure the American market's competitiveness, Cox calls for relaxing certain disclosure requirements that now pertain only to American companies. See Cox, *Rethinking US Securities*, *supra*, at 170; see also David Charny, *Competition Among Jurisdictions in Formulating Corporate Law Rules: An American Perspective on the "Race to the Bottom" in the European Communities*, 32 HARV. INT'L L.J. 423 (1991) (advocating a minimum standards regime to curb a race to the bottom); Uri Geiger, *The Case for the Harmonization of Securities Disclosure Rules in the Global Market*, 1997 COLUM. BUS. L. REV. 241 (advocating a uniform regime); Steven R. Salbu, *Regulation of Insider Trading in a Global Marketplace: A Uniform Statutory Approach*, 66 TUL. L. REV. 837 (1992) (advocating a uniform regime); Manning Gilbert Warren III, *Global Harmonization of Securities Laws: The Achievements of the European Communities*, 31 HARV. INT'L L.J. 185 (1990) (providing an overview of the European mutual recognition regime). For a critical discussion of harmonization of securities regulation regimes, see Amir N. Licht, *International Diversity in Securities Regulation: Roadblocks on the Way to Convergence*, 20 CARDOZO L. REV. 227 (1998).

27. See OFFICE OF TECH. ASSESSMENT, *TRADING AROUND THE CLOCK: GLOBAL SECURITIES MARKETS AND INFORMATION TECHNOLOGY* 5-18 (1990).

28. *Id.* at 7-8. In more detail:

Through the collaborative actions of these several bodies [IOSCO and the Group of Thirty] a schedule of agreements emerges focusing initially on the risks associated with settlement and common conditions for capital adequacy. The issues of future markets and questions of multiple listings and multinational share offerings are slowly resolved. Common accounting standards take even longer.

*Id.*

The other two scenarios acknowledge the possibility of drastic disruption and discontinuity stemming from either a market break or other macroeconomic crises. In the second scenario, the major market disruption creates the political will to establish an institutional regulatory regime at the international level. Galvanized by necessity, nations would act rapidly and effectively to set up a new institution (as the current ones, e.g., IOSCO, prove inadequate) and enforce its decisions. The third scenario is the opposite—one of conflict and disintegration. Under it, a market break-down is followed by increasing friction and causes market growth to slow or even reverse. Efforts for international regulatory cooperation consequently wither quickly.<sup>29</sup>

What is absent in this particularly knowledgeable discussion is an account of the *reasons* that may cause any of these scenarios to transpire. Specifically, why is the first scenario highly likely and more probable to occur? Why would certain issues take more time and effort to regulate internationally? Why is IOSCO presumed to be an efficient vehicle for cooperation in the first scenario, but not in the second or third ones? Answering these questions, more rigorously than has been attempted so far, requires us first to understand the possible reasons for cooperation among nations and for the failure to achieve it. Part III turns to the general discipline that deals with conflict among nations in order to establish an analytical framework for answering these questions in the particular context of international securities regulation.

### III. MODELING INTERNATIONAL SECURITIES REGULATION

#### A. *Central Concepts of International Relations Theory*

##### 1. *Foreword*

This Part argues that well developed analyses in international relations theory and game theory are essential to understanding the problems facing national securities regulators in the increasingly global market. It briefly presents central concepts commonly used in international relations studies to address questions of conflict and cooperation in the international arena. These tools will later serve the discussion in the present context by helping to characterize the type of conflict likely to arise in different areas of securities regulation and by helping to identify possible institutional solutions.

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29. *See id.* at 8.

International relations theory seeks to explain the behavior of nation-states in the international setting, including their interrelations with their sister states and international institutions. In principle, the discipline is all-encompassing in terms of the issue areas covered—it can apply similar tools to every issue area that has some transnational aspects. Traditionally, it has focused on national security issues as they relate to the very existence of states, and thus reflect the quintessential conflict among nations. Issues of international political economy, and international trade in particular, are also important topics of international relations studies. Modern studies apply international relations theories to a panoply of topics, ranging from telecommunications<sup>30</sup> to space and aviation<sup>31</sup> and so forth.

International problems have also traditionally been in the realm of public international law, but until recently the two disciplines have been almost completely disconnected. As Robert J. Beck notes, “[i]nternational relations scholars have simply dismissed international law as either irrelevant or epiphenomenal: in general, ‘law’ has been left, rather unceremoniously, to the lawyers. International Law scholars, meanwhile, have typically returned the favor, ignoring routinely the work of political scientists on international rules and institutions.”<sup>32</sup> This grim picture is now changing. Over the last decade or so, scholars from both disciplines have begun to acknowledge the potential benefits of, and thus the need for, interdisciplinary collaboration.<sup>33</sup> In order to encourage such collaboration and to pierce the “veil of ignorance,” a good deal of introductory work has been done to familiarize lawyers with the branches and sub-branches of international relations theory.<sup>34</sup>

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30. See Peter F. Cowhey, *The International Telecommunication Regime: The Political Roots of Regimes for High Technology*, 44 INT'L ORG. 169 (1990); Stephen D. Krasner, *Global Communications and National Power: Life on the Pareto Frontier*, 43 WORLD POL. 336 (1991).

31. See Mark W. Zacher, *Multilateral Organizations and the Institution of Multilateralism: The Development of Regimes for Nonterrestrial Spaces*, in MULTILATERALISM MATTERS: THE THEORY AND PRAXIS OF AN INSTITUTIONAL FORM 399 (John G. Ruggie ed., 1993).

32. Robert J. Beck, *International Law and International Relations: The Prospects for Interdisciplinary Collaboration*, 1 J. INT'L LEGAL STUD. 119, 119–20 (1995); see also Christopher M. Rossomondo, *International Rules—Approaches from International Law and International Relations*, 39 HARV. INT'L L.J. 299, 300–01 (1997) (book review) (tracing the origins of the separation between the two disciplines).

33. For examples of such legal scholarship, see Kenneth W. Abbott, *International Law and International Relations Theory: Building Bridges—Elements of a Joint Discipline*, 86 AM. SOC'Y INT'L L. PROC. 167 (1992); Kenneth W. Abbott, *Modern International Relations Theory: A Prospectus for International Lawyers*, 14 YALE J. INT'L L. 335 (1989); Anne-Marie Slaughter Burley, *International Law and International Relations Theory: A Dual Agenda*, 87 AM. J. INT'L L. 205 (1993); and Anne-Marie Slaughter, *Interdisciplinary Approaches to International Economic Law: Liberal International Relations Theory and International Economic Law*, 10 AM. U. J. INT'L L. & POL'Y 717 (1995). Calls by prominent political scientists include Oran R. Young, *International Law and International Relations Theory: Building Bridges—Remarks*, 86 AM. SOC'Y INT'L L. PROC. 167, 172–75 (1992) and Robert O. Keohane, *International Law and International Relations Theory: Building Bridges—Compliance with International Commitments: Politics Within a Framework of the Law*, 86 AM. SOC'Y INT'L L. PROC. 167, 176–80 (1992).

34. See Beck, *supra* note 32; Slaughter, *supra* note 33.

Principled calls for interdisciplinary collaboration notwithstanding, the proof remains in the pudding, namely, in actual implementation of such interdisciplinary insights in concrete legal contexts. This Article does so with regard to securities regulation, about which very little in this vein has been written so far.<sup>35</sup> Conflicting policies on securities regulation and competition among states for equity investment and securities businesses are, in essence, international relations. Presenting the topics from this vantage point should thus facilitate and enrich their analysis. Furthermore, this work adds another span to the interdisciplinary bridge by drawing upon law and economics analyses of securities regulation and corporate governance.<sup>36</sup>

In reliance on the extant literature, this Part provides only a cursory overview, in broad strokes, of the central schools of international relations theory. The following sections describe in more detail, however, how international relations theory employs game theory to enrich the analysis of international problems.<sup>37</sup>

## 2. From Anarchy to Game Theory

The fundamental assumption—indeed, observation—of much of international relations theory is that “[n]ations dwell in perpetual anarchy, for no central authority imposes limits on the pursuit of sovereign interests . . . . Because as states, they cannot cede ultimate control over their conduct to [a] supra-national sovereign, they cannot guarantee that they will adhere to their promises.”<sup>38</sup>

While this statement is agreed upon by most scholars, those called Realists use anarchy as their primary metaphor for the international system. Stressing the absence of a central authority capable of creating and imposing order on the interaction of nation-states, they view countries as competitors

35. For an example of what has been written on this subject, see Gunnar Schuster, *Extraterritoriality of Securities Laws: An Economic Analysis of Jurisdictional Conflicts*, 26 *LAW & POL'Y INT'L BUS.* 165 (1994) (applying game theory). Also noteworthy is TONY PORTER, *STATES, MARKETS, AND REGIMES IN GLOBAL FINANCE* (1993), which was written by a political scientist and deals primarily with regulation of the securities and banking industries.

36. For a general argument for applying economic analysis to problems of international law, see Jeffrey L. Dunoff & Joel P. Trachtman, *Economic Analysis of International Law*, 24 *YALE J. INT'L L.* 1 (1999).

37. For works that turn to game theory in the context of international law, see William B.T. Mock, *Game Theory, Signalling, and International Legal Relations*, 26 *GEO. WASH. J. INT'L L. & ECON.* 34 (1992); and John K. Setear, *An Iterative Perspective on Treaties: A Synthesis of International Relations Theory and International Law*, 37 *HARV. INT'L L.J.* 139 (1996).

38. Kenneth A. Oye, *Explaining Cooperation Under Anarchy: Hypotheses and Strategies*, in *COOPERATION UNDER ANARCHY* 1, 13–14 (Kenneth A. Oye ed., 1986). Note that consensus over the above statement is a starting point for the discussion. By definition, states cannot *completely* cede their sovereignty or they cease to be states. As the following paragraphs indicate, scholars differ over the likely outcomes of this initial situation. See *infra* text accompanying note 43.

in a state of nature, and argue that the only order is that which emerges from competition under anarchy. They treat states as rational actors, as if they were individuals (the predominant label is "unitary actors") who calculate costs and benefits and try to maximize returns. Cooperation is unusual, fleeting, and temporary. International institutions do not exist or are irrelevant.<sup>39</sup>

A paradigm related to yet distinguishable from Realism is Institutionalism. Institutionalists recognize "the fact that world politics at any given time is to some extent institutionalized,' both through '[f]ormal international organizations and codified rules and norms' and through less formalized patterns of behavior 'recognized by participants as reflecting established rules, norms, and conventions.'"<sup>40</sup> International institutions are closely related to the concept of international regimes that are canonically defined as "sets of implicit or explicit principles, norms, rules, and decision-making procedures around which actors' expectations converge in a given area of international relations."<sup>41</sup>

Liberalism is the main rival school of Realism. Rooted in nineteenth-century laissez-faire economics, Liberalism argues that harmony and order emerge from mutually rewarding exchanges between fully informed actors who recognize the costs of conflict. Liberals point to peace as the norm and see conflict as a periodic aberration that breaks the tranquillity in which exchange makes it possible for states to prosper.<sup>42</sup> The differences between the two schools notwithstanding, Realism and Liberalism share core assumptions. First, there is no centrally mandated order in the international arena, and no hierarchical government exists to impose authoritative decisions on nation-states. Second, both schools conceive of states as the relevant actors in world politics. Third, both schools presume self-interested, purposive, and calculated behavior of rational state actors.<sup>43</sup>

Stripped from political science terms such as "state" and "government," these core assumptions are also the basic assumptions in game theoretical modeling, and the move from these three assumptions to the use of game theory models as paradigms of international problems is straightforward. Hence, game theory, which is widely used to model economic behavior, quickly came to be seen as a way to model international phenomena.<sup>44</sup> In fact, it became the basis for important contributions by

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39. See ARTHUR A. STEIN, *WHY NATIONS COOPERATE* 4-7 (1990); Slaughter, *supra* note 33, at 721-24.

40. Slaughter, *supra* note 33, at 725-26 (citing ROBERT O. KEOHANE, *INTERNATIONAL INSTITUTIONS AND STATE POWER: ESSAYS IN INTERNATIONAL RELATIONS THEORY* vii (1989)).

41. Stephen D. Krasner, *Structural Causes and Regime Consequences: Regimes as Intervening Variables*, 36 INT'L ORG. 185, 186 (1982).

42. See STEIN, *supra* note 39, at 7-8; see also Slaughter, *supra* note 33, at 727-31.

43. See STEIN, *supra* note 39, at 8-10. For a different view, arguing that Realism and Liberalism do not share core assumptions, see generally Joseph M. Grieco, *Anarchy and the Limits of Cooperation: A Realist Critique of the Newest Liberal Institutionalism*, 42 INT'L ORG. 485 (1988).

44. See STEIN, *supra* note 39, at 11.

economists to the study of international politics, especially in the area of military strategy.<sup>45</sup> Duncan Snidal, a keen user of game theory models, has even advocated for its use as *the* general theory of international relations. According to Snidal:

While the simplicity of game models leads to a clarity that illuminates social phenomena, the deductive apparatus of game theory allows us to infer new understandings about international politics. The best-known example is Prisoners' Dilemma. Analysis in terms of this 2x2 game provides insights on issues such as GATT or SALT, which could never be achieved by, say, archival research alone.<sup>46</sup>

As Stein says, “[c]ertain games, especially [P]risoners’ [D]ilemma and [C]hicken, have been widely used as generic metaphors for international phenomena.”<sup>47</sup> Each in a different way, both those games represent conflict in its utmost form, as the players are caught in circumstances in which they have strong incentives not to cooperate, that is, to “defect.”<sup>48</sup> When the game is played in a national security context, and the shadow of a nuclear mushroom is cast over the scene, the conflict is all the more palpable.<sup>49</sup> Yet other issue areas can also be modeled in this way, and, despite their predominance, Prisoners’ Dilemma and Chicken are but a subset of a larger

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45. The pioneering work is THOMAS S. SCHELLING, *THE STRATEGY OF CONFLICT* (1960).

46. Duncan Snidal, *The Game Theory of International Politics*, in COOPERATION UNDER ANARCHY, *supra* note 38, at 28; see also Robert Jervis, *Realism, Game Theory, and Cooperation*, 40 WORLD POL. 317 (1988) (intersecting models of Realism and “proto-game theory” to explain international cooperation); Richard E. Quandt, *On the Use of Game Models in Theories of International Relations*, 14 WORLD POL. 69 (1961) (exploring productive uses of economic game theory models on predicting international behavior while setting definite limits on their effectiveness); Glenn H. Snyder, “Prisoner’s Dilemma” and “Chicken” Models in *International Politics*, 15 INT’L STUD. Q. 66 (1971) (clarifying differences between the two models in the context of international politics). But see James K. Sebenius, *Challenging Conventional Explanations of International Cooperation: Negotiation Analysis and the Case of Epistemic Communities*, 46 INT’L ORG. 323 (1992) (arguing against using game theory, due to its unrealistic assumptions); R. Harrison Wagner, *The Theory of Games and the Problem of International Cooperation*, 77 AM. POL. SCI. REV. 330 (1983) (commenting on inadequacy of simple games to explain international cooperation).

47. STEIN, *supra* note 39, at 11.

48. In the Prisoners’ Dilemma game both players have a dominant strategy to defect, so in the theoretic one-period game cooperation is not achievable although it is Pareto-efficient. Prisoners’ Dilemma is discussed in more detail below in the context of disclosure requirements. In Chicken two equilibria exist: in one, one player cooperates and the other defects, and vice versa. The game is conflictual in that each player has an incentive to be the defector. In a repeated game this incentive is intensified by the desire to establish a reputation of a prone defector. A colorful description and analysis of Chicken can be found in ERIC RASMUSEN, *GAMES AND INFORMATION* 72 (2d ed. 1994). The sources on the Prisoners’ Dilemma are innumerable. See, e.g., DAVID M. KREPS, *GAME THEORY AND ECONOMIC MODELING* 28–29, 37–39 (1990); PETER C. ORDESHOOK, *GAME THEORY AND POLITICAL THEORY: AN INTRODUCTION* 206 (1986); RASMUSEN, *supra*, at 16; Anatol Rapoport, *The Prisoner’s Dilemma*, in *THE NEW PALGRAVE: GAME THEORY* 199 (John Eatwell et al. eds., 1989).

49. Classic examples of Prisoners’ Dilemma and Chicken games in national security are arms races (“the security dilemma”) and the missile crisis in Cuba, respectively. See Robert Jervis, *Cooperation Under the Security Dilemma*, 30 WORLD POL. 167, 180–88 (1978).

set of games nations can play. This point will be discussed further in Part IV where specific game models of international securities regulation are considered.

### 3. *Multilateralism and the Role of Institutions*

A special role in international relations studies is attributed to multilateral forms of organization and regimes in general, and to international institutions in particular. Being aware of the difficulties that await nations who want to cooperate, especially in Prisoners' Dilemma-like situations, students of international relations find it hard to explain cooperation among a large number of states. When public goods are involved, the common wisdom is that large numbers of actors will lead to a higher likelihood that the group will be latent, unable to provide the public good. The reasons are threefold: (1) the fraction of the group benefit received by any one individual declines as the group size increases; (2) larger groups are less likely to exhibit small-group strategic interaction that could help in collective good provision; and (3) organization costs increase with an increase in group size. "[T]he larger the group, the farther it falls short of providing an optimal amount of a collective good."<sup>50</sup> There exist specific obstacles to collective action by a large number of actors. First, the feasibility of sanctioning declines as the number of actors increases, *inter alia*, because sanctioning itself is a public good. Second, recognition and control problems arise with multiple actors, as it becomes harder to exactly identify defection and cheating by other actors. Third, controversies between subsets of the group grow more likely as the group increases in number, and, consequently, there is a declining ability to identify common interests.<sup>51</sup>

Against this backdrop, international regimes and institutions acquire a central role in facilitating multilateral cooperation. Depending on the particular circumstances—namely, the game that is being played—international regimes and institutions can serve in a number of ways to help the actors emerge from the suboptimal equilibrium that would have otherwise been dictated by their situation.<sup>52</sup> There exist a large variety of

50. MANCUR OLSON, *THE LOGIC OF COLLECTIVE ACTION* 35 (1965) (emphasis omitted).

51. See Oye, *supra* note 38, at 19. But see Miles Kahler, *Multilateralism with Small and Large Numbers*, 46 INT'L ORG. 681, 702–07 (1992) (describing institutional devices to facilitate successful multilateral cooperation with large numbers); Robert Pahre, *Multilateral Cooperation in an Iterated Prisoner's Dilemma*, 38 J. CONFLICT RESOL. 326, 428 (1994) (arguing that multilateralism may make cooperation *easier* than bilateralism in an iterated Prisoners' Dilemma); see also James D. Morrow, *Modeling the Forms of International Cooperation: Distribution Versus Information*, 48 INT'L ORG. 387, 418 (1994) (examining the effects of distribution and informational problems on reaching cooperation, in addition to the problems of monitoring and sanctioning); Scott Barrett, *A Theory of International Cooperation* 3 (last modified June 1998) <[http://papers.ssrn.com/paper.taf?abstract\\_id=123441](http://papers.ssrn.com/paper.taf?abstract_id=123441)> (arguing that the number of countries that can sustain full cooperation depends on the nature of the cooperation problem).

52. For an overview that the text draws upon, arguing that sovereign nations will have incentive to make joint decisions when confronting dilemmas of common interests or common



possible 2x2 games, and theoretically one could tailor a role for international institutions in many of them.<sup>53</sup> Generally, the stronger the incentives players have to seek an independent path and eschew cooperation, the more powers will have to be conferred upon the institution. Sometimes a simple agreement is achievable and enforceable; in other cases, a strong centralized organization with considerable policing powers must be established. The role of international institutions will be discussed in further detail and concreteness when we come to the specific topics of securities regulation and the games by which they can be modeled. Before doing that, however, the following Section puts forward and discusses the initial assumptions common to these models.

## B. *Methodology and Assumptions*

The rest of this Part elaborates on the standard assumptions that are common in game theoretic analysis of the kind used in this Article. This Article concentrates on games that can be represented by a 2x2 matrix—what is called the “normal” or “strategic” game form. A 2x2 game involves two players that have only two ways of action (“strategies”) chosen simultaneously, that interact only once (a “one shot game”), and that cannot communicate or commit beforehand to a certain way of action. Because such an analysis is virtually unknown in the legal literature on securities regulation (and in order to highlight the effects of choosing these assumptions and to defend them), these assumptions are discussed at some length rather than implied by the game form.

It should be stated at the outset that these assumptions are restrictive and dictate highly stylized models. This is done for at least two reasons. First, international relations in reality is so complicated that *any* model, no matter how sophisticated, would be stylized. This is not to say that more

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aversions, see Arthur A. Stein, *Coordination and Collaboration: Regimes in an Anarchic World*, in INTERNATIONAL REGIMES 115 (Stephen D. Krasner ed., 1983). See also Lisa Martin, *Interests, Power, and Multilateralism*, 46 INT'L ORG. 765 (1992); Duncan Snidal, *Coordination Versus Prisoners' Dilemma: Implications for International Cooperation and Regimes*, 79 AM. POL. SCI. REV. 923, 941 (1985). Basic discussions of international regimes and institutions can also be found in INTERNATIONAL REGIMES, *supra*; Robert Axelrod & Robert O. Keohane, *Achieving Cooperation Under Anarchy: Strategies and Institutions*, in COOPERATION UNDER ANARCHY, *supra* note 38, at 226; Robert O. Keohane, *Multilateralism: An Agenda for Research*, 45 INT'L J. 731 (1990); and John G. Ruggie, *Multilateralism: The Anatomy of an Institution*, 46 INT'L ORG. 561 (1992). See also MULTILATERALISM MATTERS: THE THEORY AND PRAXIS OF AN INSTITUTIONAL FORM, *supra* note 31; Kahler, *supra* note 51. For an international law perspective, see David Kennedy, *The Move to Institutions*, 8 CARDOZO L. REV. 841 (1987).

53. I use the terms “institution” and “organization” interchangeably, although in principle each term bears a different meaning in international relations theory: conceptually, “organization,” referring typically to a physically existing body, is subsumed in “institution.”

sophisticated models are useless. Indeed, Part IV of this Article explores the potential benefits of relaxing some of the assumptions made here. The degree of complexity and finesse becomes one of taste as long as the simpler models retain a significant value added and their limits are acknowledged. The use of 2x2 game models as paradigms of international problems is thus common and useful. Second, the main thrust of this Article is to argue that different types of conflicts are at the base of different issue areas in international securities regulation. Two-by-two game models are perhaps the purest representations of conflictual situations; this makes them a natural choice here. Notwithstanding their relative simplicity,<sup>54</sup> there is a considerable variety of such games.<sup>55</sup> It is this relative simplicity, however, that enables one to capture the conflictual setting with clarity, while preserving explanatory power. Two-by-two games are therefore highly effective in making the point I want to emphasize—namely, that the *starting* point in various regulatory issues is different and may thus warrant different international regimes. These models can later serve as a basis for extensions and further sophistication,<sup>56</sup> but complicating them with more subtle assumptions here could only distract attention from this Article's central point.

### 1. *The Players*

The common assumption in many models of international relations is that the players are sovereign states that are rational and self-interested, and that act strategically.<sup>57</sup> In the securities regulation context, this assumption calls for some elaboration and qualification. First, regulatory power is usually vested in administrative agencies that may be seen as agents for the state. Whether deliberately or not, many countries now follow the U.S. model of an independent commission entrusted with oversight of the securities markets. In other countries, this task is undertaken by the Ministry of Finance. The title of this Article reflects this very phenomenon: commissions, rather than states, play the game. This is a facet of a general trend in liberal democracies in which the "state" is disaggregated into its

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54. Jervis calls it "proto-game theory." Jervis, *supra* note 46, at 317 (citing Barry O'Neil, *Game Theory and the Study of Deterrence of War*, in PERSPECTIVES ON DETERRENCE 134, 135 (Paul C. Stern et al. eds., 1989)).

55. The exact number of unique 2x2 games is 78. Anatol Rapoport & Melvin J. Guyer, *A Taxonomy of 2x2 Games*, 11 GEN. SYS. 203, 204 (1966). Yet, Snyder and Diesing studied the structure of crisis dynamics and found that nine games can represent all the historical events they examined. See STEIN, *supra* note 39, at 76.

56. See Martin, *supra* note 52, at 768; Oye, *supra* note 38, at 18; Snidal, *supra* note 46, at 37; cf. LISA MARTIN, COERCIVE COOPERATION: EXPLAINING MULTILATERAL ECONOMICS SANCTIONS 16 (1992) (utilizing a single-period, two-state model because more realistic models would give rise to a plethora of equilibria and because the single-period, two-state model would prove useful in developing testable hypotheses).

57. See Snidal, *supra* note 46, at 27, 37.

component political institutions that become responsible for international legal relations. Some refer to this as “disaggregated sovereignty.”<sup>58</sup>

Second, the interests of such agencies are not necessarily aligned with those of the state itself or its citizenry.<sup>59</sup> For example, scholars argue that the SEC had initially acted to make insider trading illegal and subsequently pursued violators not in order to serve a particular public end, but rather to enhance its public stature and power or to serve the interests of intermediaries.<sup>60</sup> In the same spirit of public choice, some maintain that governments may have interests of their own that are potentially inimical to those of the general population. Consequently, a degree of intergovernmental competition, rather than cooperation, may better serve the interest of social welfare.<sup>61</sup>

Third, even when regulatory authority is held by independent commissions, the players cannot be regarded as unitary actors. In democratic regimes of checks and balances, control over policy-making is divided among several branches. In such cases, domestic controversies rather than a single national policymaker determine much of the state’s behavior. A telling example is controversies within the American legislature itself—specifically, between the House Committee on Government Operations and the Senate Securities Subcommittee of the Senate Committee on Banking, Housing, and Urban Affairs—about whether the SEC should increase its unilateral extraterritorial enforcement efforts or rather seek further multinational cooperation.<sup>62</sup> In such cases, however, the securities commission may be regarded as a “focal actor,” that is, an entity that

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58. For an excellent exposition of this argument see Anne-Marie Slaughter, *International Law in a World of Liberal States*, 6 EUR. J. INT’L L. 503, 504 (1995). See also Martin, *supra* note 52, at 782 (arguing that democracies are especially subject to the problem of divided control over policymaking); Anne-Marie Slaughter, *The Real New World Order*, 76 FOREIGN AFF. 183, 184 (1997); Joel P. Trachtman, *L’Etat, C’est Nous: Sovereignty, Economic Integration and Subsidiarity*, 33 HARV. INT’L L.J. 459, 469–71 (1992) (discussing how the principle of subsidiarity determines at what level of sub-state actors power should reside).

59. See Snidal, *supra* note 46, at 40.

60. See, e.g., JONATHAN R. MACEY, *INSIDER TRADING: ECONOMICS, POLITICS AND POLICY* 17 (1991); David D. Haddock & Jonathan R. Macey, *Regulation on Demand: A Private Interest Model with an Application to Insider Trading Regulation*, 30 J.L. & ECON. 311, 314–17 (1987). For an application in an international context, see Enrico Colombatto & Jonathan R. Macey, *A Public Choice Model of International Economic Cooperation and the Decline of the Nation State*, 18 CARDOZO L. REV. 925, 929 (1996).

61. See Ralph C. Bryant & Edith Hodgkinson, *Problems of International Cooperation, in CAN NATIONS AGREE? ISSUES IN INTERNATIONAL ECONOMIC COOPERATION* 1, 7 (Richard N. Cooper et al. eds., 1989); see also Kenneth Rogoff, *Can International Monetary Policy Be Counterproductive?*, 18 J. INT’L ECON. 199, 199 (1985) (presenting a model in which coordination among governments adversely influences economic welfare).

62. See Peter E. Millspaugh & Bradley D. Belt, *Policing Foreign Trader Abuses in U.S. Markets: Enforcement Strategy Perspectives*, 19 SEC. REG. L.J. 366, 368 (1992).

operates as a clearing house for the interests of domestic actors ("influencers") who can reward the focal actor for making a decision that favors them. Hence the collectivity, focal actor plus influencers, behaves like a unitary rational actor that maximizes a collective utility function.<sup>63</sup>

Fourth, matters are further complicated by the fact that oftentimes stock exchanges are self-regulated organizations. As such, they enjoy partially independent rule-making authority that may overlap with that of the supervising commission, and in general hold considerable power. Insofar as they do not violate national statutes and their commission's rules, they may impose different rules for listing and trading within one country. Problems may arise when stock exchanges exercise their authority for their own interests or to benefit influential interest groups, such as management. These interests are not necessarily equivalent to maximizing national welfare, as we have assumed with regard to states' interests. Thus, competition (the race) among exchanges may prove to be more fierce than that among countries.<sup>64</sup>

Notwithstanding these problems, I will assume that commissions play the game as faithful agents for the state. In other words, I will assume that the actual operation of the securities laws is undertaken by a professional administrative agency acting *bona fide* in the interest of its national constituencies. To be sure, the issues just mentioned might impede attempts to derive a state's payoff structure from reliable sources. From the other player-regulator's viewpoint, these concerns could create uncertainties with regard to the game actually being played, as it would not be able to ascertain "who is in charge" and "what are they up to." Nevertheless, the complexity of liberal democratic regimes does not have to bear negatively on their

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63. See Andrew Kydd & Duncan Snidal, *Progress in Game-Theoretical Analysis of International Regimes*, in REGIME THEORY AND INTERNATIONAL RELATIONS 112, 128-30 (Volker Rittberger ed., 1993). The issue of domestic controversies is related to the notion of two-level games. In these models, a negotiator on behalf of the state simultaneously tries to appease her foreign counterparts as well as her domestic interest groups. In such a framework, domestic problems could be used strategically as a leverage. See Robert D. Putnam, *Diplomacy and Domestic Policy: The Logic of Two-Level Games*, 42 INT'L ORG. 427, 434 (1988); see also Robert D. Putnam & C. Randall Henning, *The Bonn Summit of 1978: A Case Study in Coordination*, in CAN NATIONS AGREE? ISSUES IN INTERNATIONAL ECONOMIC COOPERATION, *supra* note 61, at 12, 16 (showing that reaching the Bonn Accord among the G-7 at the 1978 summit in Bonn was catalyzed by influential minority factions within each government that exploited external pressures). See generally Robert Pahre & Paul Papayoanou, *Using Game Theory to Link Domestic and International Politics*, 41 J. CONFLICT RESOL. 3 (1997).

64. See Marcel Kahan, *Some Problems with Stock Exchange-Based Securities Regulation*, 83 VA. L. REV. 1509, 1514-18 (1997) (arguing that stock exchanges are not the type of regulatory bodies that will most vigorously compete and have the greatest expertise with respect to securities regulation); see also Daniel R. Fischel, *Organized Exchanges and the Regulation of Dual Class Common Stock*, 54 U. CHI. L. REV. 119, 127-32 (1987) (discussing the potential for a "race to the bottom" among stock exchanges); Jeffrey N. Gordon, *Ties That Bond: Dual Class Common Stock and the Problem of Shareholder Choice*, 76 CAL. L. REV. 1, 69 (1988) (discussing competition among exchanges in the United States); cf. Paul G. Mahoney, *The Exchange as Regulator*, 83 VA. L. REV. 1453, 1477-91 (1997) (arguing that regulatory competition by exchanges is likely to result in better rules than governmental regulation).

ability to make credible commitments; indeed, it may even enhance it.<sup>65</sup> Thus, we can justify treating the state as a unitary actor.

## 2. *Maximands*

I will assume, as is commonly done, that states seek to maximize national social welfare (their maximand) thus excluding any altruistic motive to maximize aggregate international welfare per se. In the context of international securities markets, states may seek various goals: (1) to increase foreign investments in domestic firms' equity; (2) to increase local trading volume as a source for commissions and derivative businesses; (3) to increase liquidity and depth in order to stabilize the national economy and to draw further investments; and/or (4) to enable its residents to take advantage of international diversification of their portfolios.

In addition to absolute welfare gains, states often see relative gains, or rank, as a maximand. The international securities market was not saved from this fate. Since the late 1980s, American policy makers, the business community, and scholars have become more concerned with the global competitiveness of American securities markets. The SEC in particular, when it announced its pro-cooperation policy, was careful to emphasize that the United States would strive to preserve its leadership position.<sup>66</sup> Similar considerations have constantly hampered the efforts of EU Member States to agree on directives pertaining to the securities market.<sup>67</sup>

## 3. *Two-State Games*

Inherent to the 2x2 game model is the assumption that the number of players is only two. Obviously, this is an unrealistic picture of the world, in which the actual number is almost a hundred times greater. Even the number of economically significant countries—say, the OECD members and some Far Eastern countries—is much larger. In the realm of competition for legal regimes, moreover, it may be the smaller, “insignificant” countries that paradoxically acquire special importance, and thus warrant consideration. Delaware, in the domestic market for corporate charters, and certain banking and tax havens are famous examples of small states with considerable significance.

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65. See Kurt Taylor Gaubatz, *Democratic States and Commitment in International Relations*, 50 INT'L ORG. 109, 110, 120-23 (1996).

66. See SEC, Policy Statement, *supra* note 24, ¶ 89,576.

67. See Benn Steil, *Equity Trading IV: The ISD and the Regulation of European Market Structure*, in THE EUROPEAN EQUITY MARKETS 113, 133-34 (Benn Steil ed., 1996).

A 2x2 game might be said further to imply a bilateral monopoly and, hence, the existence of market power, rather than a competitive market with no market power. Such a claim would be true only in part. Once states internationalize their securities markets, they might in fact find themselves in bilateral relationships with other states, as, for example, after a dual listing or a linkage between two national exchanges.

#### 4. *Ordinal Payoff Structure*

The game models used here are further stylized by employing ordinal preference orders to denote payoff structures.<sup>68</sup> Admittedly, cardinal payoff structures would convey more information about states' preferences by expressing the intensity of interest they have in each outcome. Alternatively, they could be interpreted as reflecting differences in the players' size. A large state with relatively large absolute utility payoffs finding itself in an unsatisfactory equilibrium outcome could thus use threats or side payments to change its rival's payoff structure, which is smaller in absolute terms, and with it change the equilibrium outcome. Ordinal payoff structures are insensitive to such aspects.

Notwithstanding these drawbacks, ordinal payoffs are superior in the present context. Ordinal utility functions symbolize states' revealed preferences. They represent actual behavior—a reflection of choice. Cardinal utility functions, on the other hand, are notoriously problematic as they are imposed on actual behavior through the modeler's subjective judgment. In most cases cardinal payoff structures would necessitate arbitrary assumptions which may render the entire analysis more questionable. Particularly in the regulatory realm, policy-making is often done according to prior beliefs but without clear "prices" or other numerical values. Thus, determining cardinal payoff structures is a much more dubious task when states are involved as opposed to profit-maximizing firms or even individuals.

#### 5. *Static Analysis*

Another implication of the 2x2 matrix model is the static nature of the analysis. It is a single-period model, in which both states decide simultaneously on the nature of their regulatory regime with respect to a certain issue area. This assumption implies that neither state can expect to exploit the other state's position after it has made its move, nor can it expect to be able to retaliate if the other state exploits the former's position after her move is made.

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68. An ordinal payoff structure states a player's order of preference with regard to all possible outcomes. If a player prefers outcome A over outcome B then the outcome payoffs will be denoted 2 and 1, respectively. A cardinal payoff structure states a player's utilities from all possible outcomes. Utility could be denoted in monetary or other units, and players are assumed to prefer high utility outcomes over low utility ones.

Abstracting from iterated games is particularly significant in light of the now common wisdom that, under certain conditions, such games may give rise to cooperation. Allowing two players to interact under a “shadow of the future” created by the repeated games may yield more cooperational equilibria than the one-period model.<sup>69</sup> In the case of Prisoners’ Dilemma, relaxing the one-period assumption may cause the model to point at an opposite outcome where reciprocity and, consequently, cooperation may emerge.<sup>70</sup>

As already noted, understanding the basic one-period situation is nonetheless important because it clarifies the underlying conflict that requires reconciliation. Also, in certain cases, it is the multiple-period game model that entails unrealistic assumptions.<sup>71</sup> In the particular context of this Article, a multiple-period model could be as unrealistic as the single-period one. The securities regulatory process is generally quite slow, and with regard to international aspects it may be even more so. In addition, once private players have adjusted to a new regulatory policy it would be very difficult to unwind it. Finally, part and parcel of repeated game models is the notion of possible retaliation. In the regulatory context, however, it is more difficult to conceive of possible retaliation than in, say, the international trade or taxation contexts.<sup>72</sup>

## 6. Dichotomous Strategies

The final assumption is that states can only make dichotomous decisions, that is, that only two strategies are available to them. Understandably, the two strategies are set in opposition, that is, “cooperate” and “defect” (that is, totally eschew cooperation). This again is a strong assumption, since regulators usually enjoy ample discretion to take various *kinds* of action and engage in various *degrees* of intervention. For example, when deciding on disclosure requirements, which will be discussed shortly below, a regulator may decide that a certain item has to be disclosed on an

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69. See Axelrod & Keohane, *supra* note 52, at 232–33; Oye, *supra* note 38, at 13–14; Snidal, *supra* note 46.

70. See generally RASMUSEN, *supra* note 48, chs. 5–6. A classic work is ROBERT AXELROD, *THE EVOLUTION OF COOPERATION* (1984). Cf. Wagner, *supra* note 46, at 332–33 (arguing that cooperation may emerge even in a two-period game).

71. For an argument against using game theory in such contexts, see Sebenius, *supra* note 46.

72. Customs duties or denial of certain tax benefits could be imposed relatively quickly and, more importantly, in a way that would target foreign entities or transactions, often differentiating on a national basis. A well-designed and well-intended regulatory regime (namely, one that is not meant solely as a regulatory burden with equivalent effects of custom duties) would be less likely to be targeted toward foreign elements in order to inflict harm on them.

annual, quarterly, or immediate basis, and should include particular details or not. Notwithstanding the richness that gradual games may add to the discussion,<sup>73</sup> many controversies can be distilled to a “yes-or-no” question, such that a dichotomous game may still be satisfactory.

#### IV. GAMES OF INTERNATIONAL SECURITIES REGULATION

This Part constitutes the main part of the Article. In it, I offer an analytical matrix whereby three fundamental issues of securities regulation are assessed—the regulation of disclosure, fraud, and insider trading—in terms of sources of international diversity and the correlated games that, I argue, characterize the interaction between regulators in these areas. The areas covered are the main components of the “investor protection” element of any securities regulation regime and those that are tightly connected to corporate governance.<sup>74</sup> In addition to these topics, each regime usually includes a component of market regulation under which one can find the regulation of stock exchanges and market professionals. While the latter areas also have a role in investor protection, a full discussion of them would involve issues that are beyond the scope of this Article.

The analysis proceeds in the following way. For each issue area, the first step is to offer a plausible “story” characterizing states’ typical policies. Modeling is an exercise in stylized story telling, so for a model to be relevant and useful there has to be a situation in reality that it represents. The stories of interest are those about diversity in regulatory policy making. For this purpose, I trace the sources of international diversity in securities regulation policies on various issue areas, emphasizing the economic and political economy bases.

Second, for each possible national policy story I derive the corresponding payoff structure, namely, how countries might (ordinally) value each of the possible outcomes of their interaction. By reflecting the players’ interests and preferences, the payoff structure actually reflects their policies; focusing on the payoff structure that securities regulators face in the international arena will illuminate the implications of various regulatory policies.

Finally, I show how policies interact with similar or different ones in 2x2 games. The games analyzed share the common assumptions discussed above and differ only in their payoff structure. In light of the results suggested by each specific game, I discuss the prospects for international cooperation and optimal mechanisms for obtaining sustainable cooperation.

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73. See Snidal, *supra* note 52, at 927–28 (arguing that actors are often presented with a whole range of intermediate choices).

74. For a discussion of the connection between securities regulation and corporate governance, see Licht, *supra* note 26.



## A. Disclosure Regulation

### 1. Sources of International Diversity

For a conflict to arise, there must exist some non-mutuality in the players' interests. With regard to disclosure regulation, the question is: Why do certain differences in disclosure requirements exist in various countries' securities laws? Why don't we observe universal consensus on the need for more disclosure or universal agreement on the information that needs to be disclosed?

International diversity in disclosure regimes stems from the complex nature of the information that is usually required to be disclosed. Disclosure rules may diverge with regard to a host of parameters: the required issue items; specificity of information—for example, line of business reporting versus company level results; treatment of soft (future-facing) information; different treatments of initial public offerings and ongoing disclosure; and the timing of disclosure. Strictness or laxness are equally determined by the accompanying public and private enforcement mechanisms. Public enforcement is affected by the powers, budget, and staff conferred to regulatory authorities. Private enforcement is affected by the powers that potential plaintiffs enjoy when they wish to enforce their right to information. These include legal formulas for liability, the potentially liable parties, and measures for damages. Some of the relevant provisions are found in the legal sources pertaining to securities, but others are frequently determined by general rules of procedure and the laws of obligations in each country.

Further diversity stems from differing interests of market participants. First, consider issuers. On the one hand, issuers prefer to withhold information to the extent that its disclosure may adversely affect their business situation. This could happen, for example, when competitors can extract sensitive information from the reports. Instances where it was argued that disclosure requirements are actually destructive to issuers include reporting of results with a line-of-business breakdown and, more recently, reporting of exposure to market risk.<sup>75</sup> On the other hand, companies tend to

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75. On line-of-business reporting, see Edmund W. Kitch, *The Theory and Practice of Securities Disclosure*, 61 *BROOK. L. REV.* 763, 792–98 (1995). On exposure-to-risk disclosure, see Merton H. Miller & Christopher L. Culp, *The SEC's Costly Disclosure Rules*, *WALL ST. J.*, April 25, 1996, at A14. A perverse example was recently given with regard to Russian companies. Since the effective tax rate in Russia is greater than 100%, and payments are also due to organized crime elements, shareholders have a perverse incentive not to have the company accurately report its financial situation. See Bernard Black & Reinier Kraakman, *A Self-Enforcing Model of Corporate Law*, 109 *HARV. L. REV.* 1911, 1927–28 (1996).

disclose information in order to attract investors. Though these aspects are discussed further below, the point here is that different regulatory systems could readily strike different balances between these considerations.

Consider now the investors. Indexing investors and those having no control position in the companies in which they invest usually prefer more disclosure by the company. Investors may be closer to a control or insider position, for example, by crossing a holding threshold of five percent or ten percent or by initiating a tender offer. We would generally expect such investors to prefer less stringent disclosure duties, since they oftentimes have direct information sources in the company, and, as to themselves, they often prefer as minimal disclosure as possible. As the shareholder base of many companies becomes more internationalized, several legal systems may have an interest in regulating their disclosure.

The third element is the markets (stock exchanges) that have rule-making powers. In order to attract issuers to list and investors to trade, they can require disclosure beyond what is prescribed by the securities commission (requiring less disclosure will not be effective, of course).<sup>76</sup>

Even if disclosure rules could readily diverge, the question remains: Why *should* they do so? Investor protection and market integrity are invoked as the justification for a mandatory corporate disclosure system,<sup>77</sup> but this still calls for guidance as to the problems investors face and the optimal level of disclosure. As a general rule, a benevolent regulator should promulgate disclosure duties to counter information asymmetries that cannot be cured by market forces. The literature on this issue is voluminous and not free of debate,<sup>78</sup> but in general market failure is claimed to warrant a mandatory disclosure regime. One convincing argument points out that information is a public good by nature, so an efficient regime should subsidize its

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76. See *supra* note 64 and accompanying text.

77. See, e.g., Joel Seligman, *The Historical Need for a Mandatory Corporate Disclosure System*, 9 J. CORP. L. 1, 9 (1983).

78. For an overview, see ROMANO, *supra* note 8, ch. 6 (1993). For a strong position against mandatory disclosure, see George J. Benston, *The Costs and Benefits of Government-Required Disclosure: SEC and FTC Requirements*, in CORPORATIONS AT THE CROSSROADS: GOVERNANCE AND REFORM 37, 40-48 (D. DeMott ed., 1980); and George J. Benston, *Required Disclosure and the Stock Market: An Evaluation of the Securities Exchange Act of 1934*, 63 AM. ECON. REV. 132, 134-53 (1973).

Easterbrook and Fischel's basic premise is similar to Benston's, namely, that issuers in general have the right incentives to disclose the correct amount of information, because otherwise investors would fear the worst and discount the value of the issuer's stock. See EASTERBROOK & FISCHEL, *supra* note 8, ch. 11 (1991). Although appealing, the argument is not as self-evident as Easterbrook and Fischel present it. Without exceeding the scope of this Article, it should be mentioned that investors' beliefs and fears are framed by previous experience and social conventions. Even if investors might contemplate the worst as a possibility, they may not necessarily attribute a high probability to it.

Finally, the argument that disclosure is in fact subject to a "race to the top" has been recently formalized and extended to stock exchanges by Steven Huddart, John S. Hughes, and Markus Brunnermeier. See Steven Huddart et al., *Disclosure Requirements and Stock Exchange Listing Choice in an International Context*, Working Paper, Fuqua School of Business, Duke University (1998).

production.<sup>79</sup> Another market failure occurs because of positive externalities that corporate disclosure confers upon competing firms.<sup>80</sup> Finally, the agency problem inherent to the relationship between shareholders and company insiders<sup>81</sup> also warrants mandatory disclosure by the latter.<sup>82</sup> Under this reasoning, mandatory disclosure constitutes external intervention in the corporate governance system<sup>83</sup> prevailing in each country. Because corporate governance systems across the globe exhibit considerable diversity, it is only natural that mandatory disclosure regimes would also diverge.<sup>84</sup>

Empirical evidence suggests that financial disclosure levels in various countries play an important role in the decision to make an international listing.<sup>85</sup> From a regulatory perspective, these considerations are translated into terms of regulatory burden on issuers and traders. A securities regulator maximizing national welfare can strike a balance suitable for the domestic conditions, having regard to the prevailing domestic corporate governance structures. But as markets internationalize, external constraints are set by competing markets, and too high a burden will eventually lead to regulatory arbitrage and migration of businesses to other jurisdictions.<sup>86</sup> The securities industry (stock exchanges and securities houses), as well as securities

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79. See John C. Coffee, Jr., *Market Failure and the Economic Case for a Mandatory Disclosure System*, 70 VA. L. REV. 717, 723-24 (1984). See generally Joel Seligman, *The Obsolescence of Wall Street: A Contextual Approach to the Evolving Structure of Federal Securities Regulation*, 93 MICH. L. REV. 649 (1995) (reviewing the need for a mandatory disclosure system in light of recent developments in the practice and theory of securities markets).

80. See EASTERBROOK & FISCHER, *supra* note 8, ch. 11.

81. For the classic exposition of this point, see Michael C. Jensen & William H. Meckling, *Managerial Behavior, Agency Costs, and Ownership Structure*, 3 J. FIN. ECON. 305 (1976). See generally Mark J. Roe, *Comparative Corporate Governance*, Working Paper No. 125, Columbia University School of Law at 345 (1997) (forthcoming in THE NEW PALGRAVE DICTIONARY OF LAW AND ECONOMICS). Note that no assumption is required with regard to the exact structure of ownership rights in the corporation. Although agency problems are more evident in a dispersed ownership structure, more prevalent in the United States is that agency problems arise whenever there is a discrepancy between ownership and control. See Jensen & Meckling, *supra*.

82. See Paul G. Mahoney, *Mandatory Disclosure as a Solution to Agency Problems*, 62 U. CHI. L. REV. 1047, 1090-93 (1995).

83. A corporate governance system comprises the rules of company law that are in force in each country together with the actual holding structures that are common in that country.

84. For a discussion, see Licht, *supra* note 26, at 284-85.

85. See Gary Biddle & Shahrokh M. Saudagaran, *The Effects of International Disclosure Levels on Firms' Choices Among Alternative Foreign Stock Exchange Listings*, 1 J. INT'L FIN. MGMT. & ACCTG. 55, 56 (1989); Shahrokh M. Saudagaran & Gary C. Biddle, *Foreign Listing Location: A Study of MNCs and Stock Exchanges in Eight Countries*, 26 J. INT'L BUS. STUD. 319, 320 (1995). Disclosure requirements are but one of many factors influencing a company's decision to list its stock overseas. See Kent H. Baker, *Why U.S. Companies List on the London, Frankfurt, and Tokyo Stock Exchanges*, 6 J. INT'L SEC. MARKETS 219, 225 (1992).

86. See, e.g., Grundfest, *supra* note 8, at 369; Seligman, *supra* note 79, at 673-702.

regulators, are keenly aware of this fact and indeed perceive it as exerting pressure to relax strict—and, therefore, burdening—regulation.<sup>87</sup>

Note that by requiring disclosure, the regulator in effect supplies a public good—this time in the form of disclosure *rules*. Consider a dual-listed company whose shares trade in two markets with different disclosure standards. Clearly, once the company satisfied the disclosure requirement set by the more stringent market, the rules prescribed by the more lax one are also satisfied. The outcome exhibits the classic features of a public good: consumption of the rules' benefits (the disclosed information) is non-excludable and there is no rivalry in consumption. Free riding by the more lax market is thus expected, and, consequently, disclosure may end up being under-induced and information under-supplied.

Moreover, even when a company is listed on a single market, a negative externality may occur with regard to foreign shareholders. A national-welfare-maximizing regulator might under-induce disclosure as long as the benefits accruing to the economy from foreign investment and financial business exceed the potential harms of under-disclosure to its constituency.

## 2. *The Correlated Games and International Cooperation*

### a. *Prisoners' Dilemma Games*

Either as an externality or as a public good situation, the corresponding 2x2 game is the Prisoners' Dilemma. Consider first a company choosing one out of two markets for listing its stock. Recall that by inducing suboptimal disclosure level—through lax rules or weak enforcement—a state can externalize adverse effects to its rival. The payoff structure for both states is that of the Prisoners' Dilemma: each player most prefers to defect, i.e., to under-induce disclosure, when the other state cooperates, i.e., induces an optimal (higher) disclosure level (the circumstance is denoted DC).<sup>88</sup> The second-best outcome is one of mutual cooperation (CC), and the third-best is mutual defection (DD). The least preferred outcome materializes when one state cooperates while the other defects (CD). The players' preference order

87. See, e.g., James L. Cochrane, *Are U.S. Regulatory Requirements for Foreign Firms Appropriate?*, 17 FORDHAM INT'L L. J. 558, 559-67 (1994); James L. Cochrane et al., *Foreign Equities and U.S. Investors: Breaking Down the Barriers Separating Supply and Demand*, 2 STAN. J.L. BUS. & FIN. 241, 243-44 (1996) (the authors were, at the time of publication, staff members of the New York Stock Exchange).

88. Hereinafter I will use the double capital letter notation to denote the players' payoff structure. C denotes cooperation, and D denotes defection. The first letter in each pair denotes the player's own strategy, and the second the rival player's strategy. The Prisoners' Dilemma's payoff structure is thus denoted by  $DC > CC > DD > CD$ , which is equivalent to the other common notation:  $t$  (temptation to defect)  $>$   $c$  (cooperation)  $>$   $p$  (punishment for mutual defection)  $>$   $s$  (sucker's payoff, i.e., unilateral cooperation).

is thus  $DC > CC > DD > CD$ , and Figure 1 shows the strategic form of the game.

FIGURE 1. PRISONERS' DILEMMA

		Column	
		C	D*
Row	C	3, 3	1, 4
	D*	4, 1	2, 2**

Payoffs to (Row, Column)

Cell numerals refer to each player's ordinal ranked payoffs.

\* Player's dominant strategy

\*\* Equilibrium outcome

The same outcome obtains for a multiple listing situation, in which a stringent disclosure regime is a public good,<sup>89</sup> since the benefits of such a regime are non-excludable and are not subject to rivalry in consumption. The regulators' preference orders reflect a payoff structure compatible with a Prisoners' Dilemma, as shown in Figure 1: each regulator would rather free ride on her colleague's disclosure regime rather than induce it herself. This should come as little surprise. Students of international relations have identified several international problems—from national security to international trade<sup>90</sup>—as situations involving a public good, and have treated the supply of public goods as a Prisoners' Dilemma.<sup>91</sup> Disclosure duties are

89. For a discussion, see Licht, *supra* note 1, at 627.

90. Analogies from international trade to international securities regulation warrant caution. International securities regulation is different from international trade in that the former lacks the discriminatory effect between domestic and foreign interests. Securities regulation rules—particularly, disclosure rules—apply equally to domestic and foreign registrants. Suboptimal disclosure rules would inflict considerable harm to domestic investors and companies, so regulators are likely to use them less aggressively compared with custom duties and other protectionist measures, in order to attract foreign listings. Note, however, that certain foreign issuers in the United States enjoy a laxer disclosure regime. Rule 12g3-2 under the Securities and Exchange Act of 1934, 17 C.F.R. § 240.12g3-2 (1998), exempts foreign issuers from reporting duties if there are fewer than 300 shareholders of a certain class residing in the United States.

91. See, e.g., Robert Jervis, *Cooperation Under the Security Dilemma*, 30 *WORLD POL.* 167, 170-78 (1978). In the international political economy context, Kindelberger's work is a prominent example for the argument that an open world trading system is a public good. See CHARLES

thus no exception. To the extent that mandatory disclosure rules can directly be translated to degrees of regulatory burden, then the Prisoners' Dilemma may also serve as a heuristic model.

Put succinctly, the prospects for cooperation in a Prisoners' Dilemma situation are theoretically nil. Both players have a dominant strategy to defect; that is, irrespective to what its rival does, each player prefers to defect, either in order to exploit its rival's cooperation or to protect itself from being exploited.<sup>92</sup> The outcome is a Nash equilibrium in DD: namely, if both players choose to play D neither one of them would have an incentive to change its strategy. This is clearly unsatisfactory since CC is Pareto-efficient<sup>93</sup> compared with DD but cannot sustain an equilibrium.

Under the assumptions employed heretofore, this point would mark the end of the discussion. Any effort to induce cooperation requires means that are beyond the simple 2x2 game. The basic form of cooperation—a bilateral agreement between the players—is excluded by the 2x2 game model. The players cannot make credible commitments to cooperate because the game has only one period; as a result, no retaliation can take place. Multilateral agreements (also beyond the 2x2 game model) might worsen the problem due to monitoring and verification difficulties, leading to free riding.<sup>94</sup>

Real-life situations, however, may exhibit a conflict structure akin to the Prisoners' Dilemma yet allow for mechanisms that are beyond the simple model to overcome problems inherent in the structure. International institutions in particular are an important mechanism for facilitating cooperation,<sup>95</sup> and they may be tailored to fit the specific problem the parties face. Resolving a problem with a Prisoners' Dilemma payoff structure would require a strong, centralized organization, upon which the member states confer significant powers of rule prescription and dispute resolution,

P. KINDELBERGER, *THE WORLD IN DEPRESSION 1929-1939*, at 28 (1973); Charles P. Kindelberger, *Dominance and Leadership in the International Economy: Exploitation, Public Goods, and Free Rides*, 25 INT'L STUD. Q. 242, 247-48 (1981); see also MICHAEL TAYLOR, *THE POSSIBILITY OF COOPERATION* 13-14 (1987).

However, a thoughtful critique by John Coneybeare has pointed out that public goods problems and those of Prisoners' Dilemma do not necessarily overlap. In particular, free trade is not a public good problem and not even a pure Prisoners' Dilemma. See John A.C. Coneybeare, *Public Goods, Prisoners' Dilemma, and the International Political Economy*, 28 INT'L STUD. Q. 5, 8-10 (1984) (arguing that the good in Prisoners' Dilemma—freedom—is excludable and subject to rivalry, and thus is not a public good); see also TAYLOR, *supra*, at ch. 2 (arguing that in public good problems individual preferences are not necessarily those of a Prisoners' Dilemma but rather of games like Chicken and Stag Hunt (Assurance)).

92. Finding whether a dominant strategy exists is relatively easy in the presentation form used here. First, in Figure 1, put yourself in Row's shoes and assume that Column played C. In this case, Row's best response would be to play D. Now assume that Column played D. Again, Row would play D. Playing D thus turns out to be the best response to any of Column's strategies. This makes it a dominant strategy for Row. The same reasoning applies, respectively, to Column.

93. A Pareto-efficient situation obtains where there is no way to deviate from the status quo also that no individual is made worse off and at least one is made better off.

94. See *supra* Subsection III.A.3.

95. See generally Martin, *supra* note 52.

and to which they provide sufficient resources for monitoring and enforcement.<sup>96</sup>

In addition to exercising their central authority to enforce cooperation, international institutions can help member states change the Prisoners' Dilemma payoff structure altogether, through issue linkage. Suppose that state A has an interest that state B raise its disclosure requirements, while state B would like state A to change its broker-dealer regulation policy or, for the sake of the argument, its banking regulation policy. An international organization in which both states are members and to which these issues are relevant can facilitate cooperation, since linking the issues during the negotiations allows both states to see the aggregate payoff favorably.

In the securities regulation context, presenting the problem as a Prisoners' Dilemma game may help in explaining the stark differences in the achievements of the two major institutions, the European Union and IOSCO. The European Union boasts an impressive array of directives covering most aspects of securities regulation, including disclosure.<sup>97</sup> Starting in 1979, the then EC Commission promulgated a series of directives intended to simplify and establish minimum standards regulating the relationship of public companies and stockholders. The first three directives harmonized certain requirements concerning admission to stock exchange listing,<sup>98</sup> listing particulars,<sup>99</sup> and half-yearly reporting.<sup>100</sup> Pursuant to the Single European Market program, later directives were based on the principle of mutual recognition. An important 1989 directive on public offer prospectuses and a number of amendments to the early directives have implemented that

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96. See *id.* at 770-71.

97. EU regulation of financial services in general is aimed to ensure that essential minimum standards are respected in all member states, so that financial services can be provided throughout the Community on the basis of a "single license" from the home state. However, this does not prevent the host state from regulating the activity on a nondiscriminatory basis. A series of directives, promulgated by the European Council, cover issues such as listing particulars required from listed companies, ongoing reporting duties, public offerings, and insider trading. Other thorny issues covered by EU directives, such as stock exchange regulation and capital adequacy, also resemble a Prisoners' Dilemma problem. For a legal overview, see STANBROOK & HOOPER AND KPMG EUROPEAN HEADQUARTERS, *A BUSINESS GUIDE TO EUROPEAN COMMUNITY LEGISLATION* 595 (1995). For an excellent general overview and assessment, see THE EUROPEAN EQUITY MARKETS (Benn Steil ed., 1996). See also Manning Gilbert Warren III, *The European Union's Investment Services Directive*, 15 U. PA. J. INT'L BUS. L. 181, 187-90 (1994).

98. Council Directive 79/279 on Coordinating the Conditions for the Admission of Securities to Official Stock Exchange Listing, 1979 O.J. (L 66) 21.

99. Council Directive 80/390 on Coordinating the Requirements for the Drawing Up, Scrutiny and Distribution of the Listing Particulars to Be Published for the Admission of Securities to Official Stock Exchange Listing, 1980 O.J. (L 100) 1.

100. Council Directive 82/121 on Information to Be Published on a Regular Basis by Companies the Shares of Which Have Been Admitted to Official Stock Exchange Listing, 1982 O.J. (L 48) 26.

principle in the disclosure area. It may be true that by American standards some of the directives' requirements are rudimentary. This is true, for instance, in the case of the semiannual reporting requirement, since in the United States reporting is done on a quarterly basis and is far more detailed. On the other hand, no other group of states has come anywhere close to the overall achievements of the European Union in creating a quasi-uniform disclosure regime.<sup>101</sup>

IOSCO, indeed, aspires to establish a worldwide set of disclosure duties to be used as a common basis for multinational securities offerings and listings. Such standards are particularly in the interest of multinational corporations that prefer to have a uniform business language, and, to this end, IOSCO signed an agreement in July 1995 with the International Accounting Standards Committee (IASC) on a work plan to be completed by the turn of the century. According to Michael Sutton, "[i]n April 1996, IASC announced an intention to accelerate that plan with the objective of completing the core standards by March 1998."<sup>102</sup> That deadline was not met, and, as of June 1998, while most of the work plan had been completed, certain thorny issues still remained open.<sup>103</sup>

From the outset, a major obstacle to such an agreement was U.S. Generally Accepted Accounting Principles (GAAP) and the SEC's insistence that those standards not be overly compromised by the International Accounting Standards (IAS). In October 1997 the SEC reported to Congress on the outlook for successful completion of IASC and stated that it might propose changes to its current reporting requirements for foreign private registrants.<sup>104</sup> The SEC emphasized, however, that before doing so, it will closely scrutinize the core standards to ensure they meet certain criteria.<sup>105</sup> In this context, for one of the most problematic and contentious issues left on IASC's table—accounting for financial instruments (e.g., derivatives)—IASC considered adopting the American rules in order to avoid direct confrontation with the SEC and to secure its support.<sup>106</sup> Eventually, IASC members voted the proposal down, apparently because it was American.<sup>107</sup> It

101. *But see infra* text accompanying notes 125–126 (discussing MJDS).

102. Michael H. Sutton, *Financial Reporting in U.S. Capital Markets: International Dimensions*, 11 ACCT. HORIZONS 96, 98 (1997).

103. *See* Robert Bruce, *Tolstoy Would Have Been Proud of IASC*, TIMES (London), May 14, 1998, at 32; *see also* *Financial Assets and Liabilities: The Next Steps*, IASC INSIGHTS, Dec. 1997, at 11; Karen M. Kroll, *Closing the GAAP?*, INDUSTRY WK., Nov. 3, 1997, at 61.

104. *See* SEC, REPORT ON PROMOTING GLOBAL PREEMINENCE OF AMERICAN SECURITIES MARKETS 18, Oct. 1997, available in <<http://www.sec.gov/news/studies/acctgsp.htm>>.

105. *See id.* at 15. The main criteria required from IASC standards are that they (1) constitute a comprehensive basis for accounting; (2) are of high quality, result in comparability and transparency, and provide for full disclosure; and (3) can and will be rigorously interpreted and applied. *See id.*

106. *See* Robert Bruce, *A Fudge That Could Lead to an Alliance*, TIMES (London), Sept. 18, 1997, at 32.

107. *See* *Accounting Standards: America v. The World*, ECONOMIST, Jan. 17, 1998, at 58; *see also* Bruce, *supra* note 103 (reviewing developments in the IAS project); *A Fair System for*



should be borne in mind that even when IASC does hand over to IOSCO an agreed-upon set of standards for approval, the SEC has the power to veto them. In the meantime, the SEC refuses to allow foreign issuers to use international standards in making public offerings or stock exchange listings in the United States.

This brings us back to the Prisoners' Dilemma. States are usually very reluctant to compromise their sovereignty, and establishing an international organization in order to overcome the Prisoners' Dilemma problem in itself requires overcoming such a problem; countries are therefore reluctant to do this. One strategy for establishing a truly strong central institution is to do it gradually over time. Both the European Union and the World Trade Organization (WTO) are examples of this phenomenon. The European Union gained power gradually over a long period. The WTO was established almost forty years after the GATT signatories had failed to establish the International Trade Organization (ITO) and instead were limited to lowering trade barriers in a number of rounds of negotiations. More importantly, in the case of the European Union, the major (and most hard to reach) achievements with respect to financial services regulation were part of a broader program for creating a single European market. This program in itself is a subpart of a wider process transforming Europe from a group of nation-states into a union with confederate qualities, the ultimate end of which is to ensure peaceful coexistence of nation-states in Western Europe.<sup>108</sup>

Nothing of this is shared by IOSCO. While the EU harmonization project is the most ambitious in its substantive scope, IOSCO is the largest and most ambitious cooperation initiative in terms of global coverage, with a membership of some 135 securities regulators and stock exchanges worldwide.<sup>109</sup> IOSCO's members represent very diverse countries, and with the steady growth in its membership this diversity will only increase.<sup>110</sup> In terms of personnel resources, IOSCO is a very small institution.<sup>111</sup> It was

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*Financial Instruments*, FIN. TIMES (London), Jan. 8, 1998, at 10.

108. See generally WILLIAM WALLACE, REGIONAL INTEGRATION: THE WEST EUROPEAN EXPERIENCE (1994). At the international level, trade wars, too, may well have far-reaching political ramifications. Among the reasons that the United States pushed for establishing the ITO and GATT was the recognition that international economic affairs had a role in causing World War II. See, e.g., JOHN H. JACKSON ET AL., LEGAL PROBLEMS OF INTERNATIONAL ECONOMIC RELATIONS 293 (3d ed. 1995).

109. See INT'L ORG. OF SEC. COMMISSIONS, ANNUAL REPORT 1996, at 1 (1996).

110. IOSCO partially acknowledges this diversity by having special bodies and holding special programs dedicated to emerging markets. See *id.* at 18.

111. IOSCO employs two full-time professional staff members and three administrative staff members in addition to its Secretary General. See *id.* at 30. This is not even a shadow of the European Union's huge bureaucracy and is also smaller than Directorate General XV, the European Union's body in charge of securities markets.

once described as “primarily a talk shop for regulators”<sup>112</sup> and today this description is still quite accurate. In sum, IOSCO looks like a recipe for how *not* to succeed in solving a Prisoners’ Dilemma situation.<sup>113</sup>

The stark differences between the European Union and IOSCO and IOSCO’s ostensibly inappropriate structure for overcoming Prisoners’ Dilemma-like conflicts call for more elaboration on the Prisoners’ Dilemma as the right heuristic, on disclosure regulation in general, and on IOSCO itself.

With regard to the Prisoners’ Dilemma, its usefulness for explaining international relations situations should never be overemphasized. Although it has some very elegant features as a model for hard cases, situations can be quite problematic in terms of reaching cooperation without having all of its traits. This, indeed, is the central argument of this Article—that other game models better explain interactions between national securities regulators.<sup>114</sup> IOSCO’s structure could thus indicate that it has a slim chance of bringing about a harmonized international disclosure regime and that in pursuing such projects its members may be wasting their time. On the other hand, IOSCO’s structure could indicate that there are additional factors influencing the development of an international disclosure regime. If that were the case, then perhaps other game models could do a better explanatory job. The following paragraphs pursue this line of argument with models of relative gains games and of hegemonic stability.

As to disclosure, the fact that IOSCO does engage in a project in this field indicates that its members see a chance for reaching an agreement on disclosure regulation. While the members could be wrong, an alternative explanation is that disclosure regulation is richer than what has been assumed to date. Certain aspects of it may not exhibit the traits of the Prisoners’ Dilemma and thus may not invoke dynamics akin to a race to the bottom. This avenue is further pursued in Subsection IV.A.3 on accounting standards.

Finally, in light of its structure, IOSCO may be better geared toward establishing international cooperation in areas other than disclosure, such as, for example, antifraud regulation. Conflicts in such areas may be less severe or nonexistent so that they may not require the same institutions that disclosure regulation does. As a corollary, the relevant game models for such areas would also be different from the Prisoners’ Dilemma. Should

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112. Joan E. Spero, *Guiding Global Finance*, 73 FOREIGN POL’Y 114, 124 (Winter 1988–1989). For more details about IOSCO’s activities, see A.A. Sommer, Jr., *IOSCO: Its Mission and Achievement*, 17 NW. J. INT’L L. & BUS. 15 (1996).

113. Note that I do not argue that IOSCO has failed. What is being explored in the text is the reasons for IOSCO’s divergence from the textbook solution for overcoming a Prisoners’ Dilemma-like problem, i.e., establishing a strong centralized institution.

114. Compare TAYLOR, *supra* note 91. The argument advanced in this Article is broader than Taylor’s. While Taylor argues that public good problems may be modeled by 2x2 games other than the Prisoners’ Dilemma, I argue that problems of international securities regulation may not involve public good problems to begin with and, *a fortiori*, need not be modeled as a Prisoners’ Dilemma.

IOSCO prove successful in more limited projects, it may gather the required stature and authority to allow it to deal with the more intractable problems. This could proceed according to a GATT-like scenario of gradual progress over time, possibly in several rounds.

b. *Relative Gains Games*

Occasionally, states are concerned with their rank as much as with their absolute payoffs. Such is the case with respect to the United States's position in the global securities market with which many Americans are increasingly concerned.<sup>115</sup> Consequently, a game like Prisoners' Dilemma, which originally had a Pareto-superior cooperative outcome, becomes a zero-sum game, since in such tugs-of-war what one state gains its rival loses. In the extreme, the 2x2 game model transforms as shown in Figure 2.<sup>116</sup> Since one state is by definition better off when its rival is worse off, the CC outcome is superior for one state while it is inferior for the other, and vice versa for DD.

FIGURE 2. COMPETITIVE TRANSFORMATION OF PRISONERS' DILEMMA

		Column	
		C	D*
Row	C	2, 3 or 3, 2	1, 4
	D*	4, 1	3, 2 or 2, 3**

Payoffs to (Row, Column)

Cell numerals refer to each player's ordinal ranked payoffs.

\* Player's dominant strategy

\*\* Equilibrium outcome

The relative gains version of the game resembles the Prisoners' Dilemma in that in both games the players have a dominant strategy to defect, leading to a Nash equilibrium in DD. However, the equilibrium that emerges in DD is worse than the DD outcome in the original Prisoners'

115. See the discussion in Section II.B, *infra*.

116. See STEIN, *supra* note 39, at 127.

Dilemma. While the latter might cause the players to look for a payoff-increasing cooperative arrangement, the former suppresses any common interest in achieving a mutually more desirable outcome since such an outcome does not exist.

Whether such games leave room for cooperation is not fully resolved.<sup>117</sup> Real-life situations do not exhibit pure forms of competitive games of this sort; for instance, descending in rank while gaining enormous absolute gains might often seem a reasonable compromise. Also, losing place number eight to become number ten is not equivalent to losing place number one to become number three. The severity of the model's outcome is not frequently encountered. However, once a state does adopt a competitive attitude toward its goals in the international arena, it should bear in mind the more conflictual nature its international relations will acquire and the less cooperation it will be able to achieve. Nevertheless, relativistic viewpoints and rank-seeking are often deeply embedded in states' traditions and cultures. Alternatively, such viewpoints and behavior may stem from a state seeking market power. It follows that to the extent that the United States keeps emphasizing a leadership role in the securities market it may impede reaching cooperation in Prisoners' Dilemma-like issues.

### c. *Asymmetric States—Hegemonic Stability Games*

Consider a case with a large asymmetry between the two player-states. One player, Row, is a world economic power with a deep and liquid market and a reputation of having a stringent securities regulation system. The other player, Column, has a small economy with a relatively illiquid market and no tradition of securities regulation. For various reasons, large offerings by companies from Column that cannot be accomplished entirely in its market are also carried out in Row's larger market. While Row prefers Column to establish a disclosure regime at least as demanding as its own, it will maintain its stringent regime even in the face of Column's defection. Row's payoff structure is represented by the preference order  $CC > CD > DC > DD$ . Column's preferences are different: while it sees the potential value of disclosure, it is less enthusiastic to establish a stringent regime immediately.

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117. This issue is subject to a lively debate in the international relations scholarship. See generally STEIN, *supra* note 39, ch. 5. Joseph Grieco expresses the prominent Realist position that doubts any possibility for cooperation in a competitive game. See Grieco, *supra* note 43. Stein provides a static 2x2 model in which under certain conditions cooperation may emerge. See STEIN, *supra* note 39, at 146. Snidal, in a dynamic multi-player model, shows that as the number of states increases the impact of relative gains diminishes. See Duncan Snidal, *Relative Gains and the Pattern of International Cooperation*, 85 AM. POL. SCI. REV. 701 (1991). A fierce exchange ensued. See Joseph M. Grieco, *The Relative-Gains Problem for International Cooperation: Comment*, 87 AM. POL. SCI. REV. 729, 735-42 (1993); see also Robert J. Franzese, Jr. & Michael Hiscox, *Bargains, Games, and Relative Gains: Positional Concerns and International Cooperation*, Working Paper No. 95-4, Harvard Univ., Department of Government (1995) (arguing that while the relative gains problem can hinder cooperation in international relations, it does so only under specific conditions).

Instead, it prefers to rely on Row's regime and impose laxer requirements at home. Its preference order is thus  $DC > CC > DD > CD$ , and the corresponding game is shown in Figure 3.

FIGURE 3. HEGEMONIC STABILITY GAME

		Column	
		C	D*
Row	C*	4, 3	3, 4**
	D	2, 1	1, 2

Payoffs to (Row, Column)

Cell numerals refer to each player's ordinal ranked payoffs.

\* Player's dominant strategy

\*\* Equilibrium outcome

In the international relations terminology the game involves a regime of hegemonic stability.<sup>118</sup> Both players have a dominant strategy, and the equilibrium outcome of the game for Row and Column is CD, respectively.<sup>119</sup> The hegemon (Row) is dissatisfied with this outcome in which Column free rides its legal regime but still prefers it to playing D, i.e., lowering its disclosure standards.

A perception that the game being played involves hegemony would probably entail a sense of a relative gains game as well. Thus, if a state's regulators perceive their country as a de facto hegemon, they might adopt the corollary perception and strive to preserve it. The United States again provides a good example.<sup>120</sup> As already mentioned, one can find intermingled expressions of both perceptions in the context of U.S.

118. See ROBERT O. KEOHANE, *AFTER HEGEMONY: COOPERATION AND DISCORD IN THE WORLD POLITICAL ECONOMY* 31-39 (1984).

119. Column's third and fourth preferences are not decisive for an equilibrium. Even if Column preferred  $CD > DD$ , an equilibrium could be established in (Row cooperate, Column defect), albeit without a dominant strategy for Column. Such a scenario, however, is hard to support with a plausible story.

120. See Edward G. Greene et al., *Hegemony or Deference: U.S. Disclosure Requirements in the International Capital Markets*, 50 *BUS. LAW.* 413, 413 (1995). Query, however, whether a genuine hegemon exists in the global securities market.

international securities regulation policy. The common theme is that the United States has the largest, most efficient, and most demanding market in the world, and *therefore* it has to find a way to preserve its position while leading the way in standard setting.<sup>121</sup>

On the other hand, the equilibrium in this game leaves the hegemon with its second-best outcome, while the other player-state gets its first-best outcome. The hegemon thus could have a greater positive impact on the other's returns than on its own. In other words, the hegemon's strategy improves its absolute position, but over time its relative position will deteriorate. For this reason, the problem has been named "the hegemon's dilemma."<sup>122</sup> This phenomenon explains another facet of general American policy in international securities regulation: the demand to ensure a "level playing field" for its issuers.

Hegemony and cooperation may come hand in hand when the hegemon opts to change its rivals' payoff structure through issue linkage or side payments (or threats). Such non-public-good transactions help both sides to ensure the provision of the public good.<sup>123</sup> Lisa Martin dubbed this kind of asymmetric situation a Suasion game, since the dilemma facing the hegemon is to persuade or coerce others to cooperate.<sup>124</sup>

The MJDS system demonstrates the SEC's hegemonic behavior. The MJDS system purports to implement mutual recognition of financial reporting in the United States and three Canadian provinces.<sup>125</sup> Canada is the largest supplier of foreign listings to the United States, has close economic relations with it, and in general shares the same business tradition. Nevertheless, negotiations on MJDS were protracted, causing the United Kingdom (that originally took part in the project) eventually to drop out. The final outcome is far from implementing mutual recognition. Due to the SEC's insistence, Canadian companies reporting under the MJDS have to reconcile their statements to meet a series of American reporting requirements and be subject to American liability rules. It was further argued that the MJDS caused the Canadian securities regulation regime to shift toward that of the United States.<sup>126</sup> In the MJDS case the SEC thus behaved as a hegemon by using its power position as the regulator of the

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121. See SEC, Policy Statement, *supra* note 24, ¶ 84,341. Doty also reflects this mix of hegemony and relative position concerns. See Doty, *supra* note 25, at S50. Most telling, however, is the title of the SEC's report to Congress on the progress of IOSCO toward a harmonized disclosure system for transnational offerings. See SEC, *supra* note 104, at 17.3.3.

122. Arthur S. Stein, *The Hegemon's Dilemma: Great Britain, the United States, and the International Economic Order*, 38 INT'L ORG. 355, 384 (1984).

123. See KEOHANE, *supra* note 118, at 51, 91-92.

124. See Martin, *supra* note 52, at 777-80.

125. See Multijurisdictional Disclosure and Modifications to the Current Registration and Reporting System for Canadian Issuers, Exchange Act Release No. 6902, 56 Fed. Reg. 30,036 (July 1, 1991).

126. See Calley Jordan, *Regulation of Canadian Capital Markets in the 1990s: The United States in the Driver's Seat*, 4 PAC. RIM L. & POL'Y J. 577, 589-95 (1995).

coveted U.S. market. Such behavior, however, is not always feasible for political or other reasons—something that may force a state to resort to alternative avenues such as using international institutions.

While a hegemon can transact directly with its rival and spare the use of international institutions, organizations like IOSCO may still facilitate cooperation by offering opportunities for issue linkage and by helping the smaller player to save face domestically. Thus, it may be considered more respectable to yield to IOSCO than to the SEC. So far, the SEC has used IOSCO strategically in this manner in the field of disclosure, while adopting a very confrontational stance. Less confrontational maneuvering seems to have happened in other fields—particularly with respect to insider trading—as I argue in more detail below.<sup>127</sup>

The SEC's recent dealing with the IOSCO/IASC project of disclosure rules also reflects a case of hegemonic coercion rather than suasion. As the project gets closer to fruition, the SEC is flexing its hegemonic muscles to make sure that the chosen standards do not deviate from the Commission's regulatory position. In doing so, the SEC relies on the U.S. market power in order to establish the standards it deems fit.<sup>128</sup> That the United States, through the SEC, is behaving hegemonically is underscored by the fact that no consensus exists even within the United States as to the merits or exact form of disclosure about financial instrument risk. By confronting the IOSCO/IASC, the SEC saves itself and its foreign counterparts the need to confront directly with one another. At the same time, the SEC has been narrowing the gaps between the American standards and the proposed IAS, thus ensuring that foreign disclosure regimes do not deviate too much from the American one (assuming plausibly that most countries will adopt IAS).

### 3. *A Note on Accounting Standards*

This Subsection continues the exploration of disclosure regulation and the search for models that could help explain the extant international regime in this field. As noted above, the standard economic analyses of domestic disclosure regulation and certain features of international interaction between national securities regulators indicate the Prisoners' Dilemma as the appropriate baseline model. The previous Subsection then adds differences in size and in perception of the game as additional factors and discusses the correlated game models. In what follows, I deal with the effects of setting

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127. See *infra* Section IV.C.

128. A similar episode of a clash between IOSCO and the SEC over particular standards took place in the early 1990s with regard to capital adequacy standards. See PORTER, *supra* note 35, at 118-19; Sommer, *supra* note 112, 19-20. The SEC's refusal to endorse the standards proposed by IOSCO has harmed the organization severely.

disclosure rules through accounting standards. This process—again, in its pure form—is best modeled by yet another 2x2 game, a point that sheds light on some questions left open with regard to IOSCO.

a. *The Double Role of Accounting Standards*

“Disclosure rules” and “accounting standards” are often used interchangeably, perhaps because in determining the actual content of disclosure, regulators usually defer to standards set by professional accounting bodies. The SEC, for example, has the authority to supervise the setting of accounting standards for disclosure by public companies but prefers to have them set by a professional body—the Financial Accounting Standards Board (FASB).<sup>129</sup> In any event, it should be noted that accounting standards play a double role in financial reporting. One role is to determine *what* should be reported. For example, hidden reserves, which enable management to shift profits from good years to bad ones, are allowed by German generally accepted accounting principles (GAAP) but are strictly forbidden by U.S. GAAP. The second role is to determine *how* to disclose, or present, such information: methods of reporting inventory, sums denominated in foreign currency, and adjustment for inflationary effects are but a few examples.

The need for uniform presentation rules may be called into question in light of empirical evidence that changes in the presentation of financial data do not affect the value of the disclosing company’s securities. Such changes, it is said, cannot fool the market.<sup>130</sup> A question thus arises as to whether any presentation standards are required at all or, more precisely, whether any resources should be invested in harmonizing presentation standards. These empirical results are strongly connected to the Efficient Capital Market Hypothesis and are ordinarily brought as evidence of market efficiency.<sup>131</sup>

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129. Regulation S-K, 17 C.F.R. § 229 (1995), and particularly item 302 thereof are the central source for this regulation by reference under the American integrated disclosure system. For a recent review of FASB’s role and its relations with the SEC, see Martin Mayer, *FASB on Trial*, INSTITUTIONAL INVESTOR, Nov. 1997, at 78. The SEC’s main concern with regard to FASB in the last few years has been to ensure the independence of its standard setters (the trustees). See Paula Dwyer, *Hardball at the SEC*, Bus. Wk., Sept. 29, 1997, at 50.

130. See Robert K. Eskew & William F. Wright, *An Empirical Analysis of Differential Capital Market Reactions to Extraordinary Accounting Items*, 31 J. FIN. 651, 673 (1976); Robert S. Kaplan & Richard Roll, *Investor Evaluation of Accounting Information: Some Empirical Evidence*, 45 J. BUS. 225, 227 (1972); see also Claire A. Hill, *Why Financial Appearances Might Matter: An Explanation for “Dirty Pooling” and Some Other Types of Financial Cosmetics*, 22 DEL. J. CORP. L. 141, 145 (1997) (arguing that markets react neutrally to financial cosmetics so long as they are “tastefully applied”).

131. For the purposes of the arguments presented in the text there is no need to elaborate on various possible forms of market informational efficiencies (the strong, semi-strong, and weak forms). However, the semi-strong form is the relevant one for practical aspects. Semi-strong efficiency occurs when security prices reflect all publicly available information. See Eugene Fama, *Efficient Capital Markets: A Review of Theory and Empirical Work*, 25 J. FIN. 383, 383 (1970) (defining the three forms of informational efficiency).



But a closer look, however, reveals that the argument actually cuts both ways, the reverse argument being that when markets are efficient we would expect them not to be sensitive to the choice of accounting standards. Seen this way, the argument means that for markets that are *not* entirely efficient, accounting rules *may* be relevant, in the sense that their choice may affect prices. Consequently, the value of harmonizing these rules in order to avoid unsubstantiated variance (noise) in prices becomes evident.

Harmonizing presentation rules may be important even in efficient markets, for reasons of transaction costs reduction. Market efficiency is costly to achieve and is the product of a wide array of factors. The mechanisms of market efficiency—that is, various forms of informed trading—are driven by actual traders.<sup>132</sup> These traders include professionally informed traders, such as arbitrageurs, researchers, brokers, and portfolio managers, “who devote their careers to acquiring information and honing evaluative skills.”<sup>133</sup> Reducing the costs to these market professionals of becoming informed by eliminating the need to translate financial data from one format to another (reconciliation), and thus eliminating possible errors during the translation, will improve market efficiency and therefore warrants the effort for coordination.<sup>134</sup>

The presentation role of accounting standards thus may be as important as their substantive one. Consistency in presentation, namely, a rule that requires companies to utilize the same accounting method consistently over time, would prevent management from shifting among alternative methods to the one most favorable to them. In this, they are equivalent to substantive rules and may invoke the same Prisoners’ Dilemma problem. In addition, presentation rules are essential for comparability, that is, to allow investors to compare alternative securities. Finally, uniform presentation standards, like other standards, create positive network externalities by creating a common business language. Thus, they lower transaction costs and the noise in securities prices.

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132. See Ronald J. Gilson & Reinier H. Kraakman, *The Mechanisms of Market Efficiency*, 70 VA. L. REV. 549, 569–72 (1984); Jeffrey N. Gordon & Lewis A. Kornhauser, *Efficient Markets, Costly Information, and Securities Research*, 60 N.Y.U. L. REV. 761, 786–96 (1985); Sanford J. Grossman & Joseph E. Stiglitz, *On the Impossibility of Informationally Efficient Markets*, 70 AM. ECON. REV. 393, 393 (1980).

133. Gilson & Kraakman, *supra* note 132, at 571.

134. See FREDERICK D.S. CHOI & RICHARD M. LEVICH, *THE CAPITAL MARKET EFFECTS OF INTERNATIONAL ACCOUNTING DIVERSITY* 3–5 (1990). *But see* Ravi Bhushan & Donald R. Lessard, *Coping with International Accounting Diversity: Fund Managers’ Views on Disclosure, Reconciliation, and Harmonization*, 4 J. INT’L FIN. MGMT. & ACCT. 149, 151 (1992) (disputing the relationship between the costs of standards and the overall quality of information available).

b. *Sources of International Diversity*

While substantive disclosure rules may originate from national policies or other fundamental economic reasons, there is little reason to assume that this is also the case with respect to presentation rules. In fact, such rules are by definition divorced from substantive purposes. Yet this does not mean that countries do not have any interest in their related presentation accounting standards. We would usually expect presentation rules to originate from traditional conventions that were developed and adapted over time to meet modern needs.

Once a country's accounting profession adopts certain presentation conventions, human and other forms of capital start to accumulate in, for example, acquired skills and education systems. Indeed, standards in general present the most striking examples of human capital that users are extremely reluctant to scuttle by migrating to another standard, even if the latter is easier to use or more efficient.<sup>135</sup> In the international context, standards have not escaped that fate. Conflicts among states about standards are common and are often a source of tension.<sup>136</sup>

c. *The Correlated Game and International Cooperation*

Conflicts among states about standards are commonly modeled by the game Battle of the Sexes.<sup>137</sup> They are generally called "coordination games," as opposed to "collaboration games," of which the Prisoners' Dilemma is the quintessential example.<sup>138</sup> In a Battle of the Sexes game each player tries to achieve a double goal. One goal is for both players to play the same strategy, either CC or DD. In fact, both CC and DD are cooperative to the same degree, so D should not be considered "defection." A second goal is for both players to play his or her preferred strategy, over which they differ. A possible preference order for a coordination game is  $CC > DD > CD > DC$  for Row and  $DD > CC > DC > CD$  for Column.<sup>139</sup> Figure 4 presents the game in its strategic form.

135. The QWERTY keyboard is a famous example. See Paul A. David, *Clio and the Economics of QWERTY*, 75 AM. ECON. REV. 332, 335 (1985); S.J. Liebowitz & Stephen E. Margolis, *The Fable of the Keys*, 33 J. L. & ECON. 1, 3 (1990).

136. See, e.g., Krasner, *supra* note 30, at 342-44 (discussing the evolution of communications standards as a coordination game).

137. The story that is usually told with regard to the game's name is of a man and a woman who consider their entertainment plans for the evening. While one of them wants very much to go to a prize fight, the other strongly prefers the ballet. Each of them, however, would forgo his or her first-best preference in favor of the other's, to avoid going out alone.

138. See Snidal, *supra* note 46.

139. The preference order and the payoff structure do not have to be symmetrical with respect to the two most right-hand side terms.

FIGURE 4. BATTLE OF THE SEXES

		Column	
		C	D
Row	C	4, 3**	2, 2
	D	1, 1	3, 4**

Payoffs to (Row, Column)

Cell numerals refer to each player's ordinal ranked payoffs.

\* Player's dominant strategy

\*\* Equilibrium outcome

In this game, neither player has a dominant strategy, i.e., neither can choose its policy without knowing what the other player's policy choice is. The game has two Nash equilibria, in CC and DD: once both players choose C or D, they have no incentive to change their choice. Specifically, once the accounting industries in two countries agree on certain presentation standards, they have good reasons to adhere to them and no reason to change them unilaterally. Therefore, there is no compelling need for any strong enforcement mechanism, because once an agreement is reached, it is self-enforcing.

States, however, still face the problem of reaching *any* agreement. In the game form presented in Figure 4, because of the ordinal payoff structures, there is no way to know in advance which of the two possible equilibria would result. A specific outcome may be induced by making one of the two equilibria a focal point, for instance, by converging to the largest state's accounting standards. In certain countries, however, taking such a course of action might be interpreted by interested parties as succumbing to foreign dictates. States that take pride in their tradition would thus be discouraged from replacing their accounting standards with those of another state's, unless those standards are clearly superior (which would not be the case, generally).<sup>140</sup>

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140. Similarly, where the decision-making process on the issue is captured (or heavily influenced) by the interested industry, one could expect strong opposition to changes that would render human and physical capital worthless.

An alternative way to reach an agreement in a coordination problem is to turn to international organizations such as ISAC or IOSCO that can provide face-saving as well as dissemination of information among the member states. Such an institution can facilitate changes in a multilateral form by reducing transactions costs.<sup>141</sup> However, we would expect such international institutions to be relatively weak, lacking rule-making authority and dispute resolution fora. IOSCO, indeed, confirms this expectation, since it mainly operates as a discussion-facilitating forum and has no enforcement powers.

In fact, one can identify a dual mechanism of coordination in this particular context: national securities regulators turn to IOSCO for resolving the problem and IOSCO, in turn, refers the problem to IASC—in itself a very weak institution. In this setting, both institutions reinforce one another in providing the focal point for agreement in a coordination problem. IOSCO benefits from the professional reputation of IASC that lends authority to its rules (while diminishing its direct responsibility to their actual content), and IASC benefits reputationally from the unique imprimatur given to its work by IOSCO. Thus, both institutions benefit from their role in terms of reputation and power in the future. The SEC's objection to the standards demonstrates the flip side—that when substantive accounting standards are at issue, cooperation is much harder to achieve.<sup>142</sup>

## B. *Antifraud Regulation*

Transnational securities fraud has many faces. In essence, it relates to any fraudulent conduct with significant elements located in different countries. The transnational quality may relate to different *kinds* of elements, as is the case when the shareholders are located in one country and the misrepresentation is carried out in another; or it may relate to the same element, when, for example, defrauded shareholders are dispersed in several countries, securities are traded in several markets, or the misrepresentation spans across state borders. A commonly discussed problem is: When should one country assert its jurisdiction extraterritorially—that is, *unilaterally*—on the case?<sup>143</sup> This Article does not deal with this issue, although it shares the observation made in such discussions that not all countries will always pursue wrongdoers with the same vigor. The question asked here is different, namely: When would two countries' *cooperate* in pursuing wrongdoers?

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141. See John G. Ruggie, *Multilateralism: The Anatomy of an Institution*, 46 INT'L ORG. 561, 576–78 (1992) (describing international telecommunication institutions in nineteenth-century Europe).

142. For an alternative analysis of the setting of accounting standards, see Paul J. M. Klumpes, *Competition Among Accounting Standard Setters: A Property Rights Analysis*, Working Paper No. 98/007, The Management School, Lancaster University (1998). Klumpes, however, assumes IOSCO to be much stronger an institution than it really is.

143. See *supra* Sections II.A, II.B.

### 1. Sources of International Diversity

International cooperation is defined in terms of conscious policy coordination among states.<sup>144</sup> When antifraud regulation is at issue, the task of policy coordination is easiest since, presumably, most modern societies condemn fraud. While some cultures are more tolerant of lying than others,<sup>145</sup> I believe we would find less variance among nations when the additional legal elements that constitute fraud—reliance, damage, and causal connection—are present. It seems that there are relatively fewer cultural differences with regard to fraud, so that a consensus exists that fraud is undesirable. Given this consensus, what are the possible sources of international diversity with regard to antifraud regulation?

In general, we would expect differences among countries to appear as we depart from the “core,” common-law-like notion of fraud. The following paragraphs sketch several bases for diversity among countries in antifraud regulation (although some of them apply to other securities regulation issues as well).

First, diversity may stem from benign differences in legal concepts applicable to securities fraud. An example of such a specific concept is the definition of “prospectus.”<sup>146</sup> Different legal systems may have various methods of defining a prospectus even if all of them refer to the same generic document. Although most lawyers would opine that a prospectus is a major document in a public offering, a striking demonstration of a different interpretation was provided by U.S. law. Due to the statutory structure of the Securities Act of 1933 and subsequent case law, it had become possible to argue that “prospectus” included documents that were part of a purely private securities transaction. After a long period of controversy and uncertainty,<sup>147</sup> a Supreme Court decision was required (not without a strong dissent) to clarify that this interpretation was wrong.<sup>148</sup> Clearly, the implications for what is subject to administrative enforcement and monitoring are vast. A more general example relates to liability formulas, i.e., to the elements that require proof in order to establish liability. These

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144. See Oye, *supra* note 38, at 6.

145. See RONALD INGLEHART ET AL., HUMAN VALUES AND BELIEFS: A CROSS-CULTURAL SOURCE BOOK 54, tbl.V303 (1998) (reporting considerable national diversity in people’s attitudes towards lying in one’s own interest).

146. Some may prefer to relate to “prospectus” as a technical term rather than as a concept. The distinction is a matter of taste, with no effect on the centrality of prospectuses in any securities regulation regime.

147. See *Welcome to the Post-Gustafson Era*, EUROMONEY, July 1995, at 113.

148. See *Gustafson v. Alloyd, Inc.* 513 U.S. 561, 569–70 (1995). *But see id.* at 584, 585 (Thomas, J. dissenting) (interpreting the Securities Act to allow “prospectus” to cover both private and public securities transactions).

include the mental element, and the definition of "fraudulent" or "misleading."

Second, differences in the structure of the securities market may entail differences in the regulatory attitude toward fraud. Modern securities markets pose a hurdle to the classical fraud formula due to the absence, in practically all cases, of reliance on the alleged misrepresentation. The United States solved the problem with the "fraud on the market" doctrine, which allows the plaintiff to satisfy the reliance requirement in a fraud suit by showing that she bought or sold her shares in a semi-strong efficient market.<sup>149</sup> Such a demonstration is relatively easy in the United States with respect to a certain category of securities for which a sufficient float exists and that are closely followed by financial analysts. In many other countries such showing is virtually impossible, as these conditions are absent. Consequently, public representations that could substantiate liability in the United States might not suffice in other countries, and thus alternative solutions must be sought.

Third, differences in regulatory competence also entail de facto gaps in antifraud regulation. Since fraud is more accepted as *mala per se*, it is less likely to serve as a subsidy mechanism than lenient disclosure rules or capital requirements. Yet different monitoring and enforcement capabilities will nonetheless create such differences. Consequently, fraud may be more prevalent in one country than in another notwithstanding similar legal attitudes.

The argument that states would normally gain little from tolerating securities fraud indeed revolves around the assumption that fraud is accepted as a *mala per se* and is less likely to serve as a subsidy mechanism. In economic terms, the convention that "fraud is bad" means that for most societies allowing transnational fraud would internalize the effects of lenient regulation.<sup>150</sup> Cooperation in fraud prevention would enhance the gains for both states and improve their position. Put differently, there are no interstate externalities (from failing to punish transnational swindlers) that would motivate one state to tolerate fraud toward its sister states, and we therefore should not expect competition or a "race to the bottom" in international antifraud regulation to develop.

One could still argue that states may attribute different levels of severity to domestic or inbound fraud (fraud among or against their citizens) and to outbound fraud that has no direct effect on local markets. Thus, a state could enrich itself by allowing its citizens to defraud the rest of the

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149. See *Basic, Inc. v. Levinson*, 485 U.S. 224, 241-47 (1988); see also Ian Ayres, *Back to Basics: Regulating How Corporations Speak to the Market*, 77 VA. L. REV. 945 (1991); Jonathan R. Macey & Geoffrey P. Miller, *Good Finance, Bad Economics: An Analysis of the Fraud-on-the-Market-Theory*, 42 STAN. L. REV. 1059 (1990).

150. The possible reasons for such internalization could be both ethical and practical. A nation can perceive fraud as a moral wrong such that the national identity of the victims matters less, or the nation can be concerned that its reputation might get tarnished.

world. The argument is not so far-fetched. In the United States, some federal courts condemn the idea of leniency toward outbound securities fraud (for purposes of extraterritorial jurisdiction). A possible reasoning for such a rule, as indicated above, would be that such fraudulent conduct will adversely affect that country itself, through the corruption of morals. One court thus declared that, “[w]e do not think Congress intended to allow the United States to be used as a base for manufacturing fraudulent securities devices for export, even when these are peddled only to foreigners.”<sup>151</sup>

Persuasive as it may sound, other federal courts find this proposition too expansive, and prefer more restraint in such cases.<sup>152</sup> This might lead one to realize that some outward-facing fraudulent conduct may be considered more lightly than comparable inward-facing fraud. An example is the case of transnational bribery by multinational corporations which, strangely enough, found its way into the Securities Acts.<sup>153</sup>

It is well-known that bribery is still embedded in the “administrative culture” of certain countries. Precedents include less developed states as well as developed countries such as Italy and Japan. Multinational corporations (MNCs) that seek business in such countries often have to pay bribes to officials and other office holders as a matter of course, even if such conduct is outright prohibited in their home country. Some of the largest American MNCs have been found to engage in such conduct, and the parties receiving bribes have included prime ministers and other top officials. The ensuing scandals led to the enactment of the Foreign Corrupt Practices Act (FCPA),<sup>154</sup> which is embodied primarily in Section 30A of the Securities Exchange Act. It prohibits issuers and other companies subject to the reporting duties of the Securities Acts from bribing foreign officials or political parties in order to obtain or retain business.

Notwithstanding the FCPA’s noble cause, other countries were reluctant to enact similar laws despite strict prohibitions on domestic bribery. In fact, for two decades after the enactment of the FCPA, the United States remained the sole country proscribing outbound transnational bribery. The situation placed American-based MNCs between a rock and a hard place, putting them at a clear disadvantage relative to non-U.S. MNCs.<sup>155</sup> Several attempts to achieve or broker a multilateral agreement to

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151. *IIT v. Vencap, Ltd.*, 519 F.2d 1001, 1017 (2d Cir. 1975). In my opinion, this forceful proposition also undermines some proposals for jurisdictional rules that are based solely on shareholders’ nationality, which are discussed in Section II.B., *supra*.

152. See generally *COX ET AL.*, *supra* note 15, at 1356–63 (reviewing the cases).

153. 15 U.S.C. §§ 78m(b), 78dd-1, 78dd-2, 78ff (1994).

154. *Id.*

155. For discussions see Steven R. Salbu, *Bribery in the Global Market: A Critical Analysis of the Foreign Corrupt Practices Act*, 54 WASH. & LEE L. REV. 229, 254–57 (1997); Daniel Pines,

ban that conduct, including some sponsored by the United Nations and the OECD, have all failed. Only in November 1997 was a treaty signed by twenty-nine OECD members to outlaw the practice of bribing foreign government officials.<sup>156</sup> This treaty is primarily a moral victory for the United States since the signatories stopped short of agreeing to criminalize the conduct. In addition, certain countries, including France and Germany, allow their firms to deduct overseas bribes from their taxes as legitimate business expenses.<sup>157</sup> The lesson to take home from the bribery example is that countries might differ over the condemnability of certain conduct and, even though they reach consensus on this point, they may still differ over its extraterritorial application.<sup>158</sup>

## 2. *The Correlated Games and International Cooperation*

### a. *A Harmony Game*

The case of international antifraud regulation is instructive because it demonstrates that in certain cases, states' independent interests do not clash, but rather may converge. The correlated 2x2 game is mainly one of Harmony, i.e., one in which "actors' policies (pursued in their own self-interest without regard for others) *automatically* facilitate the attainment of others' goals."<sup>159</sup> Such a policy can be summarized in the following preference order: CC > CD > DC > DD. In general, the payoff structure reflects a policy of "the more, the better," i.e., an interest in having as

Note, *Amending the Foreign Corrupt Practices Act to Include a Private Right of Action*, 82 CAL. L. REV. 185, 208-10 (1994).

156. See Edmund L. Andrews, *29 Nations Agree to Outlaw Bribing Foreign Officials*, N.Y. TIMES, Nov. 21, 1997, at A1; see also Paul Lewis, *Straining Toward an Agreement on Global Bribery Club*, N.Y. TIMES, May 20, 1997, at D4 (describing the difficulties in reaching a transnational antibribery agreement).

157. See *Progress Against Bribery*, INT'L HERALD TRIB., Dec. 2, 1997, at 8.

158. Another example of different stances toward domestic and outbound conduct is the case of cartels. In many of the advanced market economies, cartelization is perhaps the gravest offense in antitrust/competition law. For example, in the United States, conduct such as price fixing and territorial allocations is subject to a per se illegality doctrine. In other words, it comes closest to *mala per se* conduct. Nevertheless, export cartels—cartels whose anti-competitive effects are felt abroad—are exempted from the Sherman Act, 15 U.S.C. § 1 (1994), and are exempted from prohibition in the United States under both the Webb-Pomerence Act of 1918, 15 U.S.C. §§ 61-65 (1994), and the Export Trading Company Act of 1982, 15 U.S.C. §§ 4001-4021 (1994). The situation is similar in other countries. See F.M. SCHERER, *COMPETITION POLICIES FOR AN INTEGRATED WORLD ECONOMY* 43-52 (1994). Efforts to reach an international treaty banning even this seemingly universally-censured conduct have so far failed, and prominent antitrust scholars acknowledge the difficulties of and slim prospects for reaching such an agreement. For representative opinions, see Eleanor M. Fox, *Toward World Antitrust and Market Access*, 91 AM. J. INT'L L. 1 (1997); Spencer Weber Waller, *The Internationalization of Antitrust Enforcement*, 77 B.U. L. REV. 343 (1997); Diane P. Wood, *The Internationalization of Antitrust Law: Options for the Future*, 44 DEPAUL L. REV. 1289 (1994). One may suspect, however, that the general stance toward cartelization is not as hostile as it is in the United States and in the EU.

159. KEOHANE, *supra* note 118, at 51; see also STEIN, *supra* note 39, at 29-30; Oye, *supra* note 38, at 7.



much antifraud activity as possible. Figure 5 presents the game in the strategic form.

FIGURE 5. HARMONY GAME

		Column	
		C*	D
Row	C*	4, 4**	3, 2
	D	2, 3	1, 1

Payoffs to (Row, Column)

Cell numerals refer to each player's ordinal ranked payoffs.

\* Player's dominant strategy

\*\* Equilibrium outcome

In Harmony, both players have a dominant strategy to play C, so the equilibrium outcome is CC, which is also the Pareto-efficient outcome. In fact, one may distinguish between "playing C" in the Harmony game and "cooperation," where cooperation requires that the actions of parties—which are not in preexistent harmony—be brought into conformity with one another through negotiation.<sup>160</sup> In its pure form, Harmony does not call for any cooperation in the sense of conscious policy coordination, as the players independently converge to the desired CC outcome.

The argument that the game being played in antifraud regulation is Harmony receives support from the growing number of MOUs between securities regulators around the world.<sup>161</sup> Typically, an MOU would provide for mutual assistance in investigations and confidentiality of records.<sup>162</sup> By

160. See KEOHANE, *supra* note 118, at 51.

161. An updated list of MOUs can be found on IOSCO's website, <<http://www.iosco.org>>. *An Index of Memoranda of Understanding and Similar Agreements Between IOSCO Members* (visited Oct. 30, 1998) <<http://www.iosco.org/iosco.html>>.

162. For an extensive overview of MOUs and other cooperative measures, see Mann et al., *International Agreements*, *supra* note 25, at 795-818. See also Doty, *supra* note 25, 316-21 (discussing MOUs); Paul G. Mahoney, *Securities Regulation by Enforcement: An International Perspective*, 7 YALE J. ON REG. 305, 312-14 (1990) (discussing SEC efforts to promote American-style regulation abroad); Mann et al., *International Mechanisms*, *supra* note 25, 316-21 (discussing MOUs); Millspaugh & Belt, *supra* note 62, at 376-79 (describing MOUs and treaties); James A. Kehoe, Note, *Exporting Insider Trading Laws: The Enforcement of U.S. Insider Trading Laws*

signing such an MOU, a securities regulation agency indicates to its colleague agency that it shares the same values and would not consider the assertion of extraterritorial jurisdiction as an encroachment on its authority.<sup>163</sup> The SEC has been the leading agency in terms of the number of MOUs and the impetus to sign them; MOUs reached by the SEC essentially facilitate the extraterritorial application of U.S. securities laws.

A significant feature of the mutual assistance MOUs is the fact that they are bilateral. As a rule, one cannot find multilateral agreements among them, and, moreover, we do not observe an international institution that oversees these agreements, enforces them, or plays a crucial role in brokering them.<sup>164</sup> This is an indication that there is no demand for a centralized international regime of cooperation in antifraud regulation.<sup>165</sup> In other words, there are few, if any, hurdles to overcome that warrant the investment in a multilateral arrangement.

Further evidence as to the game being played is provided by the issues covered in a typical MOU. Their nature is probably best summarized in the language of the SEC staff members: "MOUs generally are non-binding arrangements between like-minded regulators."<sup>166</sup> MOUs are non-binding, declaratory statements of intent, exhibiting similar conceptual ideas concerning what constitutes securities violation and what areas should be regulated by securities laws. MOUs call for information exchange and mutual cooperation in investigations of securities violations.<sup>167</sup> It is thus not surprising that in the European Union MOUs are virtually absent. The situation is best explained by the fact that all the major directives on securities regulation provide for information exchange among regulatory authorities, and that these directives, moreover, are in essence joint declarations of regulatory policy and minimum standards. They thus make the signing of specific MOUs cost-ineffective, if not redundant, as these would be the primary roles of an MOU.<sup>168</sup>

Finally, consider the nature of the signatories to the MOUs, which are the securities commissions rather than the states themselves. Since the

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*Internationally*, 9 EMORY INT'L L. REV. 345, 359-69 (1995) (describing MOUs and treaties).

163. Cf. Pines, *supra* note 155, 205-07 (arguing that since the FCPA embodies universal values, other countries should welcome its extraterritorial application). As the main text indicates, the case is probably more problematic than Pines suggests.

164. With respect to MOUs, IOSCO serves primarily as a depository for signed MOUs and as a source of a model MOU standardized text. For a discussion of the latter role, see *infra* text accompanying notes 211-213. These roles, however, do not suffice to create a strong centralized regime when one is necessary.

165. Cf. Robert O. Keohane, *The Demand for International Regimes*, 36 INT'L ORG. 325, 326-27 (1982) (arguing that demand for international regimes is dependent on a number of conditions and not a "given").

166. Mann et al., *International Agreements*, *supra* note 25, at 796.

167. See *id.*; Kehoe, *supra* note 162, at 359.

168. See Amir N. Licht, *Stock Market Integration in Europe*, CAER II Discussion Paper No. 15, Harvard Inst. for Int'l Dev., at 36-37 (1998), available in <<http://www.hiid.harvard.edu/projects/caer/pubs.html>>.

parties' interests are harmonious, there is no need for any binding covenants that would derogate from the states' sovereignty by limiting their freedom of action. Had the problem been one that required states to forego options that could otherwise have been in their interest (as is the case in international trade), a full-fledged international treaty between them would have been necessary.<sup>169</sup> From the fact that a non-binding arrangement is sufficient one may conclude that the parties' interests are generally harmonious.

In the aggregate, therefore, this evidence supports the claim that international antifraud regulation is a Harmony game. It follows that analyses of international securities regulation that are based solely on a race-to-the-bottom or regulatory-competition reasoning may be inappropriate in this specific context.<sup>170</sup> At the same time, one should be careful not to draw general lessons hastily from the growing number of bilateral MOUs. These MOUs, while encouraging, do not necessarily mean that agreement on other, more conflictual, issues can be readily achieved.

#### b. *A Stag Hunt Game*

The very existence of the MOUs is still disturbing. If the game being played in antifraud regulation is purely Harmony, then the Pareto-efficient outcome should occur spontaneously as the product of each state's egoistic choice alone. Therefore, the transaction costs borne by the parties in reaching these agreements call for explanation. Moreover, if this condition were the case, states would not be so sensitive to the extraterritorial application of foreign laws to their residents, and states would be less reluctant to assert jurisdiction extraterritorially.

One possible answer may be that some states play for a positional good as depicted in Figure 2. In such a case, the utility from doing the right thing may be offset by the disutility from losing rank in the international securities market. In fact, the SEC has been applying a policy of lower disclosure standards for foreign issuers exactly under this reasoning.<sup>171</sup> Translating such

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169. MOUs are sometimes supplemented by mutual legal assistance treaties. These documents are fully binding international treaties between the signatory states that provide for various forms of assistance in information gathering. Assistance under such treaties is usually conditioned on "double criminality" of the relevant conduct under both states' laws—when harmonious interests are ensured. *See, e.g.*, Treaty on Mutual Assistance in Criminal Matters between the Swiss Confederation and the United States, May 25, 1973, U.S.-Switz., 29 U.S.T. 2019. These agreements formerly were invoked especially in connection with international insider trading cases.

170. Some international relations scholars have indeed argued that international relations studies are preoccupied with conflictual game models, such as Prisoners' Dilemma, Chicken, and Stag Hunt, and that such studies all too often ignore the more straightforward explanations for cooperation and conflict, as modeled by Harmony and Deadlock (the absence of any mutual interest), respectively. *See Oye, supra* note 38, at 7.

171. *See supra* note 20.

a policy to the field of antifraud would mean a more tolerant attitude toward fraud in general than is evidently the case in the United States.

An alternative explanation may be that, with regard to antifraud regulation, states do employ a double standard for inbound and outbound fraud. As mentioned above,<sup>172</sup> some federal courts in effect implement such a standard by restricting the extraterritorial application of American securities laws. By signing an MOU, securities regulators can ensure that inbound transnational fraud is curbed by their colleagues to the same degree as outbound fraud.

A third alternative may be that the universal view of fraud assumed heretofore, namely, that "fraud is bad," does not always hold in reality. Such would be the case if one state strove to ban a certain conduct, which it deems fraudulent, while others were still hesitant, not fully convinced that it was fraud. Thinking that "*they* call it 'fraud', but it's really not *that* bad," a commissioner might allocate her limited budget and staff to other purposes. In this situation both players will demand assurances that their rival sees eye to eye with them, assurances concretized in a document such as an MOU.

The game Stag Hunt better models the scenarios portrayed in the last two alternatives. In Stag Hunt, each player most prefers mutual cooperation but might defect in order to achieve a smaller payoff. A player's worst case occurs when she keeps cooperating while her rival defects; consequently, she would rather see both players defect than end up being the sucker (cooperating while the rival defects).<sup>173</sup> In terms of its payoff structure, Stag Hunt is surprisingly close to Harmony.<sup>174</sup> Both games are symmetrical and have mutual cooperation as the most preferred outcome. The preference order in Stag Hunt is  $CC > DC > DD > CD$  and the corresponding strategic form is depicted in Figure 6.

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172. See *supra* text accompanying notes 19–20.

173. The original story behind the game's name is about a group of people attempting to catch a stag. One of the hunters suddenly has an opportunity to catch a rabbit, which would ensure him a lower payoff but would undermine his fellows' efforts completely. The story traces back to Jean Jacques Rousseau. See ORDESHOOK, *supra* note 48, at 209.

174. To see this point, consider first a slight transformation of the Harmony game in which the two middle terms in the preference order are swapped:  $CC > DC > CD > DD$  (instead of  $CC > CD > DC > DD$ ). The outcome is still a Harmony game. Both players have a dominant strategy to play C, and a Pareto-efficient outcome results. Now consider a further transformation in which the two right-hand side terms are swapped. The preference order is now  $CC > DC > DD > CD$  (instead of  $CC > DC > CD > DD$ ), which yields the Stag Hunt game.

FIGURE 6. STAG HUNT

		Column	
		C	D
Row	C	4, 4**	1, 3
	D	3, 1	2, 2**

Payoffs to (Row, Column)

Cell numerals refer to each player's ordinal ranked payoffs.

\* Player's dominant strategy

\*\* Equilibrium outcome

Notwithstanding the similarity between the payoff structures of the two games, Stag Hunt is dramatically different from the Harmony game. Stag Hunt has two Nash equilibria: in CC and in DD. On its face, the game should end in mutual cooperation, which is Pareto-efficient compared with mutual defection and can be expected to be the focal point. However, if a country suspected that its rival might defect, it would respond with preemptive defection, and the game will end in DD. Such an outcome might occur if a player fears that its rival plays with a "trembling hand," that is, that the rival might make an irrational move for reasons beyond its control. In the international context these moves could be domestic political pressures or changes of government.<sup>175</sup> Ensuring the optimal outcome would be easier if the players could provide assurances that they will cooperate. For this reason the game is also dubbed the "Assurance Game."<sup>176</sup>

The Stag Hunt scenario is hard to reconcile with the way we portrayed fraud and states' attitudes toward it. After all, why should a state consider as

175. See Martin, *supra* note 52, at 781. Strictly speaking, "trembling hand" problems are not possible in models without randomization of strategy choice. The simple 2x2 game presented here is thus only the starting point of the discussion.

176. See STEIN, *supra* note 39, at 30; Martin, *supra* note 52, at 780. Stein sees the international extradition of criminals as an example of such an assurance game. See STEIN, *supra* note 39, at 31. Some states, he argues, "require treaties to provide them with assurances that the other state will behave in a predictable fashion when questions of extradition arise." *Id.* While I fully agree with the argument, I believe it can be taken even further in light of the main text. Extradition treaties usually include a condition of double criminality—that the alleged conduct is deemed criminal in both states. This is exactly the point made in the text: states require assurances that they share the same views and values with regard to a certain conduct before they cooperate in enforcing its prohibition.

disastrous a situation in which it fights fraud? I intend that the “core” classic fraud, as we understand it, is not the central reason behind the MOU movement. To be sure, fighting “regular” fraud clearly benefits from the existence of the growing MOU network<sup>177</sup> but query whether it could have enabled its inception in the first place. Rather, other forms of conduct not yet perceived by all nations as equivalently fraudulent are the stronger reason. One such case may be outbound transnational fraud, discussed in this Section. The following Section argues that, to a large extent, the MOU movement was originally targeted against insider trading and used an antifraud rhetoric as a vehicle toward that end.

### C. *Insider Trading Regulation*

Insider trading is the last component of substantive securities regulation that this Article discusses. Unlike fraud, one can find considerable diversity in states’ regulatory attitude toward insider trading; to see how states can differ in this regard, let us begin with an example.

Before leaving Japan after World War II, the Allied Powers imposed a complete set of securities laws. The Japanese Securities Exchange Law of 1948 (“the Law”) was copied verbatim from the American Securities Act of 1933, the Securities Exchange Act of 1934, and rules thereunder. After its enactment, only minor amendments to the Law were introduced, some of which even tracked post-1948 developments in American laws. Specifically, the Law included a version of Rule 10b-5 under the 1934 Act, but it was not applied to insider trading.<sup>178</sup>

Amendments to the Law, passed in 1988, prohibit insider trading in general and in connection with tender offers in particular, purporting to imitate the effect of Rules 10b-5 and 14e-3. Nevertheless, the insider trading regime in Japan remained in a state of desuetude. Japanese stock markets traditionally have been replete with insider trading and price manipulation both before and after the 1988 amendments. In 1994, a newly established Securities and Exchange Surveillance Commission (SESC) started to bring charges for insider trading,<sup>179</sup> but some considered it a camouflage for a

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177. The main administrative benefit is the ability to exchange information, especially where secrecy laws had previously blocked such exchange.

178. For overviews and analyses of Japan’s securities laws, see Atsuko Hirose, *Changes in Japanese Securities Law*, 32 HARV. INT’L L.J. 508 (1992); Wataru Horiguchi, *Securities Malfeasance in Japan: The Need for an Independent Organization to Monitor Insider Trading, Price Manipulation, and Loss Compensation*, 16 HASTINGS INT’L & COMP. L. REV. 223 (1993); Shen-Shin Lu, *Are the 1988 Amendments to Japanese Securities Regulation Effective Deterrents to Insider Trading?*, 1991 COLUM. BUS. L. REV. 179; George F. Parker, *The Regulation of Insider Trading in Japan: Introducing a Private Right of Action*, 73 WASH. U. L.Q. 1399 (1995); and Nicole J. Ramsay, *Japanese Securities Regulation: Problems of Enforcement*, 60 FORDHAM L. REV. S255 (1992).

179. See Steven Brull, *Japanese Panel Brings Insider Charges*, INT’L HERALD TRIB., Oct. 15, 1994, at 19; Emiko Terazono, *Tokyo Insider Dealing Probe Urged*, FIN. TIMES (London), Feb. 11, 1995, at 3.

nonenforcement policy.<sup>180</sup> In early 1998, this observation still seemed correct.<sup>181</sup>

Japan's case is especially interesting in light of the similarity to the United States of its statutory text, but it is not unique. Insider trading was outlawed only recently in many European countries, sometimes reluctantly, in compliance with an EU directive.<sup>182</sup> This Section sketches some background necessary for understanding international diversity in insider trading laws. It then offers a new outlook on insider trading, connected to the previous discussion of fraud, and models possible international interactions with regard to transnational insider trading.

### 1. Sources of International Diversity

Several factors may cause insider trading not to be treated in relative international harmony as are other facets of fraud. Although intuitively clear, the nature of the conduct in insider trading defies exact definition. For example, defining the scope of liable persons requires a determination of first-tier insiders (like officers and directors of the company), second-tier insiders (tippees), and so on. States can diverge not only over imposing liability on the second- and third-tier insiders, but also over the degree of liability and sanctions. These differences, however, are secondary and become relevant only after two states come to share the view that insider trading is undesirable and should be condemned. As the preceding paragraphs demonstrate, this is not yet the case in the international arena. Even when states do outlaw insider trading, they do not necessarily pursue violators with comparable vigor, and the consequence is de facto differences among states.

Several factors cause insider trading not to be treated like regular fraud. To be sure, powerful forces that determine states' attitudes toward insider trading include cultural, traditional, and political factors. In many

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180. See Rupert Bruce, *U.S. and Britain Spur Asia Toward Reform*, INT'L HERALD TRIB., Oct. 1, 1994, at 19.

181. In the year ended June 30, 1997, the SESC filed a "record" five criminal complaints, only three of which concerned insider trading. The previous record number of criminal complaints filed by the watchdog was three, set in the year from July 1994 to June 1995. See *Securities Watchdog Filed 5 Criminal Complaints in Year*, Japan Econ. Newswire, Oct. 1, 1997, available in LEXIS, Busfin Library, Allnws File. It was only in July of 1997 that the first prison sentence was levied for insider trading—and even that sentence was a suspended one. See *Ex-lawyer Gets Suspended Term for Insider Trading*, Japan Econ. Newswire, July 28, 1997, available in LEXIS, Busfin Library, Allnws File.

182. See Council Directive 89/592 of 13 November 1989 Coordinating Regulations on Insider Dealing, 1989 O.J. (L 334) 330. See generally Lynda M. Ruiz, *European Community Directive on Insider Trading: A Model for Effective Enforcement of Prohibitions on Insider Trading in International Securities Markets*, 33 COLUM. J. TRANSNAT'L L. 217 (1995).

states, including Japan and some prominent European countries, insider trading has been tolerated for a long time as "part of the game" of securities trading and has not even carried a stigma of being immoral. Particularly in Japan, insider trading continues to be an integral part of the interrelations between politicians and the business community.<sup>183</sup>

Against this backdrop, the United States had stood alone in holding a very hostile view toward insider trading.<sup>184</sup> Donald Langevoort plausibly traces the roots of this difference in attitude to American "egalitarianism and obsession with the appearance of fair play."<sup>185</sup> Obviously, not all nations share such values with the same intensity as the United States. In fact, even Americans are not single-minded on this issue. Notwithstanding the developments in American case law and public hostility toward insider trading, academia in the United States still debates the adverse effects of insider trading and whether it should be prohibited at all.<sup>186</sup>

In fact, even American securities laws did not outright condemn insider trading for almost three decades after the enactment of the Securities Acts.<sup>187</sup> Specifically, Rule 10b-5<sup>188</sup>—today the primary vehicle for public and private enforcement—only generally outlaws fraud "in connection with the purchase or sale of securities." Only in 1961 did the SEC apply Rule 10b-5 to insider trading and announced the fundamental insider's duty to "abstain or

183. See Makoto Sato, *Focus Returns to Lawmaker Stock Trading*, NIKKEI WKLY., Mar. 2, 1998, at 4; see also Cox, *Regulatory Competition*, *supra* note 26, at 152; Lu, *supra* note 178, at 237 ("[One] reason for the [Securities] Bureau 'inefficiency' is that bureaucrats and politicians may well be involved in insider trading themselves.").

184. A colorful exposition of this view was provided by James Cox: "American jurisprudence abhors insider trading with a fervor reserved for those who scoff at motherhood, apple pie, and baseball." James D. Cox, *Insider Trading and Contracting: A Critical Response to the "Chicago School"*, 1986 DUKE L.J. 628, 628.

185. Langevoort, *Fraud and Insider Trading*, *supra* note 21, at 182 ("Under this view, insiders should be content with their paychecks and not overreach for profits. That this smacks a bit of populism, of envy and resentment directed at the privileges of class and wealth, is hard to deny. But appeal to populism is a recurrent theme in American economic history.") (citations omitted); cf. MARK J. ROE, *STRONG MANAGERS, WEAK OWNERS—THE POLITICAL ROOTS OF AMERICAN CORPORATE FINANCE* 28–32 (1994) (exploring the effects of political factors, including populism, on American corporate finance).

186. The economic arguments and the corresponding legal ones are covered later in this Article. For ethical arguments, see James Boyle, *A Theory of Law and Information: Copyright, Spleens, Blackmail, and Insider Trading*, 80 CAL. L. REV. 1413 (1992); Kim L. Scheppele, *It's Just Not Right: The Ethics of Insider Trading*, 56 L. & CONTEMP. PROBS. 123 (1993).

187. Indirectly, insider trading has been severely restricted by section 16 of the Securities Exchange Act of 1934, 15 U.S.C. § 16 (1994), which requires a limited category of "core" insiders to report, monthly, changes in their holdings, and denies such insiders "short swing" profits—profits made through sale-and-purchase or purchase-and-sale transactions within six months. For a review and assessment, see ROBERT C. CLARK, *CORPORATE LAW* 293–300 (1986); and Steve Thel, *The Genius of Section 16: Regulating the Management of Publicly Held Companies*, 42 HASTINGS L.J. 393, 393 (1991) (suggesting that Section 16 is better understood as a tool for promoting the efficient operation of publicly-held corporations). See also Jesse Fried, *Towards Reducing the Profitability of Corporate Insider Trading Through Pretrading Disclosure*, 70 S. CAL. L. REV. 303, 306 (1998) (examining measures that could be adopted to reduce the ability of corporate insiders to profit from inside information).

188. Employment of Manipulative and Deceptive Devices, 17 C.F.R. § 240.10b-5 (1998).



disclose.”<sup>189</sup> The rule was adopted by the Second Circuit in 1968,<sup>190</sup> and by the Supreme Court only in 1980.<sup>191</sup>

Put plainly, insider trading in the United States was held to be “bad” by stigmatizing it as “fraud” through the application of Rule 10b-5. While equating insider trading with fraud is defensible, it is by no means a necessary logical move. One should bear in mind that in 1961 the SEC was facing a deficiency in the Securities Acts with regard to insider trading, and using the powerful yet open-ended Rule 10b-5 was a natural step to take.<sup>192</sup> However, it was natural only in the American setting of certain public views, a resourceful and powerful Commission, and great hurdles to passing Congressional legislation. One may also speculate from the fact that the opinion in *Cady, Roberts* was written by Chairman William Cary, a man who had very clear views about the need for federal intervention in order to set minimum standards for state corporate laws.<sup>193</sup> Had any or all of these factors been different, the proscription of insider trading might have taken a different form, not necessarily by declaring it to be “fraud.”

## 2. *Economic Analyses*

Economic analysis of insider trading further supports the likelihood of regulatory diversity over insider trading. Limits of scope do not allow a full overview of economic arguments made with regard to the effects of insider trading, but one can generally identify two strands of thought, one opposing and one supporting insider trading regulation.<sup>194</sup> In a nutshell, opponents of insider trading regulation argue that allowing managers to engage in insider trading may be an efficient compensation mechanism, although they would disallow insider trading by secondary insiders. Since everybody is aware of the possibility of insider trading taking place, appropriate discounts are made in advance, so that nobody can claim to be harmed.<sup>195</sup>

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189. *Re Cady, Roberts & Co.*, 40 S.E.C. 907, 911 (1961); see CLARK, *supra* note 187, at 320–21.

190. See *SEC v. Texas Gulf Sulphur Co.*, 401 F.2d 833, 847 (2d Cir. 1968).

191. See *Chiarella v. United States*, 445 U.S. 222, 225 (1980).

192. Cf. Donald C. Langevoort, *Rule 10b-5 as an Adaptive Organism*, 61 *FORDHAM L. REV.* S7, S7 (1993) (arguing that Rule 10b-5 is suited as a centerpiece of securities regulation because of its flexibility).

193. See Cary, *supra* note 8, at 696–705.

194. For a convenient overview see DONALD C. LANGEVOORT, *INSIDER TRADING REGULATION* 8–17 (1990).

195. See, e.g., MACEY, *supra* note 60, at 13–16; HENRY MANNE, *INSIDER TRADING AND THE STOCK MARKET* 12–15 (1966); Dennis Carlton & Daniel R. Fischel, *The Regulation of Insider Trading*, 35 *STAN. L. REV.* 857, 866–72 (1983); Michael J. Carney, *Signaling and Causation in Insider Trading*, 36 *CATH. U. L. REV.* 863, 867–75 (1987).

Proponents of insider trading regulation point out two kinds of harm caused by insider trading: harm to the company and harm to the market. The alleged harm to the company stems from the well-known agency problem that arises from the separation of ownership and control in the corporation. Managers preferring their private interests over those of the company would manage it suboptimally or exploit it to their benefit.<sup>196</sup> Individual and other uninformed shareholders experience another type of harm from insider trading because they cannot fully hedge against their informational inferiority.<sup>197</sup> Adverse effects on the market are said to stem from the precautions taken by non-insider traders to ward off the possibility of being the “suckers” in a transaction. Such steps decrease market efficiency as a price-discovery mechanism.<sup>198</sup>

Consider a hypothetical securities commission evaluating its insider trading regulation policy. Economic arguments alone offer the commission a variety of positions it may choose and still reasonably legitimize publicly.

196. See, e.g., CLARK, *supra* note 187, § 8.2; Cox, *supra* note 184, at 628 (stating that transparency of management compensation justifies insider trading regulation); Frank H. Easterbrook, *Insider Trading, Secret Agents, Evidentiary Privileges, and the Production of Information*, 1981 S. CT. REV. 309, 327 (noting that insider trading decreases incentives to disclose and produce information); Robert J. Haft, *The Effect of Insider Trading Rules on the Internal Efficiency of the Large Corporation*, 80 MICH. L. REV. 1051, 1054-60 (1982) (noting that insider trading obstructs the orderly flow of information in the firm); Saul Levmore, *Securities and Secrets: Insider Trading and the Law of Contracts*, 68 VA. L. REV. 117, 107-21 (1982); Michael Manove, *The Harm from Insider Trading and Informed Speculation*, 104 Q.J. ECON. 823, 825-27 (1989) (discussing the adverse effects on the company wrought by discouraging company investments).

A more balanced attitude is presented in a series of papers by Lucian A. Bebchuk and Chaim Fershtman. See Lucian A. Bebchuk & Chaim Fershtman, *The Effect of Insider Trading on Insiders' Efforts in Good and Bad Times*, 9 EUR. J. POL. ECON. 469, 469-71 (1993); Lucian A. Bebchuk & Chaim Fershtman, *Insider Trading and the Managerial Choice Among Risky Investment Projects*, 29 J. FIN. & QUANTITATIVE ANALYSIS 1, 156-62 (1994).

197. In a competitive market dealers tend to break even. Since insiders benefit from their superior information, their profit must come at the expense of uninformed (“noise”) traders who are likely to be individual shareholders. See Ananth Madhavan, *Consolidation, Fragmentation, and the Disclosure of Trading Information*, 8 REV. FIN. STUD. 579 (1995) (presenting a formal model).

In an international multi-market setting this harm could be exacerbated to the extent that market fragmentation would facilitate evasion from detection. In order to avoid being detected, an insider could effect the transaction in a foreign market or through a foreign broker-dealer, typically in a country with “blocking laws” that provide for financial confidentiality. An insider who wanted to trade an unusually large block of securities could theoretically split the transaction among several markets. By doing so, she would be less likely to create detectable patterns, since the transaction in each market is less significant and may get blurred by trading noise. See Licht, *supra* note 1, 598-99.

Respectively, in order to regain the capability to effectively detect insider trading, commissions would have to interconnect their monitoring systems and databases. Cooperation in transnational enforcement of insider trading laws turns out to be more necessary than in other areas of securities regulation. At the same time, cooperation is also more demanding in terms of the resources needed for effective regulation. See Mann et al., *International Agreements*, *supra* note 25, at 837-38 (describing the role and prevalence of surveillance sharing agreements); Licht, *supra* note 168, at 37 (describing activities in the EU).

198. The chief effect is a higher spread—the difference between bid and ask prices. See Walter Bagehot, *The Only Game in Town*, 2 FIN. ANALYSTS J. 2 (1971); Lawrence Glosten & Paul Milgrom, *Bid, Ask, and Transaction Prices in a Specialist Market with Heterogeneously Informed Traders*, 14 J. FIN. ECON. 71 (1985).

Having a policy tolerating insider trading may rely on “lack of scientific consensus” or similar arguments. Obviously, the hypothetical commission need not approve insider trading outright; rather, it may support a narrow definition of the prohibited conduct and understaff its insider trading enforcement teams.

Such a hypothetical commission, however, may also *acknowledge* the harms caused by insider trading and yet decide to tolerate it, at least partially, in order to maximize national welfare through other avenues by externalizing its adverse effects. The point in such steps becomes clear when we recall the agency problem and the regulatory competition, or the “race to the bottom” phenomenon. Arbitrage trading in the internationalizing securities markets allows countries to externalize the effects of their legal securities regimes to other countries.<sup>199</sup> In the disclosure rules context, offering a lenient disclosure regime could theoretically attract companies to list their securities in that lenient market, thus drawing order flow and additional economic activity to it.<sup>200</sup> In the insider trading context, an additional element exists in the form of the agency problem. The actual decision about which market (and legal regime) to choose is taken by the company’s agents, who may prefer their personal interests over that of the company. Thus, managers may well opt for a lenient market, with a hope to profit by engaging in insider trading, even at the price of decreasing the company’s value.<sup>201</sup>

At this point the hypothetical commission should determine what it sees as the dominant adverse effect of insider trading—specifically, whether it considers insider trading to be an offense against the corporation or against the market. Considered as an offense against the market, the commission is more likely to hold a hostile stance toward insider trading, since it adversely affects a national resource. Thus, the victims of insider trading under this philosophy are all the citizens of that country (and foreign participants), irrespective of their being shareholders of the corporation whose securities are traded by insiders. Conversely, if insider trading is treated as an offense against the corporation, the adverse effects are limited to the corporation’s shareholders. For instance, where corporations listed in multiple markets are involved, each state has only a partial interest in shareholder welfare, determined by the relative holdings of its citizens in the corporation. In the extreme, there may be no loss to local citizenry if the shareholder basis in that country is nil—that is, when a corporation lists its securities in the

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199. See Licht, *supra* note 1, at 631.

200. See *supra* Section IV.A.

201. For a general theory of such significantly redistributive actions in the context of the competition for corporate charters, see Bebchuk, *supra* note 8.

country's market without making a public offering to its citizens and when no substantial local holdings develop.

To recap, the general social attitude toward insider trading has not yet reached a settled consensus—not in the United States, and clearly not in other countries. This situation stands in stark contrast to the well-settled attitude against regular fraud. Against this background, it is not surprising that not all nations see eye to eye with the American policy—reasonable regulatory minds can and do readily differ and conflicts among regulatory regimes are inevitable.<sup>202</sup> Perceiving insider trading as an offense against the corporation is likely to yield even greater diversity than perceiving it as an offense against the market. Accordingly, we would expect more cooperation to fight insider trading in the former case compared to the latter through harmonizing laws and mutual assistance in enforcement.

### 3. *The Correlated 2x2 Games and International Cooperation*

The variety of possible national perceptions of and positions toward insider trading leads to a variety of game models. The first two models in this Subsection relate to symmetrical games—games in which both players have the same preference order. The rest of the models brought here are asymmetrical—where the players have different preference orders due to different perceptions.

#### a. *A Harmony Game*

A straightforward case involves two countries with harmonious interests, i.e., a game of Harmony. Each player-state derives its highest utility from mutual cooperation, securing mutual assistance in monitoring and detection of insider trading and in later pursuing violators and their ill-gotten assets. The second-best option is unilateral enforcement of anti-insider trading rules, including, for that purpose, asserting extraterritorial jurisdiction. The third-best strategy is one in which the player-state itself does not actively fight insider trading activities, say, for lack of resources, but nonetheless benefits from enforcement actions taken by its counterpart if the two markets are somehow interlinked.<sup>203</sup> Finally, the least preferred outcome is where neither party regulates insider trading. Formally, the preference order is  $CC > CD > DC > DD$ , and the game's strategic form is presented *supra* in Figure 5. The implication of such an interrelation between the players for cooperation as discussed at length in Sub-subsection IV.B.2.a.

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202. See Langevoort, *Fraud and Insider Trading*, *supra* note 21, at 181.

203. Even if the two markets are completely separated, both players in the Harmony Game scenario perceive insider trading as bad. Thus, they may prefer a situation in which at least one party fights evil.

b. *Stag Hunt Game*

Consider now an alternative scenario in which states' decision-makers are not wholeheartedly determined to prohibit insider trading, for whatever reason—political, ethical, or any other. Here it makes a big difference whether a state's rival also prohibits insider trading (and effectively enforces the prohibition). Each state would be willing to fight insider trading only on condition that its rival also did so; otherwise, it would lose business to it. Such fear is further exacerbated if the state is concerned with its ranking in the international arena.<sup>204</sup>

A state's best outcome, therefore, is mutual cooperation in enforcing the prohibition. Next, it may prefer to be the renegade, for example, by enacting anti-insider trading laws but declining to enforce them vigorously. The third-best outcome would occur when neither player-state enforces anti-insider trading rules. The most disastrous outcome will occur when a state finds itself in the sucker's position, that is, when it fights insider trading alone. What makes this scenario somewhat more plausible in the anti-insider trading area than in the antifraud context is the lack of consensus with regard to insider trading and the political and economic forces that work to keep it available to people in positions of power. The players' preference order in this game is  $CC > DC > DD > CD$ . This is the Stag Hunt game, and its strategic form is presented *supra* in Figure 6.

In such a Stag Hunt game, states look for information and assurances on their rival's true preferences and expected behavior. In principle, such assurances should be willingly provided when both states share the same interest in reaching the CC outcome. Although the fear from being the sucker likens the situation to a Prisoners' Dilemma, the parties here do not have to overcome a dominant strategy to defect. Respectively, there is little need for central institutions with elaborate and resource-consuming enforcement systems.<sup>205</sup>

If states could be assured that their progressive (hostile) stance against insider trading will not be exploited by their competing rivals, they would be more willing to enact and enforce anti-insider trading laws. Seen in this light, the MOUs between the SEC and its fellow commissions abroad may be best explained as optimal assurance mechanisms in a Stag Hunt game. The same logic applies to the Insider Trading and Securities Fraud Act of 1988 (ITSFEA)<sup>206</sup> and the International Securities Enforcement Cooperation

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204. See *supra* Subsection III.B.2.

205. See Martin, *supra* note 52, at 782.

206. Insider Trading and Securities Fraud Act, Pub. L. No.100-704, 102 Stat. 4677 (1988) (codified as amended in scattered sections of 15 U.S.C. § 78(a) (1994)).

Act of 1990 (ISECA)<sup>207</sup>. ITSFEA authorizes the SEC to conduct investigations in the United States for foreign securities authorities.<sup>208</sup> Significantly, it does not require that the conduct subject to such investigation be a violation of American laws.<sup>209</sup> ISECA authorizes the SEC to provide its information to foreign securities authorities for securities investigations, and it further facilitates cooperation by exempting information provided by foreign regulators from the Freedom of Information Act.<sup>210</sup> Both acts support and complement the MOU system because they give the SEC more license in cooperating with fellow authorities. Thus, they can be interpreted as a signaling mechanism—a unilateral assurance on behalf of the United States that it is willing to pursue cooperative paths.<sup>211</sup>

c. *Ideological Hegemony Games*

The two game models presented so far were symmetric in assuming similar preference orders for both players. The Harmony game assumes this symmetry most strongly, and Stag Hunt takes into account the possibility of deviation from this mutual interest. In light of the significant diversity in states' attitudes toward insider trading, it seems necessary to analyze also the asymmetric situation—that is, to assume different preference orders for the player states. I call these games Ideological Hegemony games for reasons set forth below.

*Ideological Hegemony Game 1*—Consider a game in which Row is indifferent, for whatever reason, to insider trading, and Column sees great value in banning it. In principle, Row is not willing to invest in enforcing anti-insider trading rules, so its dominant strategy is D. While being indifferent to insider trading per se, Row is fully aware of the economic benefits that might accrue to it due to its attitude, so it prefers that Column play C rather than D. Thus, its preference order is  $DC > DD > CC > CD$ . Column's preferences are the opposite: it has a dominant strategy to play C to effectively prohibit insider trading. Column's preference order is similar to that in the Harmony game:  $CC > CD > DC > DD$ . Given the two dominant strategies, a Nash equilibrium exists in DC, as depicted in Figure 7.<sup>212</sup>

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207. International Securities Enforcement Cooperation Act of 1990, Pub. L. No. 101-550 § 201, 104 Stat. 2713 (codified as amended in scattered sections of 15 U.S.C. (1994)).

208. See 15 U.S.C. § 78(u)(2) (1994).

209. See *id.*

210. See 15 U.S.C. § 78x(d) (1994).

211. A typical MOU would call on the signatories to encourage the legislature in each signatory's country to pass such authorizing laws.

212. Similar to the outcome in the pure Harmony game, swapping the two middle terms in Column's preference order (which becomes  $CC > DC > CD > DD$ ) does not change its dominant strategy and the equilibrium outcome.

FIGURE 7. IDEOLOGICAL HEGEMONY 1

		Column	
		C*	D
Row	C	2, 4	1, 2
	D*	4, 3**	3, 1

Payoffs to (Row, Column)

Cell numerals refer to each player's ordinal ranked payoffs.

\* Player's dominant strategy

\*\* Equilibrium outcome

*Ideological Hegemony Game 2*—Consider now a game in which Column keeps playing the Harmony game as in Ideological Hegemony Game 1. Row's attitude, however, is more cynical than in that game. While it sees the importance of banning insider trading, it is willing to sacrifice these values—provided that Column adheres to its anti-insider trading policy—in order to prevail in the competitive international securities market. Should Column change its policy and defect, Row will prefer to defect too. In short, Row's preference order is that of the Prisoners' Dilemma—one that characterizes a race to the bottom. Row's dominant strategy is to play D, now for stronger reasons, and the equilibrium is again in (Row defect, Column cooperate). Figure 8 sums the game in the strategic form.

FIGURE 8. IDEOLOGICAL HEGEMONY 2

		Column	
		C*	D
Row	C	3, 4	1, 2
	D*	4, 3**	2, 1

Payoffs to (Row, Column)

Cell numerals refer to each player's ordinal ranked payoffs.

\* Player's dominant strategy

\*\* Equilibrium outcome

For a state in the position of Column, both asymmetric games exemplify the Hegemon's Dilemma because one country's interests lead it to a second-best outcome from its own point of view. Here, however, Column need not be the kind of hegemon usually referred to by international relations scholars—a world power. Rather, it ends up with an equilibrium outcome for row and column of DC, respectively, due to its ethical values that it considers superior and worth paying a price for.<sup>213</sup> This is why the situation may be called “ideological hegemony.” The concept of hegemony is disaggregated here into two components: structural hegemony—the concentration of economic resources in a single state—and ideological hegemony—the ability of the dominant state to persuade other actors to accept its frame of reference as their own.<sup>214</sup>

The implications for the form of international cooperation depend, therefore, on Column's structural and ideological power in the international arena. If Column is a powerful state, it may use side payments and threats to change Row's payoff structure. Less dominant states or hegemons in decline cannot exert equivalent leverage. They would probably prefer multilateral fora that lend themselves to multilateral issue linkage or serve as face-saving mechanisms. In the context of international securities regulation, the SEC has indeed openly admitted that unilateral action on its part met with considerable resistance and was largely ineffective—a fact that has caused it to adopt a cooperative policy.

213. Cf. KEOHANE, *supra* note 118, at 74–75 (“Altruists and saints can be as rational as the crassest materialist or most resolute bully.”).

214. See Kenneth A. Rodman, *Sanctions at Bay? Hegemonic Decline, Multinational Corporations, and U.S. Economic Sanctions Since the Pipeline Case*, 49 INT'L ORG. 105, 107 (1995).



Now consider Row. For it, multilateral fora are more effective in Ideological Hegemony Game 2, where the states need the multilateral framework to overcome their dominant strategy to defect. Row states in Ideological Hegemony Game 1, however, will show little interest in joining a multilateral organization that, in their view, does not serve any valuable goal. They would rather tolerate insider trading and garner the ensuing benefits such that only coercion or enticement might change their behavior. Indeed, many cases in which developed countries changed their laws to proscribe insider trading were in response to heavy American pressures initiated by the SEC.<sup>215</sup> In those cases a profound change in public perception of insider trading was also required,<sup>216</sup> which in turn necessitated passing primary legislation. In any event, these pressures have severely strained U.S. foreign relations and were another reason for adopting the cooperative policy.<sup>217</sup> Had the sole issue been providing assurances, MOUs would have been sufficient.

We are now able to look again at IOSCO and its role in the MOU movement. Tony Porter reports that IOSCO claims its 1989 Rio Declaration to be “nothing short of the ancestor to almost all the Memoranda of Understanding in place today,”<sup>218</sup> but rightly observes that several MOUs were signed before the Rio Declaration, and that the United States unilaterally initiated an overwhelming number of them. Within the analytical framework suggested here, we can say that the United States has realized that it cannot exert hegemonic power, in the traditional sense, to induce countries to curb insider trading (and outbound fraud). Nevertheless, seeing itself as an ideological hegemon, it utilized IOSCO to achieve the same result. For all its members, IOSCO served the classic role assigned to a weak organization like itself.<sup>219</sup> First, by giving its imprimatur, it helped the members save face. Second, by providing the text of a model MOU, it strengthened the cooperational focal point.

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215. See Kehoe, *supra* note 162, at 351–58.

216. See *id.*

217. See generally Mann et al., *International Agreements*, *supra* note 25 (discussing jurisdictional issues arising between the SEC and internationalized U.S. securities markets).

218. PORTER, *supra* note 35, at 113.

219. Cf. Anne-Marie Burley, *Regulating the World: Multilateralism, International Law, and the Projection of the New Deal Regulatory State*, in MULTILATERALISM MATTERS: THE THEORY AND PRAXIS OF AN INSTITUTIONAL FORM, *supra* note 31, at 125 (arguing that postwar international institutions that were initiated by the United States were inspired by its domestic New Deal regulatory system).

## V. CONCLUSION

As the globalization of securities markets accelerates, international cooperation in securities regulation grows in importance for regulators, lawyers, and practitioners. The general setting is a competitive one—competition is prevalent among markets and, consequently, among legal regimes (regulatory competition). Various forms of connection, particularly arbitrage trading in multiple-listed securities, now carry the effects of one regulatory regime to its neighbors. The outcome is a composite legal system in which national regimes may either enhance or erode the regulatory objectives of the component regimes.<sup>220</sup> The resulting external effects are reminiscent of those encountered in environmental contexts: for example, transborder emission of hazardous substances. In contrast, securities markets do not require geographical proximity in order for states to affect one another adversely. Also, in order to effectively enforce a country's securities regulation regime *domestically*, regulators increasingly need cooperation from their foreign counterparts. Cooperation among securities regulators is thus warranted for reasons that are beyond the standard argument for curbing a regulatory race for the bottom (which still retains its force, where applicable). Regulatory cooperation today encompasses a variety of issues and may take place in various political and economic settings.

This Article looked at problems of international cooperation in securities regulation in a new way. The gist of the analysis was the application of an interdisciplinary approach to these problems that integrates insights gained by international relations theory into an economic analysis of securities regulation. The Article examined three fundamental subjects of securities regulation—disclosure, antifraud, and insider trading—and transformed states' policies into preference orders in 2x2 games. Each of these issue areas may be modeled by different types of games, denoting a different conflictual structures among states' respective securities regulation policies. Hence, different predictions can be made about the level of expected international cooperation in that area. The Article then analyzed some facets of current cooperation regimes in light of these structural conclusions.

To the extent that disclosure regulation constitutes a regulatory burden, the provision of disclosure rules (requiring issuers to disclose more) creates a situation akin to a Prisoners' Dilemma, calling for a strong, centralized regime to solve it. However, other aspects of this subject, such as the setting of accounting rules, are less conflictual as captured by the Battle of the Sexes game model. They call for weaker institutions that can achieve a great deal merely through information exchange. Power differences between nations add yet another factor in designing international disclosure regimes (see Table 1).

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220. See Licht, *supra* note 1, at 635-36.

Antifraud and anti-insider trading regulation is also non-monolithic. While fraud tends to be combated in relative unison, thus requiring little investment in international institutions, insider trading and, to a lesser extent, outbound transnational fraud are not treated similarly across the globe. Reaching sustainable cooperation in these issues, however, is primarily a matter of providing assurances—a situation that is well modeled by the Stag Hunt game. Here, too, considerations of hegemony and power may complicate the analysis but facilitate cooperation by establishing (or at least initiating) a power-based regime. On the whole, anecdotal evidence, especially from the SEC's efforts to establish international cooperation, tends to support the theoretical predictions (see Table 1).

TABLE 1. SUMMARY

Subject	Typical Games	Regimes/ Institutions	Examples
Disclosure— Substantive	<ul style="list-style-type: none"> <li>• Prisoners' Dilemma</li> <li>• Hegemonic Stability</li> </ul>	<ul style="list-style-type: none"> <li>• Strong, centralized</li> <li>• Power based</li> </ul>	<ul style="list-style-type: none"> <li>• EU</li> <li>• MJDS</li> </ul>
Disclosure— Presentation	<ul style="list-style-type: none"> <li>• Battle of Sexes</li> </ul>	<ul style="list-style-type: none"> <li>• Weak— Information exchange</li> </ul>	<ul style="list-style-type: none"> <li>• IOSCO</li> </ul>
Antifraud	<ul style="list-style-type: none"> <li>• Harmony</li> <li>• Stag Hunt</li> </ul>	<ul style="list-style-type: none"> <li>• Very weak or absent</li> <li>• Weak—Assurances</li> </ul>	<ul style="list-style-type: none"> <li>• MOUs</li> </ul>
Insider Trading	<ul style="list-style-type: none"> <li>• Stag Hunt</li> <li>• Ideological Hegemony</li> </ul>	<ul style="list-style-type: none"> <li>• Weak—Assurances</li> <li>• Power based</li> </ul>	<ul style="list-style-type: none"> <li>• MOUs</li> </ul>

Notwithstanding its relative simplicity, the 2x2 game framework as employed here nicely captures the many differences evident between possible regulatory policies when they interact with one another. The critical step in the modeling process is the transformation of a regulatory policy into a preference order. Although it is unlikely that any actual relationship among regulators could be neatly pigeonholed into the boxes of a 2x2 matrix, it is equally unlikely that a typical securities regulator would be able to specify her international cooperation policy in considerably more detail than the format used here. The fact that a certain subject may be modeled by more than one 2x2 game does not diminish the model's explanatory power, but rather indicates the complexity of the issue.

In addition to having offered some new insights with regard to the specific fields discussed herein, this Article implies an agenda for further research. First, the methodology employed here can and should be similarly applied to other topics in international securities regulation. Such topics may include broker-dealer regulation, regulation of manipulative practices, clearing and settlement mechanisms, and stock exchange regulation.

Moreover, the same line of reasoning could be extended to other fields of law, such as taxation and antitrust, where international cooperation is relevant.<sup>221</sup>

Second, a better understanding of the dynamics of international securities regulation may still be achieved by relaxing some of the simplifying assumptions of 2x2 games. One could expect improved results if repeated game models were used. By allowing a "shadow of the future" to emerge, such models may yield more cooperational equilibria than the one-period model. Caution, however, is warranted in this respect for reasons explored earlier in this Article.<sup>222</sup>

Another feature of securities regulation is its gradual nature. Certain aspects are manifestly gradual, such as the frequency and timing of disclosure; others, like the prohibition of insider trading, may seem more dichotomous but in fact have some gradual character, such as in the definition of "insiders." Allowing for gradual degrees of cooperation should yield more subtle conclusions.<sup>223</sup> Similar progress may be achieved by employing n-person game models, and by analyzing the effects of incomplete information and perceptions.<sup>224</sup>

Finally, more progress can clearly be made by empirically studying the forms of international cooperation in securities regulation. In addition to the conventional comparative analysis of national laws, there is evidently room for studying the mechanisms of international cooperation, and international cooperation must be accompanied by a common understanding of its problems. This is not to say that national diversity in securities regulation regimes must be eliminated, but rather that its effects must be more fully understood.<sup>225</sup>

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221. The international tax system is a good candidate for such an exercise. Indeed, the network of MOUs in securities regulation is but a shadow of the vast network of bilateral tax treaties. One may thus wonder, why is there a WTO for trade but not one for tax? I leave the question to experts in international taxation. However, the present work suggests that even where taxation is concerned, different international problems involve different types and degrees of conflict. For example, allocating taxable income between taxing countries seems more contentious than prevention of complete tax evasion by taxpayers, which decreases the tax base. Each problem may warrant a different international regime.

222. See *supra* text accompanying note 69.

223. See Duncan Snidal, *Coordination Versus Prisoners' Dilemma: Implications for International Cooperation and Regimes*, 79 AM. POL. SCI. REV. 923, 941 (1985).

224. See, e.g., STEIN, *supra* note 39, ch. 3 (demonstrating that "misperception can lead to deviations from otherwise expected outcomes").

225. The phenomenon of a common international understanding in a certain field was dubbed "epistemic communities" in the international relations context. It is not yet clear whether we can talk about an emerging epistemic community with regard to securities regulation. Cf. Peter M. Haas, *Introduction: Epistemic Communities and International Policy Coordination*, 46 INT'L ORG. 1 (1992) (defining and discussing epistemic communities). See generally Jeffery Atik, *Science and International Regulatory Convergence*, 17 NW. J. INT'L L. & BUS. 736, 758 (1996-97) (discussing the possibility that science may provide "a new kind of international discourse" in certain regulatory contexts).