

A Collaborative Model of the Corporation

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Abstract

Two models of the corporation dominate legal discourse. The first is the management-power model, which is premised on vesting corporate insiders -- officers and directors -- with primary decision-making power. The second is the shareholder-power model which contemplates increased shareholder power to reduce managerial agency costs and self-dealing. Both models assume that insiders and shareholders engage in a competitive struggle for corporate power and address, descriptively and normatively, the appropriate allocation of that power.

Corporate law and practice have moved beyond existing theories of the corporation framed in terms of a competitive power struggle between insiders and shareholders, however. Increasingly, the insider-shareholder dynamic in the modern corporation is collaborative, not competitive. This Article responds to this development, defending a collaborative model of the corporation on both descriptive and normative grounds. In particular, the Article uses game theory to demonstrate how insider-shareholder collaboration is likely to produce complimentary information that increases firm value.

The collaborative model offers several insights for corporate governance. First, it suggests that, to enhance collaboration, core governance provisions should be the product of bilateral action involving both insiders and shareholders. Second, board insulation mechanisms should require shareholder input. Finally, doctrines constraining director use of corporate information should facilitate rather than frustrating information sharing between activist directors and their principals. In turn, implementation of these principles requires rethinking and adapting several existing principles of corporate law.

TABLE OF CONTENTS

INTRODUCTION	2
I. CONFRONTATIONAL THEORIES OF THE CORPORATION	5
A. The Managerial-Power Model of the Corporation	5
B. The Shareholder-Power Model.....	7
II. THE EMERGENCE OF COLLABORATION.....	9
A. Institutional Investors and Collaboration.....	9
1. Large Institutional Investors	9
B. Anecdotal Evidence of Collaboration.....	13
III. THE VALUE OF COLLABORATION IN A WORLD OF PARTIAL INFORMATION	15
A. Private Ordering and Collaboration.....	15
B. Information Complexity and Complementarity.....	17
C. Aggregating Insider and Investor Information	20
D. The Value of Collaboration - An Illustrative Hypothetical	22

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IV. THE GOVERNANCE OF COLLABORATION.....	26
A. Economic Rights.....	26
B. Administrative Rights.....	28
1. The Marginal Contribution Criterion.....	28
2. Taxonomy.....	29
3. Implementation.....	31
1. Formal Contracts.....	31
2. Relational Contracts.....	32
V. POLICY IMPLICATIONS OF THE COLLABORATIVE MODEL.....	34
A. Corporate Charters vs. Bylaws.....	35
B. Balancing Board and Shareholder Power.....	37
1. Staggered Boards vs. Poison Pills.....	38
2. Say on Pay.....	40
3. Special Shareholder Meetings.....	40
C. Information-Sharing.....	41
CONCLUSION.....	44
APPENDIX.....	45

INTRODUCTION

Two models of the corporation dominate legal discourse.¹ The first is the management-power model. Under this model, which had its origins, descriptively, in the insights of Berle and Means, corporate insiders – officers and directors – exercise control over corporation decisions while shareholders are mere capital providers. Insider control is formalized through statutory provisions such as Delaware General Corporation Law section 141 which vest legal authority for corporate decision-making in the board of directors.² The result has been termed “director primary.”³

Berle and Means observed the potential for the management-power model of the corporation to generate agency costs and reduce firm value. In particular, vesting authority in corporate insiders creates information asymmetries and managerial moral hazard problems. Some commentators have responded by advocating increased shareholder empowerment to combat these problems. The resulting shareholder-power model contemplates increased shareholder power to reduce managerial agency costs and self-dealing.

Both models assume that insiders and shareholders engage in a competitive struggle for corporate power and address, descriptively and normatively, the appropriate allocation of that

¹ Chief Justice Strine has colorfully characterized adherent to the two models as “the dueling ideological mythologists of corporate law.” Leo E. Strine Jr., *Can We do Better by Ordinary Investors? A Pragmatic Reaction to the Dueling Ideological Mythologists of Corporate Law*, 114 Colum. L. Rev. 449, 457 (2014) (describing the divide between the money manager advocates and the insulation advocates).

² See DEL. CODE ANN. tit. 8, § 141(a) (2015); MODEL US. CORP. ACT § 8.01(b) (AM. BAR ASS’N 2010).

³ Stephen M. Bainbridge, *Director Primacy: The Means and Ends of Corporate Governance*, 97 NW. U. L. REV. 547, 547 (2003).

power. Disagreement only arises as to whether board power or shareholder power is the right response to this struggle. The rise of the activist investor has raised the profile of this debate. Defenders of shareholder activism support increased shareholder empowerment to enable activists to wrest corporate control from incumbents and justify this effort as promoting increased firm value. Critics of activism describe activist agendas as short-term and destructive of corporate value. While the effect of shareholder activism on long term firm value remains highly disputed, commentators on both sides frame the debate in competitive terms.

Meanwhile, the corporate world has moved on. Increasingly, the insider-shareholder dynamic in the modern corporation is collaborative, not competitive. Although shareholders are no longer dispersed and passive but instead are empowered, they are increasingly using their greater power not to wrest control from corporate insiders but to work collaboratively alongside those insiders and to bring new information and insights to operational decision-making. In a coherent, if unheralded, effort, insiders and newly empowered shareholders are increasingly joining forces to promote deliberative mechanisms based on cooperation rather than coercion. They are doing so in multiple ways—through direct engagement about matters of concern, the flourishing of private initiatives aimed at introducing shared governance principles, activist interventions oriented to the longer term and several other forms of constructivist activism. Although coexisting with hostile activism, the trend toward board-shareholder collaboration is spreading rapidly and systemically. Institutional investors are at the forefront of this trend. Breaking old patterns, they have increasingly issued statements that they would support the long-term plans of companies, withhold support of short-termist activist campaigns and work *with*, rather than against, boards of directors. The trend suggests that collaboration offers a distinctive mechanism for enhancing firm value that unilateral decision-making by either insiders or shareholders cannot provide.⁴ It is time for the theory to catch up with the practice. This Article fills the gap,⁵ using game theory to demonstrate how insider-shareholder collaboration is likely to produce complimentary information that increases firm value.

“Confrontational” theories of the corporation defend agency cost reduction as being equivalent to output maximization, based on the assumption that asymmetric information, and hence managerial moral hazard, is *the* problem in corporate governance. This conclusion, however, does not withstand the changes that have occurred in corporate production and the role of shareholders, and the impact these changes have had on the information structure of the public corporation. Perhaps by giving central focus to managerial agency problems, these theories do not consider the broader potential impact of corporate governance on firm economic value.

Corporate production has grown knowledge-intensive. This makes it unlikely that any one individual or organization may possess the relevant information to respond effectively to *all*

⁴ See, e.g., C.N.V. Krishnan et al., The Second Wave of Hedge Fund Activism: The Importance of Reputation, Clout, and Expertise, 40 J. CORP. FIN. 296, 296 (2016) (describing the success of some hedge fund activists as the result of board representation, improving performance, and monitoring management rather than from capital structure changes).

⁵ One recent article suggests that the relationship between activist and targeted companies is moving toward a “new, collaborative (or at least less adversarial) conception,” but the analysis is largely limited to the hedge fund context and to the implication for golden leash practices. Gregory H. Shill, *The Golden Leash and the Fiduciary Duty of Loyalty*, 64 UCLA L. REV. 1246, 1256-59, 1261-64 (2017). On the contrary, this Article examines the potential for a full scope collaborative model of insider-shareholder relationships.

business challenges. It follows that today's corporations no longer face just classic issues of asymmetric information. Rather, they also confront what we call "partial information" problems, problems that require corporate actors to leverage and pull knowledge from multiple sources. At the same time, the rise of empowered and actively informed investors offers a new source of well-resourced and sophisticated firm-specific knowledge from *outside* the corporation. For reasons we detail below, today's shareholders are likely to possess information that is not only additive to the information possessed by corporate insiders, but that is complementary to the insiders' information. In this world, the normative superiority of a competitive corporate paradigm disappears. At its place, we find a trend toward systemic collaboration as a means to aggregate the partial information of insiders and shareholders, extracting value that goes lost under unilateral decisionmaking.

The value of board-shareholder collaboration thus flows from the aggregation of the complementary information that insiders and shareholders are likely to possess in a world of complex investments and empowered shareholders. This conclusion raises a series of questions about the governance of collaboration, which this Article begins to tackle, drawing on the theory of cooperative games. The main insight is that under a realistic assumption of market incompleteness, boards and investors may develop incentives for deviating behaviors and hence fail to collaborate even though collaboration is value-increasing. On the board's side, these behaviors will largely tend to reflect instances of moral hazard and entrenchment. Correspondingly, on the investors' side, this behavior will typically take the form of short-termism, as some investors (for example hostile hedge funds) might be in the position to competitively exploit asset pricing imperfections to profit from short-term speculative options. The common feature shared by these deviating behaviors is the creation of a power imbalance, either in favor of the investors or the board, which calls for corrective measures.

To redress these concerns, the collaborative model is best supported by governance structures that promote joint action between insiders and shareholders and limit the opportunism that can result from unilateral power. We identify three examples of such structures. First, we argue that core governance provisions should be the product of bilateral action involving both insiders and shareholders. In particular, our analysis provides a justification for privileging the requirement that critical components of corporate structure should be charter-based rather than bylaws-based, as amending the charter requires the collaborative effort of insiders and shareholders, while bylaws are largely a reflection of unilateral governance. Second, board insulation mechanisms should require shareholder input and last a finite time (as opposed to being perpetual), as this would preserve board authority against the risk of non-collaborative, speculative investor behavior, while avoiding that board protection might lead to non-collaborative board behavior. Finally, doctrines constraining director use of corporate information should facilitate rather than frustrating information sharing between activist directors and their principals.

Implementation of these principles requires some second order adjustments. In particular, we identify concerns that our proposals raise due to limitations on the efficiency of the IPO market in disciplining corporate governance. We also acknowledge the tension that our proposals raise with respect to traditional limitations on shareholder fiduciary obligations. We offer some preliminary thoughts with respect to both concerns.

The rest of the Article proceeds as follows. Part I summarizes and critically assesses the prevailing confrontational theories of the corporation, exposing these theories' growing lack of explanatory power.⁶ Part II details the emergence of the collaborative model. Part III shows that board-shareholder collaboration creates value by aggregating the diverse and complementary information possessed by insiders and shareholders. Part IV uses game theory to formalize the source of this value creation and to identify the necessary criteria for insider-shareholder collaboration to enhance corporate value. Part V discusses the policy implications of the analysis.

I. CONFRONTATIONAL THEORIES OF THE CORPORATION

A. The Managerial-Power Model of the Corporation

Scholars have depicted the relationships between firm insiders (boards and managers) and shareholders as confrontational since Berle and Means⁷ and, in the economic literature, since Jensen and Meckling.⁸ Berle and Means identified the separation of ownership (by shareholders) and control (by managers) in the public corporation and argued that diffuse and diverse shareholders were unable to exercise effective control over self-interested managers.⁹ Critical to Berle and Means' story was the premise that, absent effective shareholder control, managers could and did engage in self-dealing behavior.

Jensen and Meckling formalized the intuition. They emphasized the respective positions of shareholders as "principals" and managers as "agents," and identified managerial moral hazard as an agency cost arising from the asymmetric information existing between firm insiders and outsiders.¹⁰

This principal-agent problem -- managerial moral hazard -- rests at the core of U.S. corporate law. Under the management-power model of the corporation, the corporate form presumes the adoption of a board structure alongside centralized management precisely to address this problem. That is, for board advocates, the central principle in the prevailing legal model of the corporation is that vesting authority for corporate decision-making in the board of directors¹¹ serves to efficiently address moral hazard and other agency costs.¹² Collective action problems and

⁶ This does not exclude that confrontational theories may suffer from additional common limitations. *See, e.g.*, Simone M. Sepe, *Board and Shareholder Power Revisited*, 101 MINN. L. REV. 1377 (2017) (examining the shortcomings arising from the failure of corporate legal theory to consider adverse selection problems). Neither this excludes that each paradigm may suffer from individual limitations, *see, e.g.*, William W. Bratton and Simone M. Sepe, *Shareholder Power and Incomplete Markets*, (unpublished manuscript) (2017) (examining the normative limitations of the shareholder paradigm).

⁷ ADOLF A. BERLE, JR. & GARDINER C. MEANS, *THE MODERN CORPORATION AND PRIVATE PROPERTY* (reprint ed. 1982).

⁸ Michael C. Jensen & William H. Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure*, 3 J. FIN. ECON. 305, 318 (1976).

⁹ *See* BERLE & MEANS, *supra* note 1, at 84-89.

¹⁰ *See* Jensen & Meckling, *supra* note 8, at 308.

¹¹ *See* DEL. CODE ANN. tit. 8, § 141(a) (2015); MODEL US. CORP. ACT § 8.01(b) (AM. AR ASS'N 2010).

¹² *See id.* at 550, 559-74 (2003); Jack B. Jacobs, "*Patient Capital*": *Can Delaware Corporate Law Help Revive It?*, 68 WASH. & LEE L. REV. 1645, 1657-61 (2011) (attributing national economic decline to, among other causes, the erosion of board power); Leo E. Strine, Jr., *Toward a True Corporate Republic: A Traditionalist Response to Bebchuk's Solution for Improving Corporate America*, 119 HARV. L. REV. 1759, 1777-82 (2006) (illustrating how a

asymmetric information provide the key economic arguments supporting this conclusion. Unlike shareholders, directors could act as efficient central decision-makers, avoiding coordination issues and rational apathy,¹³ and enjoying privileged access to corporate information.¹⁴ And the need to protect the board's informational advantage against the interference of necessarily less-informed outside investors would explain why the law exclude shareholder inputs from the corporate decisionmaking process,¹⁵ instead granting the board virtually hegemonic decisionmaking power--power which is, in turn, delegated by the board to corporate executives.

Thus, board advocates defend hegemonic board power¹⁶ as both positively founded and economically rational. This account, however, is only partially accurate. Historically, the management-power model accurately captures the managerialist period, which began at the end of World War II and ended around 1980. The corporations of that time revolved around corporate insiders brought in to "hire capital from the investor."¹⁷ Close to the board paradigm's idea of "platonic masters," directors and managers amounted to quasi-civil servants¹⁸ vested with a nonreviewable power of fiat as long as they could keep the public satisfied with jobs and growth.¹⁹ Shareholders were dispersed and passive, with few mechanisms to overcome collective action problems, and hence dismissed as mere capital providers.²⁰ During the managerialist era, the fragmented nature of equity ownership, an expanding economy matched by sustained corporate success, and widespread New Deal hostility toward market-driven outcomes²¹ are the main factors that enabled hegemonic managerial power to persist as a sustainable equilibrium.

traditionalist would defend board power against proposals to increase shareholder power); Martin Lipton, *Takeover Bids in the Target's Boardroom*, 35 BUS. LAW. 101, 130-31 (1979) (defending board power in the takeover context).

¹³ See Bainbridge, *supra* note **Error! Bookmark not defined.**, at 557-558.

¹⁴ See William W. Bratton & Michael L. Wachter, *The Case Against Shareholder Empowerment*, 158 U. PA. L. REV. 653, 659-60 (2010).

¹⁵ See Stephen M. Bainbridge, *Preserving Director Primacy by Managing Shareholder Interventions*, in RESEARCH HANDBOOK ON SHAREHOLDER POWER 231, 234-36 (Hill & Randall S. Thomas eds., 2015); Leo E. Strine, Jr., Essay, *Can We Do Better by Ordinary Investors? A Pragmatic Reaction to the Dueling Ideological Mythologists of Corporate Law*, 114 COLUM. L. REV. 449, 456, 475 (2014).

¹⁶ Hegemonic boards are conceptually distinguished from "empowered boards." A hegemonic board can exclude shareholder informational inputs altogether and restrict shareholder discipline to fairly extraordinary circumstances. An empowered board has authority that is sufficient to resist short-termist shareholder interference but is always called to respond to long-term shareholder discipline. See K.J. Martijn Cremers & Simone M. Sepe, *The Shareholder Value of Empowered Boards*, 68 STAN. L. REV. 67, 123-126 (2016).

¹⁷ Bayless Manning, Book Review, 67 YALE L.J. 1477, 1489 (1958).

¹⁸ See William W. Bratton & Michael L. Wachter, *Shareholder Primacy's Corporatist Origins: Adolf Berle and The Modern Corporation*, 34 J. CORP. L. 99, 100, 110-11 (2008).

¹⁹ See ADOLPH A. BERLE, *THE AMERICAN ECONOMIC REPUBLIC* 169 (1963).

²⁰ See Adolf Berle, *Property, Production and Revolution: A Preface to the Revised Edition*, in ADOLF A. BERLE, JR. & GARDINER C. MEANS, *THE MODERN CORPORATION AND PRIVATE PROPERTY* xxvii, xxxiii (rev'd ed. 1967).

²¹ Bratton & Sepe, *supra* note **Error! Bookmark not defined.**, at 69.

Since the late 1970s-early 1980s,²² however, the pure management power model has been substantially diluted due to a variety of developments including the rise of independent directors²³ and the increased role of the board in monitoring and thus constraining managerial autonomy.²⁴ Nonetheless, commentators continue to defend versions of the management-power model.²⁵ For example, while Steve Bainbridge distinguishes his director primacy model from the managerialist model, by focusing on the existence in the managerial corporation of managerial discretion distinct from the powers delegated by the board of directors,²⁶ this distinction is of limited importance in the relationship between insiders and shareholders. Under both the director primacy model and the management corporation, insiders hold exclusive decision-making power over the corporate affairs, a power that commands the exclusion of any shareholder inputs. Similarly, Bill Bratton and Michael Wachter argue that shareholder empowerment led to short-termism and excessive risk-taking that contributed to the 2008 financial crisis and defend managerial discretion. “In our view, the prevailing legal model gets it right when it remits the judgment to the directors and their appointed managers.”²⁷

B. The Shareholder-Power Model

The stalled economy of the 1970s put an end to the managerialist era and the happy story of corporate insiders as capable guardians of the shareholders’ money.²⁸ Directors and managers came to be seen as failing to do their jobs.²⁹ The rise of the hostile takeover offered the first strands of an alternative to the managerialist model of the corporation by providing a mechanism by which shareholders could discipline entrenched management and reduce managerial agency costs. That is, hostile takeovers challenged boards’ hegemonic status and demonstrated, for the first time, the power and transformative potential of shareholder inputs as operating through the capital markets (that is, the simple exercise of stock market purchasing power).³⁰

²² The other corporate model in which we encounter conditions that rationalize hegemonic board power is the contemporary dual-class corporation with a controlling shareholder, in which controlling ownership and innovation-driven corporate production are the factors that make hegemonic board power an equilibrium. See Zohar Goshen & Assaf Hamdani, *Corporate Control and Idiosyncratic Vision*, 125 YALE L. J. 560, 565 (2016) (arguing that the goal of adopting a dual-class share structure is to defend the entrepreneur’s “vision”). Hegemonic board power in the dual-class corporation is, of course, largely a reflection of hegemonic *controller* power, as controllers tend to seat on the board and/or reserve the right to appoint a majority of board members. See Clifford G. Holderness & Dennis P. Sheehan, *The Role of Majority Shareholders in Publicly Held Corporations: An Exploratory Analysis*, 20 J. FIN. ECON. 317, 324 (1988). This Article focuses on board and shareholder power in cases that do not involve a controlling shareholder.

²³ Jeffrey N. Gordon, *The Rise of Independent Directors in the United States, 1950–2005: Of Shareholder Value and Stock Market Prices*, 59 STAN. L. REV. 1465 (2007).

²⁴ Jill E. Fisch, *Taking Boards Seriously*, 19 Cardozo L. Rev. 265 (1997) (describing the rise of the monitoring board).

²⁵ See Strine, *supra* note 17, at 455 (describing the view of some commentators that “the best way to ensure that corporations generate wealth for diversified stockholders is to give the managers of corporations a strong hand to take risks and implement business strategies without constant disruption by shifting stock market sentiment.”).

²⁶ See Bainbridge, *supra* note 9, at 561.

²⁷ William W. Bratton & Michael L. Wachter, *The Case Against Shareholder Empowerment*, 158 U. PA. L. REV. 655, 716 (2010).

²⁸ See William W. Bratton & Michael L. Wachter, *Shareholder Primacy’s Corporatist Origins: Adolf Berle and The Modern Corporation*, 34 J. CORP. L. 99, 100, 144 (2008).

²⁹ GERALD F. DAVIS, *THE VANISHING AMERICAN CORPORATION: NAVIGATING THE HAZARDS OF A NEW ECONOMY* 56 (2016).

³⁰ See FRANK H. EASTERBROOK & DANIEL R. FISCHEL, *THE ECONOMIC STRUCTURE OF CORPORATE LAW* 4, 18-21, 91, 93, 96-97 (1991). See also Henry G. Manne, *Mergers and the Market for Corporate Control*, 73 J. POL. ECON. 110,

Managers responded to hostile takeovers by seeking legal reforms designed to preserve managerial power. These reforms included state anti-takeover statutes as well as judicial and statutory endorsement of management self-help through the use of staggered boards, poison pills and other anti-takeover defensive measures. Commentators debated whether management use of takeover defenses was appropriate or whether management should instead remain passive and allow shareholders the freedom to decide whether to accept a hostile bid. The scene was set for the battle between shareholders and managers over corporate control.

The debate over management use of takeover defenses evolved into a broader call for shareholder empowerment as a tool for reducing managerial agency costs. Arguing that takeover defenses inappropriately insulated management from market discipline, defenders of shareholder democracy, most prominently Lucian Bebchuk, argued that shareholders should be given greater authority to enable them to reduce those agency costs. Bebchuk advocated increased shareholder empowerment, including granting shareholders powers that were currently reserved to corporate insiders.³¹

Critical to both the management-power model and the shareholder-power model is a competitive struggle between insiders and shareholders for corporate control. The confrontational character of both models is apparent in the language reflected in the discourse. The language of combat dates back to the 1970s when “takeover battles” featured “white knights,” “scorched earth takeover defenses,” “poison pills” and “greenmail.” Although the conflicts between shareholders and insiders today rarely involve hostile battles for corporate control, the language of combat persists. For example, a white paper directed at corporate boards termed majority voting “the next battleground in the corporate governance wars between the activist institutional shareholder community and ‘Corporate America.’”³² Similarly, Fortune magazine described Trian’s activist campaign at DuPont as “War.”³³ And Delaware Supreme Court Chief Justice Leo Strine’s recent essay describes activist hedge fund wolf packs and asks “Who Bleeds when the Wolves Bite?”³⁴

Similarly, the confrontational approach is reflected in the characterization of the objectives of each model. Today’s adherents to the managerial-power model defend it in terms of the need to protect the corporation from the short-term interests of activist shareholders. Similarly, shareholder power advocates persevere in their call to reduce managerial agency costs. In other words, both sides view the preservation of power as necessary to curb the destructive tendencies of the opposition. We argue that this competitive characterization no longer (or only partially) reflects the reality of corporate-shareholder engagements. Instead, as we explain in the next section, these interactions are increasingly taking the form of collaboration.

113 (1965) (pioneering theoretical assertions on the value-enhancement implications of the market for corporate control).

³¹ See Lucian Arye Bebchuk, *The Case for Increasing Shareholder Power*, 118 HARV. L. REV. 833, 865-70 (2005) (arguing for giving shareholder the power to initiate changes in the corporate charter and the state of incorporation).

³² Latham & Watkins, *Majority Voting For Directors: The Latest Corporate Governance Initiative*, M&A Deal Commentary, Dec. 9. 2005, https://www.lw.com/upload/pubContent/_pdf/pub1437_1.pdf.

³³ Stephen Gandel, *DuPont nearly lost its war with activist Nelson Peltz*, Fortune, June 4, 2015, <http://fortune.com/2015/06/04/dupont-nelson-peltz-vote/>

³⁴ Leo E. Strine, Jr., *Who Bleeds When the Wolves Bite? A Flesh-and-Blood Perspective on Hedge Fund Activism and Our Strange Corporate Governance System*, 126 YALE L. J. 1870, 1908 (2017).

II. THE EMERGENCE OF COLLABORATION

A. Institutional Investors and Collaboration

Shareholders no longer fit Berle and Means' account.³⁵ Instead, they have grown empowered and informed, largely because of changes that occurred in the market place.³⁶ Of all these changes, the most salient have been the reconcentration of equity ownership and the rise of hedge funds.³⁷ Since the 1990s, share ownership by institutions has continued to increase,³⁸ giving rise to what commentators have dubbed "agency capitalism."³⁹ Institutional investors now own over two-third of the outstanding shares of the thousand largest US public companies.⁴⁰ Institutional investors have also become increasingly knowledgeable and sophisticated.

Institutional investors vary in their characteristics – from passive mutual funds, which do not "pick" stocks but instead invest across the broad market and seek to obtain market returns for their beneficiaries at a relatively low cost, to hedge funds whose business model is predicated on identifying companies that they believe underperform industry peers, buying a small stake in such companies and then forcing changes from the inside that can improve corporate performance. Regardless of these differences, as we shall see next, institutional investors of all types are increasingly undertaking various forms of collaboration with corporate insiders – although collaboration tends to exhibit distinctive traits depending on the specific characteristics of the collaborating investor.

1. Large Institutional Investors

Large institutional investors are increasingly engaged in information production.⁴¹ Asset managers like BlackRock, Vanguard, and State Street – whose combined holdings make them the largest shareholder in 40 percent of all U.S. listed companies⁴² – now make regular contact with

³⁵ Ronald J. Gilson & Jeffrey Gordon, *The Agency Costs of Agency Capitalism: Activist Investors and the Revaluation of Governance Rights*, 113 COLUM. L. REV. 863, 868-73 (2013).

³⁶ This does not imply that law reform played no role in the shift to shareholder empowerment. Law reform, however, has primarily involved federal securities law rather than corporate law. See Bratton & Sepe, *supra* note **Error! Bookmark not defined.**, at 46, fn. 203. In particular, the modernization process of proxy rules has greatly facilitated insurgents' access to proxy contests, opening the door to hostile engagement by activist shareholders. See *id.*

³⁷ Other crucial changes occurred in the market place include the emergence of proxy advisory firms, the adoption of "universal" majority voting and accompanying withhold campaigns. See Marcel Kahan & Edward Rock, *Embattled CEOs*, 88 TEX. L. REV. 987, 995-1005, 1010-11 (2010).

³⁸ *Id.* at 996.

³⁹ Gilson & Gordon, *supra* note 35, at 865. For an anticipation of this view in the corporate governance literature, see James Hawley & Andrew Williams, *The Emergence of Fiduciary Capitalism*, 5 CORP. GOV. 206, 206 (1997).

⁴⁰ Gilson & Gordon, *supra* note 35, at 865.

⁴¹ See Gilson & Gordon, *supra* note 35, at 867.

⁴² If we restrict the field to the largest 500 American corporations, share ownership by the Big Three amounts to an astonishing 88 percent. See Jan Fichtner et al. *Hidden Power of the Big Three? Passive Index Funds, Re-concentration of Corporate Ownership, and New Financial Risk*, 19 BUS. & POL. 238, 313 (2017). The rise of the Big Three is explained by the massive shift from active toward passive investment strategies, which began after the financial crisis. *Id.* 302-306. Unlike active funds, passive "index" funds replicate existing stock indices by buying shares of the member firms of a particular index. Blackrock, Vanguard and State Street largely dominate the passive index fund industry, collectively managing over 90 percent of all assets under management in passive equity funds. *Id.* at 304.

firm insiders. This is called shareholder “engagement”⁴³ and can take a wide range of forms, from private “one-on-one” meetings,⁴⁴ to “investor days,”⁴⁵ investor relations contacts,⁴⁶ industry conference presentations,⁴⁷ and a variety of online communications tools.⁴⁸ Attesting to the mounting importance of shareholder engagement, a recent survey found that 63 percent of large institutional investors have engaged in direct discussions with management over the past five years, and 45 percent had private discussions with a company’s board outside of management presence.⁴⁹ And while just six percent of S&P 500 companies reported investor engagement as recent as 2010, this rose to 23 percent by 2012, 50 percent in 2014, and reached 72 percent as of June 2017.⁵⁰ Although some commentators have questioned the extent to which some institutional investors act as informed investors,⁵¹ others document the extensive efforts that large mutual funds such as Vanguard and Blackrock have devoted to developing governance sophistication and expertise.⁵²

The recent past has also seen a flourishing of private initiatives aimed at promoting board-shareholder collaboration. One of the first such initiatives was the “Shareholder-Director Exchange Program” (SDX), a private organization established in 2014 by representatives of major U.S. corporations and big institutional investors like BlackRock and Vanguard.⁵³ The aim of the SDX is to promote a voluntary “template for healthy relations” between shareholders and boards.⁵⁴

⁴³ For a detailed description of shareholder engagement see Matthew J. Mallow & Jasmin Sethi, *Engagement: The Missing Middle Approach in the Bebchuk-Strine Debate*, 12 N.Y.U. J. L. & Bus. 385 (2016).

⁴⁴ PWC, *Director-Shareholder Engagement: The New Imperative 2*, <https://www.pwc.com/us/en/governance-insights-center/publications/assets/pwc-director-shareholder-engagement-the-new-imperative.pdf> (last visited Oct. 12, 2017).

⁴⁵ *Id.* at 3.

⁴⁶ Marco Tonello et. al, *Global Trends in Board-Shareholder Engagement*, HARV. L. SCH. F. ON CORP. GOVERNANCE & FIN. REG. (Oct. 25, 2013), <https://corpgov.law.harvard.edu/2013/10/25/global-trends-in-board-shareholder-engagement/#more-53945>.

⁴⁷ *Id.*

⁴⁸ *Id.*

⁴⁹ Joseph McCahery et al., *Behind the Scenes: The Corporate Governance Preferences of Institutional Investors*, 71 J. FIN. 2905, 2906 (2016).

⁵⁰ Ernst & Young, *2017 Proxy Season Review*, [http://www.ey.com/Publication/vwLUAssets/ey-2017-proxy-season-review/\\$File/ey-2017-proxy-season-review.pdf](http://www.ey.com/Publication/vwLUAssets/ey-2017-proxy-season-review/$File/ey-2017-proxy-season-review.pdf) (last visited Oct. 9, 2017). The numbers for BlackRock and Vanguard are especially telling. From mid-2014 to mid-2015, BlackRock performed over 1,500 private “engagements” with companies held in their portfolio and Vanguard had over 800 company engagements. See Fichtner et al., *supra supra* note **Error! Bookmark not defined.**, at 318. Further, both companies now have dedicated governance teams that are responsible for shareholder engagement. As reported by Blackrock, these governance specialists engage “in thousands of conversations with companies each year,” conversations that build on the new amount and access to information that investors have gained in recent years “to glean investment insights.” Blackrock - Viewpoint, *Exploring ESG: A Practitioner’s Perspective 2* (Jun. 2016), <https://www.blackrock.com/corporate/engb/literature/whitepaper/viewpoint-exploring-esg-a-practitionersperspective-june-2016.pdf> (last visited Oct. 12, 2017).

⁵¹ See, e.g., Dorothy Shapiro Lund, *The Case Against Passive Shareholder Voting*, __ J. Corp. L. __ (forthcoming) (arguing that passive investors are rationally ignorant and calling for the elimination of their right to vote their shares but arguing that active fund managers are informed due to the research incidental to their investment decisions).

⁵² See Fisch, Hamdani and Solomon, work in progress.

⁵³ James Woolery, *Introduction to the SDX Protocol*, HARV. L. SCH. F. ON CORP. GOVERNANCE & FIN. REG. (Feb. 5, 2014), <https://corpgov.law.harvard.edu/2014/02/05/introduction-to-the-sdx-protocol/>; see also SDX Protocol, About SDX, <http://www.sdxprotocol.com/about-sdx/> (last visited Oct. 14, 2017).

⁵⁴ David Gelles, *Unlikely Allies Seek to Check Power of Activist Hedge Funds*, N.Y. TIMES: DEALBOOK (Feb. 2, 2014, 10:01 PM), <https://dealbook.nytimes.com/2014/02/02/unlikely-allies-seek-to-check-power-of-activist-hedge-funds/>.

Along similar lines, in 2016, representatives of major US corporations and important investors (including again Blackrock, Vanguard and even activist hedge fund ValueAct) have signed a paper calling for new commonsense principle of corporate governance, principles that build on “constructive dialogue” among the involved parties.⁵⁵ The recently launched “Investor Stewardship Group” (ISG),⁵⁶ which brings together a collective of US-based institutional investors and global asset managers, similarly aims to improve cooperation among companies, large investors, and shareholders.⁵⁷ And at the beginning of 2017, the International Business Council of the World Economic Forum approved “The New Paradigm,” a programmatic framework that “conceives of corporate governance as a collaboration among corporations, shareholders and other stakeholders....”⁵⁸

Critically, engagement by large institutional investors is collaborative, rather than disciplinary. The initiatives described above focus primarily on communication – the provision of shareholder informational inputs to corporate insiders. The result is a dialogical process about matters of concern⁵⁹ and implementing a form of constructivist in-house activism.⁶⁰

2. Hedge Funds

Although the effect of hedge fund activism is widely debated,⁶¹ everybody agrees that hedge funds are informed investors. To select their targets, they employ teams of dedicated analysts who pore over financial documents,⁶² engage with both the company’s existing investors and competitors, and often visit potential targets to gather as much information as possible.⁶³ This information then typically flows into the often-lengthy whitepapers that hedge funds release when they decide to disclose their interest in a target.

In the words of one SDX member, the SDX developed in the belief that “[s]hareholders and the boards that serve them need to be closer, they need to be more integrated, and there need to be real relationships.” *See id.*

⁵⁵ Tim Armour et al., Commonsense Corporate Governance Principles, COMMONSENSE CORP. GOVERNANCE PRINCIPLES, <http://www.governanceprinciples.org> [<http://perma.cc/YWN6-48PR>] (emphasis added).

⁵⁶ *See* Investor Stewardship Group, About, <https://www.isgframework.org> (last visited on Oct. 28, 2017).

⁵⁷ *See* David A. Katz, Common-Sense Capitalism, HARV. L. SCH. F. ON CORP. GOVERNANCE & FIN. REG. (Jul. 28, 2017), <https://corpgov.law.harvard.edu/2017/07/28/common-sense-capitalism/>; *see also* John C. Wilcox & Morrow Sodali, The Investor Stewardship Group: An Inflection Point in U.S. Corporate Governance?, HARV. L. SCH. F. ON CORP. GOVERNANCE & FIN. REG. (Mar. 30, 2017) (noticing the closeness of intents of the ISG principles and the Commonsense Principles of Corporate Governance).

⁵⁸ Martin Lipton, The New Paradigm: A Roadmap for an Implicit Corporate Governance Partnership Between Corporations and Investors to Achieve Sustainable Long-Term Investment and Growth 1, <http://www.wlrk.com/docs/thenewparadigm.pdf>. Within the New Paradigm, institutional investors are expected to “work to understand corporations’ strategies and operations and engage with them to provide corporations with opportunities to understand the investors’ opinions and to adjust strategies and operations in order to receive the investors’ support.” *Id.*

⁵⁹ *See* F. William McNabb III, Getting to Know You: The Case for Significant Shareholder Engagement, HARV. L. SCH. F. ON CORP. GOVERNANCE & FIN. REG. (JUL. 24, 2015), <https://corpgov.law.harvard.edu/2015/06/24/getting-to-know-you-the-case-for-significant-shareholder-engagement/> (Vanguard CEO’s detailed description of the practicalities of engagement).

⁶⁰ *See* Martin Lipton, *Is Activism Moving in House?*, <http://www.wlrk.com/webdocs/wlrknew/WLRKMemos/WLRK/WLRK.24778.15.pdf> (last visited Oct. 12, 2017).

⁶¹ *See* K.J. Martijn K.J. Cremers, Saura Masconale & Simone M. Sepe, *Activist Hedge Funds and the Corporation*, 94 WASH. U. L. REV. 261, 270-85 (2017) (summarizing the theoretical and empirical debate on the effects of hedge funds).

⁶² OWEN WALKER, BARBARIANS IN THE BOARDROOM 31, 2016.

⁶³ *Id.*

Although activist hedge funds would appear to be the prototypical corporate adversaries, hostile campaigns are far from being the exclusive result of the funds' activism. Instead, the structure of these campaigns varies, sometimes substantially, depending on the fund's specific business model and temperament of its managers, the target's response, whether the fund seeks the replacement of the entire board or more typically only a partial slate and whether it can count on the support of the company's institutional investors.⁶⁴ For example, activist like Nelson Peltz (Trian Fund), Ralph Whitworth (Relational Investor Fund) and Jeffrey Ubben (Value Act) are known for embracing a constructivist, longer-term kind of activism.⁶⁵ Constructivist activists, as put by Leo Strine:

may need to knock a bit loudly, but once let in, assumes the duties and economic consequences of becoming a genuine fiduciary with duties to other stockholders and of holding its position for a period of five to ten years, during which it is a constructive participant in helping the rest of the board and management improve a lagging company.⁶⁶

While constructivist activists have traditionally represented the minority numerically (relative to hit-and-run, hostile activists), commentators have begun to look more optimistically at the possibility that this sort of activism may grow more important and potentially even predominant.⁶⁷

Equally important is the evidence that the vast majority of activist campaigns, even those that begin as adversarial, end not with a victory for either side but instead with a truce in which firm insiders and activists agree to reciprocal concessions.⁶⁸ These concessions typically take the form of a settlement (or "standstill") agreement, under which the target company agrees to accept the addition of activists' representatives to the board in exchange for the activist calling off its hostile campaign. Corporate law scholars tend to view settlement agreements through the same polarized lens as activism itself: either these agreements make incumbent directors subservient to the

⁶⁴ See WALKER, *supra* note 62, at 31.

⁶⁵ See *id.* at 13-14, 15-17.

⁶⁶ Leo E. Strine, Jr., *Who Bleeds When the Wolves Bite? A Flesh-and-Blood Perspective on Hedge Fund Activism and Our Strange Corporate Governance System*, 126 YALE L. J. 1870, 1908 (2017).

⁶⁷ See Krishnan et al., *supra* note 4, at 309-10 (providing empirical evidence that the most successful activists have been the capable of taking large stakes, gaining board seats and staying in a corporation for longer periods of time ones); Shill, *supra* note **Error! Bookmark not defined.**, at 1254, 1261-64 (describing a "dynamic" of "boards and activists . . . edging unmistakably towards collaboration" and providing anecdotal evidence supporting this conclusion); WALKER, *supra* note 62, at 230 (predicting that constructivist activism is the future of activism). Some practitioners have already begun to speak of "an activist revolution." CORP. FIN. ADVISORY & MERGERS & ACQUISITIONS, J.P. MORGAN, THE ACTIVIST REVOLUTION: UNDERSTANDING AND NAVIGATING A NEW WORLD OF HEIGHTENED INVESTOR SCRUTINY 1 (2015), <https://www.jpmorgan.com/jpmpdf/1320693986586.pdf> [<https://perma.cc/bd6f-bjkc>].

⁶⁸ See WALKER, *supra* note 62, at 36 (reporting that 45.5 percent of US activist campaigns ended in a "truce" between 2010 and 2015); Lucian Bebchuk et al., *Dancing with the Activists* 4, (unpublished manuscript) (2017), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2948869 (documenting evidence of a threefold increase in standstill agreements from the time period 2000-2002 to 2009-2011); John C. Coffee, Jr., *The Agency Costs of Activism: Information Leakage, Thwarted Majorities, and the Public Morality* 9 (unpublished manuscript) (Oct. 2017), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3058319 (reporting data from Lazard that 95% of the record 131 board seats obtained by activist hedge funds in 2016 were the result of a settlement agreement).

pursuing of the activists' agenda at the expense of other shareholders⁶⁹ or, conversely, they are an effective "intermediary step" to implement the usual disciplinary outcomes sought by activists.⁷⁰

We take a more nuanced position. Although we acknowledge that in some circumstances settlement agreements might resemble more an "unconditional surrender" than a truce, such as when the activists bargain for exclusive private payments⁷¹ or standstill provisions of short duration (for example, less than a year) while contextually providing for some increase in immediate returns to investors.⁷² However, like activist interventions more generally, standstill agreements come in many guises and including a wide range of firm specific provisions, with some of these provisions being explicitly designed to protect incumbent directors from becoming "hostages" of activist insiders.⁷³ It follows that at least result in activist-appointed directors working alongside incumbents as colleagues, seeking to effect changes in a collaborative rather than confrontational manner.

The bottom line is that the representation of corporate relationships offered by either the board paradigm or the shareholder paradigm has grown increasingly inaccurate. On the one hand, the board paradigm's representation of shareholders as mere capital providers, whose informational inputs have no role to play, has become factually obsolete. On the other, in spite of shareholder advocates' passionate defense of hegemonic shareholder power, today's empowered shareholders are increasingly exercising their newly gained levers in *collaborative* ways.

B. Anecdotal Evidence of Collaboration

Confrontational theories of the corporation entail a common narrative of persistent struggle for hegemonic power, recurring battles, winners and losers. Today's anecdotal evidence, however, no longer fits this narrative. Instead, it increasingly offers examples of insiders and shareholders joining forces to promote deliberative mechanisms based on cooperation rather than coercion.

A high-profile example of collaborative hedge fund activism is Value Act's involvement with Microsoft.⁷⁴ Back in 2013, Value Act researched Microsoft for months, concluding that the company suffered from a "perception problem." Most investors believed that the company's profits came largely from the sale of operating systems and personal computers. The declining PC

⁶⁹ See, e.g., Coffee, *supra* note 68, at 4, 13-14 (arguing that settlement agreements produce conflicts along the following dimensions: private benefits, information leakage, thwarted majorities, and public morality). Some commentators have also expressed the opposite concern that standstill agreement may be exploited by boards as a means to "hand cuff" activists. See Derek D. Bork, Settlement Agreements with Activist Investors – The Latest Entrenchment Device? HARV. L. SCH. F. ON CORP. GOVERNANCE & FIN. REG. (Jul. 7, 2016).

⁷⁰ See, e.g., Bebchuk et al., *supra* note 68, at 4 (arguing that settlement agreements provide an efficient response to issues of incomplete contracting arising in the activist hedge fund context).

⁷¹ See Coffee, *supra* note 68, at 15-17 (stating that the payments can take subtle forms, also they tend to be rare).

⁷² State Street has taken the lead among big institutional investors to point out features of settlement agreements that are especially alarming, including both short duration of the agreements and short shareholding periods by the activists. See *id* at 24.

⁷³ For example, some companies require activist-appointed directors to sign and pre-deliver director resignations that are automatically triggered when the board decides that the representative has breached the settlement agreement. See Bork, *supra* note 69.

⁷⁴ WALKER, *supra* note 62, at 145-55.

market thus suggested that Microsoft's prospects were not good. Value Act instead believed the company's strength lay in other services, such as the Office suite of products and Outlook email system.

After some behind-the-scenes contacts, the parties signed a standstill agreement, under which Value Act obtained a board seat in exchange for desisting from a potential proxy fight. In this Article's terms, the parties chose a collaborative scheme over a competitive one. In the following months, Microsoft implemented several of the suggestions made by Value Act (contextually to the appointment of a new CEO). Meanwhile, the share price of Microsoft rose considerably. Commenting on the success of the venture, Value Act's Morfit Mason remarked that Microsoft is not the usual hedge fund story of

battles, victors, and losers. It is actually about re-examining all of the premises on which a 40-year-old-icon was built and discarding the ones that don't make sense in this world and driving toward the ones that do. You can trace all of the actions that have happened at Microsoft to that fundamental attitude. Not necessarily to us, but Microsoft re-examining all of its fundamental beliefs.⁷⁵

Notably, Value Act's investment in Microsoft was a long term one. Mason continued to sit on the Microsoft board and Value Act to hold a substantial quantity of Microsoft stock through 2017.⁷⁶ During this period of time, Microsoft's stock price more than doubled, after remaining relatively flat for the prior 11 years.

The intervention by activist hedge funds Trian and Third Point at DuPont provides another example of insider-shareholder collaboration that produced detailed operational changes. Over the course of several years, the activists presented DuPont with focused business suggestions information including recommendations that DuPont sell certain underperforming operations and that it explore a merger with Dow Chemical. Although the activists did not succeed in having their nominees elected to the DuPont board of directors, their knowledgeable assessment of DuPont's operations led the company ultimately to adopt most of their recommendations.⁷⁷ Even without winning board seats, the activists played a key collaborative role. For example, Trian's Nelson Peltz hosted Dow representatives at his beach house to negotiate the terms of the merger.⁷⁸

The 93-pages whitepaper released by Peltz's Trian Fund in the recent engagement at Procter & Gamble (P&G)⁷⁹ was similarly detailed. Still, what made everybody pause and take notice⁸⁰ was that the document made it clear that Trian was only seeking the addition of Peltz to the P&G board in order to create "sustainable long-term value at P&G,"⁸¹ and not seeking to replace P&G CEO or any incumbent directors (or any other "classic" disciplinary outcomes). That is, on paper,

⁷⁵ *Id.* at 155.

⁷⁶ ValueAct Capital Reduces Microsoft Stake, Market Folly, Aug. 9, 2017, <http://www.marketfolly.com/2017/08/valueact-capital-reduces-microsoft-stake.html>

⁷⁷ Dow-DuPont: Activist Investors Pulling The Strings, Seeking Alpha, July 20, 2017, <https://seekingalpha.com/article/4086782-dow-dupont-activist-investors-pulling-strings>

⁷⁸ *Id.*

⁷⁹ Trian Partners, Revitalize P&G Together, Vote the White Proxy Card, http://www.wlrc.com/docs/Trian-PG-White-Paper-9_6_17.pdf (last visited September 12, 2017).

⁸⁰ Martin Lipton, The Trian/P&G Proxy Contest, HARV. L. SCH. F. ON CORP. GOVERNANCE & FIN. REG. (Sept. 11, 2017), <https://corpgov.law.harvard.edu/2017/09/11/the-trianpg-proxy-contest/>.

⁸¹ *Id.* at 4.

Trian was seeking more of a collaborative than competitive interaction with the P&G board, one designed to add knowledge rather than have the board fired. (Still, it bears notice that the board strongly opposed the fund intervention and was able to defeat it).⁸²

Trian's recent intervention in another classic American brand, General Electric Company (GE), presents even clearer collaborative features. This time, the company itself initiated the collaboration, as it was GE's CEO to invite Trian to invest in the company and become active in reforming it.⁸³ That Trian had knowledge unavailable to GE seems implicit in that request.

The above discussion thus points toward a widespread collaborative trend in corporate governance – that is, a systemic trend, rather than one specific to some firms, investors or industries. This suggests that collaboration offers a distinctive mechanism for enhancing firm value that unilateral decision-making by either insiders or shareholders cannot provide. Yet, insider-shareholder collaboration remains largely under-analyzed, if examined at all, in corporate legal theory. A proverbial gap needs filling. Part III below begins the task, defending insider-shareholder collaboration on both positive and normative grounds.

III. THE VALUE OF COLLABORATION IN A WORLD OF PARTIAL INFORMATION

A. Private Ordering and Collaboration

Despite the prevailing narrative in existing scholarship, positive law does not mandate an adversarial model of the corporation but instead relies on private ordering to manage insider-shareholder interactions. Private ordering is a cooperative process, which encompasses both discrete market contracting and private contracting within the corporation. Indeed, the corporate charter and bylaws, tools of private ordering, control the structure of the board, the role of shareholders in corporate decision-making, and the entry of the corporation into structural changes such as a merger. Private ordering, which encompasses both contracting within the corporation and discrete market contracting⁸⁴ has resulted in mechanisms such as staggered boards and supermajority voting requirements that limit the ability of a majority of shareholders to effect change unilaterally. Private ordering is also reflected in the evolution of poison pills that entail shareholder consent to the board's deployment.

Viewed through this lens, contemporary collaborative patterns have not occurred in a vacuum. For example, one can argue that developments in the design of executive compensation plans also entail a form of collaboration, a collaboration made more explicit by the implementation of say-on-pay.⁸⁵ Incentive-based compensation for corporate executives was a response, in part, to the

⁸² PG has claimed a 0.2% victory in the proxy battle against Trian. Anna Nicolau & Lindsay Fortaudo, *P&G Says Nelson Peltz Has Lost Battle for Board Seat*, FIN. TIMES (Oct. 10, 2017), <https://www.ft.com/content/bf804304-adcd-11e7-aab9-abaa44b1e130>.

⁸³ Andrew Ross Sorkin, *Why Nelson Peltz Wants P&G to See Him as a "Constructivist,"* N.Y. TIMES: DEALBOOK (Jul. 17, 2017), <https://www.nytimes.com/2017/07/17/business/dealbook/nelson-peltzs-play-for-pampg-honorable-intentions.html>.

⁸⁴ Private ordering occupies the space of contractual freedom that is available under default rules. See Frank H. Easterbrook & Daniel R. Fischel, *The Corporate Contract*, 89 COLUM. L. REV. 1416, 1426 (1989).

⁸⁵ See, e.g., Jill Fisch, Darius Palia and Stephen Solomon, *Is Say on Pay All About Pay?*

decline of hostile takeovers.⁸⁶ Specifically, the shift of management compensation from straight salary to incentive-based plans⁸⁷ provided a conduit for market-based shareholder discipline that replaced the takeovers' confrontational exercise of such discipline.⁸⁸ It also created substantial benefits for who agreed to attractive unsolicited bids,⁸⁹ largely neutralizing the power boards had received from Delaware courts to "just say no" to these bids.⁹⁰ From this perspective, incentive compensation emerges as a collaborative compromise between board and shareholder power. The process of evaluating the size and structure of incentive compensation plans has become increasingly collaborative as a result of the Dodd-Frank mandate. Commentators observe that the requirement that issuers submit their compensation plans for shareholder approval has led to increased willingness of insiders to engage in a dialogue with investors over the appropriate size and structure of compensation plans.⁹¹

The trend toward more independent boards, which began in the aftermath of the takeover era,⁹² also entails collaborative elements. As observed by Jeffrey Gordon, independent directors have a comparative advantage over potentially entrenched executive directors to channel shareholder inputs as impounded in the stock price.⁹³ At the same time, independent directors are in the position to credibly "check" price signals against insider measures of firm prospects,⁹⁴ serving as a "buffer" that can slow "the pace of control market activity"⁹⁵ and make confrontational shareholder discipline less likely.

Therefore, as positive matter, collaboration is fully consistent with the existing structure of corporate law.

The Impact of Firm Performance, Harv. Bus. L. Rev. (forthcoming) (presented empirical analysis of data influencing outcomes of say on pay votes).

⁸⁶ See Marcel Kahan & Edward B. Rock, *How I Learned to Stop Worrying and Love the Pill: Adaptive Responses to Takeover Law*, 69 U. CHI. L. REV. 871, 884, 896-97 (2002) (maintaining that the increased use of incentive compensation was an adaptive response to the managerial-friendly takeover standards set by Delaware courts).

⁸⁷ Bratton & Sepe, *supra* note **Error! Bookmark not defined.**, at 23.

⁸⁸ Shareholder advocates remain skeptical of incentive compensation, as the risk of board capture would negate an essential premise of incentive compatibility: that principals can take an adversarial position against agents. See Lucian A. Bebchuk et al., *Managerial Power and Rent Extraction in the Design of Executive Compensation*, 69 U. CHI. L. REV. 751 (2002). As a matter of economic theory, however, this conclusion stands against standard assumptions that incentives can be efficiently provided *within*, rather than outside, the organization. See K.J. Martijn Cremers, Saura Masconale, and Simone M. Sepe, *CEO Pay Redux*, 96 TEX. L. REV. 3, 8 (forthcoming 2017) (on file with author) (discussing the theoretical and empirical shortcomings of managerial power theory).

⁸⁹ *Id.* at 884.

⁹⁰ See *Moran v. Household International, Inc.*, 500 A.2d 1346 (Del. 1985) (first upholding management's use of a poison pill to reject a hostile offer).

⁹¹ See, e.g., Seymour Burchman & Blair Jones, *Righting the Say On Pay Ship After a "No" Vote*, SEMLER BROSSY (Sept. 2013), <http://www.semlerbrossy.com/wp-content/uploads/ATD-Shareholder-Engagement.pdf> ("One of the positive outcomes of the Say on Pay provision in the Dodd-Frank legislation has been more regular dialogue between companies and shareholders.").

⁹² See Kahan & Rock, *supra* note **Error! Bookmark not defined.**, at 883.

⁹³ Jeffrey N. Gordon, *The Rise of Independent Directors in the United States, 1950-2005: Of Shareholder Value and Stock Market Prices*, 59 STAN. L. REV. 1465 (2007).

⁹⁴ *Id.* at 1471.

⁹⁵ *Id.* at 1471.

B. Information Complexity and Complementarity

As noted above, as a normative matter, confrontational theories cast corporate law as being primarily, if not exclusively, about mitigating agency costs, based on that managerial moral hazard is the primary, if not exclusive, obstacle to the productive coordination of insider and shareholder inputs. Under this assumption, insider-shareholder competition is a necessary feature to discipline self-dealing managers and to reduce the resulting agency costs. The normative task is to determine the optimal legal rules based on a predictive judgement on the relative costs and benefits of board power and shareholder power.

In the modern economy, however, it is unlikely that minimizing agency costs is the dominant feature affecting firm value. Rather, successful corporations are increasingly defined today by the ability to bring together the vast quantities of information that is necessary for the production of knowledge.⁹⁶ This process is most clearly detected in the growing contribution of intangible assets, such as technological knowhow, patents, brands, trade secrets, and algorithms.⁹⁷ While one may think of the shift to intangible assets as a process that only affects new economy technology companies such as Google, Facebook, Apple, and Tesla, in reality information is the key driver to success across industries. It also is one of perpetual motion, because generating and exploiting knowledge demands that knowledge be continually replenished.

The complex informational structure of the public corporation requires a richer model of the insider-shareholder relationship than that reflected in confrontational theories. Specifically, it is no longer accurate for this relationship to be seen as affected by asymmetric information problems only. The shift to a knowledge rich economy and the rise of informed investors have brought about novel informational challenges, making it likely that *both* firm insiders *and* shareholders may possess relevant private information. Within this increased informational complexity, “partial information” issues are likely to overlap with, and matter as much as, asymmetric information ones.⁹⁸

Partial information issues arise because in the new information-intense economy, it is unlikely that any one individual or organization will possess the relevant information to respond effectively to *all* business challenges.⁹⁹ Rather, information is likely to be scattered through a multitude of

⁹⁶ See Big Innovation Ctr., *The Purposeful Company—Interim Report* 5 (2016), <http://www.biginnovationcentre.com/media/uploads/pdf/The%20Purposeful%20Company%20Interim%20Report.pdf> [hereafter, *The Purposeful Company Report*].

⁹⁷ Carol A. Corrado & Charles R. Hulten, *How Do You Measure a “Technological Revolution”?*, 100 AM. ECON. REV. (PAPERS & PROC.) 99, 103 (2010). A recent study, for example, documents that 80 percent of the market value of U.S. corporations is represented by intangible assets nowadays. *The Purposeful Company Report*, *supra* note **Error! Bookmark not defined.**, at 5, 14.

⁹⁸ More technically, asymmetric information no longer is only “unilateral,” with outsiders necessarily standing at an informational disadvantage relative to insiders, but is increasingly “bilateral,” with both insiders and outsiders holding private information not available to the other party. See Frederik Andersson, *Adverse Selection and Bilateral Asymmetric Information*, 74 J. ECON. 173, 173 (2001) (examining bilateral asymmetric information in the insurance context). For added clarity, this Article uses the term “partial information” at the place of “bilateral asymmetric information.”

⁹⁹ *Id.* at 14.

agents, thus requiring corporate actors to leverage and pull knowledge from multiple sources.¹⁰⁰ Adding to this informational complexity, the rise of sophisticated and actively informed investors suggests that these investors are increasingly likely to have the computational capacity to gather relevant knowledge. Similar to VC investors,¹⁰¹ today's institutional investors and hedge funds bring their knowledge of the market rather than just capital to firms.¹⁰² Or they may have knowledge of potential synergies with suppliers and developers, perhaps because of preexisting networks.¹⁰³ Hedge funds, in particular, tend to specialize in certain industries or sectors of an industry, around which they usually build strong expertise.¹⁰⁴ The examples of collaborative hedge fund activism described in Part II.B above demonstrate the knowledge that various hedge funds have brought to recent activist campaigns, knowledge that has resulted in the implementation of revised operational strategies at their targets.

Under these different informational assumptions, the normative necessity of a competitive corporate paradigm disappears. In its place, we find a trend toward systematic collaboration as the means to efficiently aggregate the partial information of insiders and shareholders. The key to understanding the value added by aggregating this information turns on the insight that the information supplied by collaborating investors is increasingly “complementary” in nature. Information is *complementary* when the possession of one piece of information increases the marginal value of acquiring the second piece, so that the informational whole is greater than the sum of its parts.¹⁰⁵ Complementary information is to be distinguished from information that is only “substitute.” Information is *substitute* if the possession of one piece of information decreases the marginal value of acquiring another piece of information.¹⁰⁶ Information that is relatively similar thus tends to be substitute.

Cognitive models of collective wisdom help understand why the aggregated knowledge of today's insiders and shareholders is likely to be more about complementary than substitute information and hence why collaborative decisionmaking adds value that unilateral decisionmaking cannot provide. These models distinguish between *interpretative* signals and the standard *generated* signals of statistical collective-wisdom models.¹⁰⁷ “Generated” signals are the result of a random variable drawn from a distribution. For example, in the corporate context, observed sales of a new product sends a generated signal about whether the product is of good

¹⁰⁰ This does not exclude that, in exceptional cases, visionary entrepreneurs will both master enough of the relevant information and build insider teams that are able to marshal otherwise scattered knowledge.

¹⁰¹ Outside the public corporation context, VC-company relationships have long had a collaborative tradition, including the appointment of VC directors to portfolio company boards to provide VC investors with formal mechanisms for input into operational decisionmaking. See, e.g., Simone Sepe, *Intruders in the Boardroom: The Case of Constituency Directors*, 91 WASH. U. L. REV. 309, 315, 335-36 (2013) (arguing that appointment of “VC directors” ensures protection of VC investors’ interests in situations where contracting alone is insufficient to this purpose).

¹⁰³ Cf. Lowell W. Busenitz, *Innovation and Performance Implications of Venture Capital Involvement in the Ventures They Fund*, in HANDBOOK OF RESEARCH ON VENTURE CAPITAL 219-235 (2007) (documenting that VC firms enable their portfolio companies to enhance their links with customers and suppliers).

¹⁰⁴ See WALKER, *supra* note, at 11-21 (discussing the different business models of major hedge fund players).

¹⁰⁵ *Id.*

¹⁰⁶ See Matthew C. Stephenson, *Information Acquisition and Institutional Design*, 124 HARV. L. REV. 1422, 1467 (2011).

¹⁰⁷ See Hong & Page, *supra* note **Error! Bookmark not defined.**, at 1275; Hong & Page, *supra* note **Error! Bookmark not defined.**, at 58.

quality.¹⁰⁸ Generated signals, however, cannot capture the fact that agents do not just receive signals, but interpret them. Thus, whether an agent values high quality or low price may have an effect on the signal they receive from the sales of a new product. Valuing quality or price may also induce agents to search for a different kind of information than that provided by the sales of the product.

Cognitive models of collective wisdom seek to capture this richer signaling structure, introducing the concept of “interpreted” signal. Unlike generated signals which are passively received by the agents, interpreted signals result from the agents’ “active cognitive effort.”¹⁰⁹ To create an interpreted signal, an agent uses an interpretative model that filters reality into a set of categories, relying on subsets of the full set of attributes. Using these categories, agents then make predictions about the value of the variable of interest.¹¹⁰ Cognitive models then show that under this richer signaling structure what matters for the ability of a collection of agents to produce more accurate predictions than an agent in isolation are the characteristics of the agents’ interpretative models. These models need to be *sophisticated* and *diverse*. The intuition can be grasped as follows. First, when agents use sophisticated interpretative models, they will tend to partition the set of states of the world into many categories (that is, more than when they use less sophisticated interpretative models). Second, when agents use diverse interpretative models, each individual will create a different partition of the possible states of the world.¹¹¹

Note the easy compatibility between interpreted signals and complementary information. In interpreted signals, signal heterogeneity (the production of different predictions) stems from cognitive diversity among sophisticated agents rather than randomness (as in generated signals).¹¹² It follows that information based on interpreted signals is more likely to be complementary, relative to information that is the result of generated signals.

¹⁰⁸ Along the same lines, what the jurors observe at trial produces a generated signal about whether the defendant is guilty or innocent, where each signal is correlated with the variable of interest by a probabilistic relationship. More technically, Hong and Page explain generated signals as follows:

For example, suppose the relevant issue concerns the status of a firm which can be classified as either “good” (G) or “bad” (B). Agents do not know the true status, but they have a common prior, say, $P(G) = P(B) = \frac{1}{2}$. Each agent draws a binary signal, whose value is either G or B, from given distributions. Most often, these signals would be assumed to be drawn independently, i.e. their values would be independent conditional on the true status of the firm.

Hong & Page, *supra* note **Error! Bookmark not defined.**, at 1275.

¹⁰⁹ *Id.* That is, interpreted signals capture the fact that an individual’s prediction about an outcome of interest can be thought of as a statistical signal, but this signal will likely depend on how this individual interprets the world. Hong & Page, *supra* note **Error! Bookmark not defined.**, at 57.

¹¹⁰ More formally, cognitive models begin by defining predictive problems as involving a set of possible states of the world X and an outcome function F , which maps each possible state of the world into a given outcome. Each individual’s interpretation of the possible states of the world is then a partition of the set of states into distinct categories. Note that predictive models are coarser than the outcome function. Indeed, whereas the objective function maps states of the world into outcomes, predictive models map sets of states of the world, namely categories, into outcomes. Hong & Page, *supra* note **Error! Bookmark not defined.**, at 57.

¹¹¹ More analytically, diverse interpretative models tend to produce negatively correlated predictions and negatively correlated predictions produce better aggregate outcomes. *See id.* at 58.

¹¹² *See* Hong & Page, *supra* note **Error! Bookmark not defined.**, at 2175.

Are the interpretive models of shareholders and insiders likely to be sophisticated and diverse? We answer in the affirmative. Board members are selected for their “institutional competence,” which denotes both expertise and the ability to acquire and process information.¹¹³ And in today’s agency capitalism, where equity ownership has largely re-concentrated in the hands of institutional investment intermediaries, shareholders such as institutional investors and hedge funds are sophisticated by definition. Concerning diversity, because of insiders’ access to private firm information, their interpretative models can realistically be assumed to be diverse from those employed by shareholders. But diversity also is a defining feature of the investor crowd. Institutional investors such as pension and retirement funds and mutual funds have different business models and investment horizons than hedge funds. Hedge funds themselves tend to have different business models and exhibit idiosyncratic features, especially when it comes to target selection. Some hedge funds, for example, focus on targeting companies in certain industries, others are governance specialists, and, still, each fund follows a different template in deciding when moving on a company.¹¹⁴ Indeed, investor diversity is quintessential to their ability to compete with each other. For if they shared the same business model, they would no longer have the prospect of delivering competitively superior performance.

Therefore, we conclude that because the information held by today’s investors is likely to complement the information held by firm insiders, a collaborative decisionmaking model that aggregates this complementary information adds to firm value.

C. Aggregating Insider and Investor Information

Under the conclusion that insider-shareholder collaboration can be expected to be value increasing, the additional question arises of what form board-shareholder collaboration should take. There are two possibilities. The first possibility is collaboration through the mediation of markets, with prices serving as a collaborative, rather than discipline-oriented, focal point for shareholder inputs. The second possibility is a direct deliberative process between insiders and shareholders.

In the corporate context, market prices provide the standard aggregation mechanism. The connection between markets and collective decisionmaking was first exposed by Hayek, who emphasized how the dispersed individual knowledge aggregated through market contracting accurately determine prices even if the average individual in the market cannot.¹¹⁵ Under Hayek’s epistemic version of Adam Smith’s invisible hand,¹¹⁶ the price system provides a form of mediated interaction between insiders and shareholders, which can be relied upon to aggregate their respective information. There is a caveat, though. Under the Hayekian view of markets as superior information aggregators, trading is the transmission mechanism. Whereas this assumption works well for shareholders, insiders are prevented by law from trading on their private information. This limitation, however, is overcome when one considers that insiders’ disclosure obligations may also

¹¹³ See Stephenson, *supra* note **Error! Bookmark not defined.**, at 1423.

¹¹⁴ WALKER, *supra* note 62, at 11-21 (comparing the business models and intervention strategies of the most important U.S. hedge funds).

¹¹⁵ See Frederick A. Hayek, *The Use of Knowledge in Society*, 35 AM. ECON. REV. 519 (1945).

¹¹⁶ See Vermeule, *supra* note **Error! Bookmark not defined.**, at 7.

serve as transmission mechanism, as both disclosure and trading serve to convey the agent's information.

It is also worth emphasizing the difference between the collaborative use of market-based information considered here and its confrontational use under the shareholder paradigm. Shareholder advocates view market-based information as largely instrumental to the exercise of shareholder discipline, basically reducing the information impounded in market prices to information about managerial performance. Under this view, the use of market-based information is confrontational and employed to exclude insider information, which is dismissed as “cheap talk.”¹¹⁷ On the contrary, the collaborative use of market-based information does not exclude insider information. Rather, as explained by Gordon, it serves to aggregate insiders and investor information, allowing the board—more particularly, for Gordon, the independent director—to use that information collaboratively for optimal decisionmaking.¹¹⁸

The alternative to the aggregation of insider and shareholder information through markets is using deliberation, which involves direct, rather than mediated, communication. To put the difference in epistemic terms, deliberation allows agents to convey their interpreted signals as they are. For example, in a rainy day, deliberation would allow an agent to directly convey to other agents the message: “Today, the weather is bad.” Conversely, the transmission of this information through markets would take, for example, the following form: “Today the price of umbrella increased, therefore the weather should be bad.”

The use of a deliberative process is typical of the production of collective wisdom in legislative bodies.¹¹⁹ But deliberation has also become increasingly common in corporate decisionmaking. In discussing recent U.S. patterns of ownership reconcentration, Ron Gilson and Jeffery Gordon stated: “[P]ut graphically but not metaphorically, representatives of institutions that collectively represent effective control of many large U.S. corporations could fit around a boardroom table.”¹²⁰ The news is that these institutions *are* now sitting together. Only they are not alone; board members (and managers) sit with them.

Institutional investors are, again, behind this trend. As a matter of fact, one has the impression that institutional investors' requests for deliberation keep flocking in these days. On August 31, 2017, Vanguard released a letter to investors directed at, among other things, reaffirming the importance of building “relationships with boards and management teams” and in which they openly pushed for a two-way dialogue with corporations.¹²¹ Only eight days later, on September

¹¹⁷See Hayne E. Leland & David H. Pyle, *Informational Asymmetries, Financial Structure, and Financial Intermediation*, 32 J. FIN. 371, 371(1977) (“[m]oral hazard hampers the direct transfer of information between market participants”). Only the disclosure of hard information that is easily incorporated in the stock price can overcome the presumption of cheap talk. See Alex Edmans et al., *The Real Costs of Financial Efficiency when Some Information Is Soft*, 20 REV. FIN. 2151, 2152 (2016) (defining “hard” information as that which is observable by outsiders and which, as a result, the current stock price can more easily incorporate).

¹¹⁸ See *supra* notes 92-95 and accompanying text.

¹¹⁹ See John Gastil & James P. Dillard, *Increasing Political Sophistication through Public Deliberation*, 16 POL. COMMUNICATION 3, 5 (1999).

¹²⁰ Gilson & Gordon, *supra* note 35, at 875.

¹²¹ Martin Lipton, Wachtell, Lipton, Rosen & Katz, Perspectives on Today's Letter from Vanguard (Aug. 31, 2017), available at <http://www.wlrk.com/webdocs/wlrknew/WLRKMemos/WLRK/WLRK.25729.17.pdf>.

8, 2017, Scott Stringer, the NYC Comptroller who manages the New York City Pension Funds, released a letter to the boards of 151 companies requesting a meeting with these companies' directors to discuss matters such as director criteria, diversity and skillsets and their linkage to the company's needs and risks.¹²² And in between the two, on September 6, Peltz's Trian Fund released its whitepaper, whose unique features (the request of a board seat but no demand to replace the CEO nor any other confrontational requests)¹²³ make it look more like another request for deliberation than the announcement of a full frontal activist attack.

While, in principle, board-shareholder collaboration in the aggregation of information can take place both through mediated market interaction and a direct deliberative process, theory predicts that deliberation is a superior aggregation mechanism under the current patterns of ownership reconcentration. There are two reasons. First, markets may temporarily fail to aggregate information efficiently. This does not imply that there is no value in market-based information. Over time, prices do converge to fundamental values.¹²⁴ For example, when prices are low for too long, we do get a likely signal that something is wrong. However, if markets may take time to aggregate information and information is essential to make business decisions, the risk exists that business decisions might be made when information is not aggregated yet. It follows that while prices can be useful for the ex-post monitoring of corporate decisions, they are less useful for aggregating information on production decision-making.¹²⁵

Second, asset pricing theory teaches that when securities are “non-separable,” information in competitive markets with partially informed traders does not get aggregated at all.¹²⁶ A security is “separable” when traders have substitute information. Recall that substitute information is sufficiently similar information, so that a trader does not need the information of other traders to make better predictions. Conversely, a security is “non-separable” when information is complementary, that is, sufficiently diverse that the information of other traders enables each trader to make a better prediction.¹²⁷ (Suppose, for example, that one trader has perfect information about one part of a company and another trader has perfect information about the rest of the company.) It follows that markets fail to efficiently aggregate complementary information, with the result of wasting the very value added by a collaborative model.

D. The Value of Collaboration - An Illustrative Hypothetical

A hypothetical is useful to illustrate why a collaborative model based on collaboration, unlike market-based transactions, enables the aggregation of complementary information. We begin by assuming that in the market there are two investors *Avant-Garde* and *RedRock*. Each investor has partial information about the value of corporation *NewSys*, which commercializes hardware products and is ready to launch a new computer. The value of *NewSys* depends on the realization

¹²² Martin Lipton & Sebastian Niles, Wachtell, Lipton, Rosen & Katz, Institutional Investor Input into Director Selection (Sept. 8, 2017) (on file with authors).

¹²³ See *supra* text accompanying notes **Error! Bookmark not defined.-Error! Bookmark not defined.**

¹²⁴ Bratton & Sepe, *supra* note **Error! Bookmark not defined.**, at 39.

¹²⁵ *Id.*

¹²⁶ Michael Ostrovski, *Information Aggregation in Dynamic Markets with Strategic Traders*, 80 *ECONOMETRICA* 2595, 2596 (2012).

¹²⁷ See *id.*

of uncertainty, which is captured by four possible states of the world. These states are *A*, *B*, *C*, and *D* and have the following characteristics:

under *State A*, the new computer produced by *NewSys* is of *Type 1*, while a new operating system available from developers in the market is of the kind *Compatible 1*. This means that the developers' new software matches *NewSys* computer;

under *State B*, the new computer is of *Type 1*, while the new software is of the kind *Compatible 2*. This means that the software does not match the new computer;

under *State C*, the new computer is of *Type 2*, while the new software is of the kind *Compatible 1*. This means that the software does not match the new computer;

under *State D*, the new hardware is of *Type 2*, while the new software is of the kind *Compatible 2*. This means that the software matches the new computer.

The occurrence of states *A*, *B*, *C* and *D* is equiprobable, meaning that each state materializes with probability $\frac{1}{4}$.

Now, it is intuitive to see that *NewSys* computer is only valuable to the extent that the new operating system is compatible with the computer's novel hardware. This implies that the computer is valuable under *State A* and *D*, but not in *State B* and *C*. Accordingly, assume that each *NewSys* stock has value equal to \$ 200 under *State A* and *D*, and zero under *State B* and *C*.

Further assume that the two investors' interpreted models (as based on their individual business models) are such that *Avant-Garde* receives a private signal on the true state of the world before this state becomes common knowledge (that is, before *NewSys* computer is actually sold in the market). *Avant-Garde*'s received signal can be either a_1 or a_2 . If the signal is a_1 , *Avant-Garde* knows that the true state can be either *A* or *B*. If the signal is a_2 , *Avant-Garde* knows that the true state can be either *C* or *D*. Similarly, assume that *RedRock* receives a private signal that can be either r_1 or r_2 . If the signal is r_1 , *RedRock* knows that the true state can be either *A* or *C*. If the signal is r_2 , *RedRock* knows that the true state can be either *B* or *D*.

To make this stylized representation more concrete, assume that the interpreted model of *Avant-Garde* is such that the investor has perfect information on the hardware technology employed by *NewSys* computer. *RedRock* instead has perfect information on the new software. This implies that the investors' information is complementary. Note here that this example focuses on the aggregation of investor information for the purpose of comparing deliberation to trading. We explore below the extension of this hypothetical to insider-investor deliberation.

Under this information structure, the expected value of *NewSys* stock will be \$ 100 for both *Avant-Garde* and *RedRock*.¹²⁸ To see this, assume that the true state is *State A*, in which *NewSys*

¹²⁸ Defining *NewSys* stock as S , this result is calculated as follows: $S|a_1 = S|a_2 = S|r_1 = S|r_2 = 100$. More analytically, $S|b_1 = [Prob(A)|a_1] \times (\$200) + [Prob(B)|a_1] \times (0) = \100 , where, by the Bayes' Rule, $Prob(A)|a_1 = [Prob(a_1|A) \times Prob(A)]/[Prob(a)] = (\frac{1}{2} \times \frac{1}{4})/(\frac{1}{2}) = \frac{1}{2}$ as $Prob(a_1) = Prob(A) + Prob(B) = \frac{1}{2}$. Please note that in this example $Prob(B)|b_1$, $Prob(C)|b_2$, $Prob(D)|b_2$, $Prob(A)|r_1$, $Prob(C)|r_1$, $Prob(B)|r_2$, and $Prob(D)|r_2$ are defined similarly

produces a *Type I* computer that is matched by the new software *Compatible I*. Under *A*, *Avant-Garde* receives the signal a_1 , which means that it knows that the true state is *State A* with probability $\frac{1}{2}$ and *State B* with probability $\frac{1}{2}$ (recall that each state is equiprobable). Under this signal, the expected value of *NewSys* stock to *Avant-Garde* is \$ 100.¹²⁹ Similarly, under *State A*, *RedRock* receives the signal r_1 , which means that it knows that the true state is *State A* with probability $\frac{1}{2}$ and *State C* with probability $\frac{1}{2}$. Under this signal, the expected value of *NewSys* stock to *RedRock* is again \$ 100.¹³⁰

Avant-Garde and *RedRock* will not change their predictions about the value of *NewSys*, even with repeated trading. This is because under the signals a_1 and r_1 , no investor is ever willing to trade for more than \$ 100. As a result, each investor is unable to infer information from the trading behavior of the other, consistent with the conclusion that when investors have complementary private information, market trading does not efficiently aggregate information.¹³¹

We now turn to the case of collaboration, under which investors can directly communicate the one with the other. In this case, after receiving the signal a_1 , *Avant-Garde* will communicate with *RedRock* and convey its knowledge that the true state can be either *State A* or *B*. Similarly, after receiving the signal r_1 , *RedRock* will convey its knowledge that the true state can be either *State A* or *C*. Through deliberation, the investors will then realize that the only state which is consistent with their respective signals is *State A*. Consequently, the expected value of *NewSys* stock to each investor will go up to \$ 200, as they will both be willing to buy *NewSys* stock up to that price.

Note that the superiority of information aggregation through collaboration over information aggregation through markets redefines the scope of private ordering in the context of board-

and each is equal to $\frac{1}{2}$. Because $S|a_2 = S|r_1 = S|r_2$ are also computed following the same procedure, it is clear why both investors expect *NewSys* stock to be equal to \$100.

¹²⁹ $\frac{1}{2} \times (\$200) + \frac{1}{2} \times (0) = \100 . This is a rational expectation equilibrium. Rational expectations theory studies the manner in which economic agents exploit available information to form their expectations. *See generally* Lars Ljungqvist & Thomas J. Sargent, *RECURSIVE MACROECONOMIC THEORY* 186 (2d ed. 2000)

¹³⁰ $\frac{1}{2} \times (\$200) + \frac{1}{2} \times (0) = \100 .

¹³¹ For completeness, we also consider here the case in which the investors' information is substitute. In this case, assume that *Avant-Garde* receives an unambiguous signal that the true state is *A*, so that $Prob(A)|a_1 = 1$ holds. Also assume that *RedRock* still receives the original signal r_1 ($Prob(A)|r_1 = \frac{1}{2}$). In this case, since *Avant-Garde* has perfect information on the true state, while *RedRock* only has partial information, the security is separable as *Avant-Garde* does not need to aggregate *RedRock*'s information to improve her predictions. This implies that the investors' information is substitute rather than complementary. Under these different circumstances, upon the occurrence of *State A* and after receiving its informative signal, *Avant-Garde* will be willing to buy more stocks of *NewSys*. This is because *Avant-Garde* knows that *NewSys*' fundamental value is \$ 200. There results that *Avant-Garde*'s trading will drive up the share price. In particular, *Avant-Garde* will be willing to buy *NewSys* shares at a price above \$ 100 and will continue to do so as long as the price is below \$ 200. Upon observing *Avant-Garde*'s trading, *RedRock* will in turn realize that the only state that is compatible with its private information r_1 (under which the true state can be either *A* or *C*) and with a trading price above \$ 100 is *State A*. This is consistent with the conclusion that when information is substitute, market trading does efficiently aggregate information. Note, however, that the efficient aggregation of information that obtains with separable securities does not solve other asset pricing imperfections. Even when securities are separable, the problem persists of when the relevant information will be aggregated. Indeed, sophisticated investors with short-term business models may have distortionary incentives, including incentives not to immediately reveal their information through prices due to speculative reasons. Of course, these distortions increase when investors have market power. *See* Giovanni Cespa & Xavier Vives, *Dynamic Trading and Asset Prices: Keynes vs. Hayek*, 79 *REV. ECON. STUD.* 539, 539-40 (2012) (formally showing that in a dynamic market, rational investors can find it profitable to speculate on short-term price differentials).

shareholder collaboration. Indeed, this conclusion excludes market contracting as a desirable private ordering mode in this context. Instead, deliberation is premised on the parties' direct collaboration, that is, private contracting only.

The bilateral hypothetical can readily be extended to the context of insider-investor deliberation by replacing Avant-Garde with the Newsys management team. As in the prior example, the management team has a private signal on the new state of the world that, is the type of hardware that Newsys intends to produce. The management team lacks perfect information about the new software, though. Accordingly, aggregating management's partial information with that of investor RedRock enables the company to match its operational decisionmaking to the state of the outside world in a way that will maximize firm value (and stock price). Notably, the board may be able to access the information, by collaborating with RedRock, at a lower cost than through seeking to develop the information itself.¹³²

Along similar lines, the hypothetical can be modified to illustrate a collaborative role for the board in deliberating with multiple investors. Assume that after engaging with Avant-Garde and RedRock (or receiving a whitepaper from the investors), the board receives signals a_1 from Avant-Garde (under which the true state is either A or B) and r_1 from RedRock (under which the true state is either A or C). The board will then know that the true state is State A, which implies that the optimal investment policy is producing more Type 1 computers. Alternatively, if the signals the board receives are of the type a_2 (under which the true state is either A or B) and r_2 (under which the true state is either B or D), the board will know that the true state is B and that the optimal business decision is to cut production of the new computer.

Under these circumstances, the board thus acts as a coordination device in the corporation's deliberative process or, in the jargon of game theorists, as the "veto player,"¹³³ selecting several pieces of information by multiple investors, aggregating those pieces of information and, finally, using the aggregated information to make better governance and business decisions.¹³⁴ As a descriptive matter, this condition captures the substantial authority that corporate law grants to the board of directors. Further, the board's access to unique firm-specific private information also normatively supports this position. Indeed, the need to aggregate the partial, complementary information of insiders and shareholders does not displace standard asymmetric information issues, but rather stands on top of such issues. Making the board the game's veto player thus addresses the twin problem of partial and asymmetric information. Note, however, the difference with the board paradigm's characterization of the board's informational advantage. Under that

¹³² See, e.g., David R. Beatty, How activist investors are transforming the role of public-company boards, McKinsey on Finance podcast, Jan. 2017, <https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/how-activist-investors-are-transforming-the-role-of-public-company-boards> ("To look at the matter in a less threatening way, instead of having to spend millions on a consulting review, you could get one for free from would-be activist investors").

¹³³ In game theory, the veto player is a player who is pivotal to a coalition, that is, a player without which the coalition cannot be formed in the first place. See MICHAEL MASCHLER ET AL., GAME THEORY 681 (2103).

¹³⁴ It is worth emphasizing that only when investors deliberate with the board, they can convey their full information set, which, in the example, is bi-dimensional (that is, under each signal, the investor infers the probability of two possible states). On the contrary, when investors communicate through prices, each investor only observe the price (1, 2, or n), that is, a unidimensional object. It follows that deliberation is a better medium than price from an epistemic point of view.

paradigm, the board's access to private information about the corporate affairs serves to exclude shareholder informational inputs. Under the collaborative paradigm, the board's position is instrumental to collaboration and hence to the inclusion, rather than the exclusion, of shareholder inputs.

Lastly, it is also worth emphasizing that only when investors deliberate with either the management team or the board, can they convey their full information set, which, in the example, is bi-dimensional (that is, under each signal, the investor infers the probability of two possible states). On the contrary, when investors communicate through prices, each investor only observe the price (1, 2, or n), that is, a unidimensional object. It follows that deliberation is a better medium than price from an epistemic point of view.¹³⁵

IV. THE GOVERNANCE OF COLLABORATION

Part III has offered a theory of board-shareholder collaboration, explaining how the rise of the collaborative model responds to the transformation that the changes occurred in corporate production and the role of shareholders have brought to the informational structure of the board-shareholder relationship.

In this Part, we move to the analysis of the governance of collaboration. We do so by drawing on game theory to derive implications about the desirable rules of the deliberation "game" between insiders and shareholders. How should insiders and shareholders split the value generated by the deliberative process? What say should each party have in this process? Does collaboration require enforcement? Answering these and other questions on the governance of board-shareholder collaboration should provide both a coherent theoretical framework and a helpful normative benchmark for current and future experimentations with collaboration.

A. Economic Rights

In game theory, a game is defined as "cooperative" when players form coalitions to achieve their goals.¹³⁶ More particularly, a coalition is worth forming when two basic conditions are preliminarily satisfied: that players can do better together than alone (this is the *superadditivity* condition)¹³⁷ and larger coalitions be more valuable than smaller ones (this is the *monotonicity*

¹³⁵ In response, one could argue that the price system is more incentive compatible than deliberation, because when investors trade they have skin in the game that they do not have in a deliberative process. Therefore, investors would have more incentives to reveal their information truthfully through the price system. This conclusion, however, is only apparently correct, as having skin in the game does not prevent the exploitation of speculative options. For example, in our hypothetical, an investor who knows that the fundamental value of NewSys stock (*S*) is zero could start trading at a price above \$ 100 so to let the other investors believe that the fundamental value is \$ 200. Through this trading strategy, the investor could resell *S* at \$ 200 and make an arbitrage gain.

¹³⁶ More technically, a cooperative solution involves a stable set of outcomes such that it meets two conditions: "(1) for every outcome outside the [cooperative] set some coalition can achieve an outcome inside the set that is better for all its members and (2) no coalition can achieve an outcome inside the set better for all its members than another outcome inside the set." See PAUL WEIRICH, *COLLECTIVE RATIONALITY* 152 (2009).

¹³⁷ See MICHAEL MASCHLER ET AL., *GAME THEORY* 671 (2103).

condition).¹³⁸

Board-shareholder collaboration satisfies both conditions. First, unlike unilateral decisionmaking, participatory deliberative mechanisms allow the corporation to capture the value of the informational whole of insider and shareholder complementary inputs, which, recall, is greater than the sum of its parts (and hence satisfies superadditivity).¹³⁹ This implies that collaboration involves joint acts, providing incentives for insiders and shareholders as a group and not exclusively incentives for each individual party.¹⁴⁰ Second, the value added by collaboration increases with the number of investors participating in the deliberative process when information is complementary, so that larger “coalitions” can be assumed to outperform smaller coalitions (and hence to satisfy monotonicity). There is a caveat, however. If on the one hand the shift to re-concentrated equity ownership has enabled the implementation of participatory deliberative mechanisms; on the other hand, under this shift a limited number of intermediary institutions now control the great majority of outstanding shares.¹⁴¹ It follows that the number of investors who possess the incentives and resources to collaborate with insiders is limited.

Once it is determined that a coalition is worthwhile, whether a player will decide to take part in it depends on the player’s expected gains from the cooperative game. In order for a coalition to be formed, these gains need to be at least equivalent to what the player would receive by playing individually outside the coalition.¹⁴² This raises the question of how the value of the coalition should be divided among the coalition’s members, that is, the question of a coalition’s economic rights. In the corporate context, in particular, the nature of the players is such that multiple economic rights are involved. First, collaboration between insiders and shareholders poses the question of how the value added from collaboration should be divided between the corporation (that is, the shareholders at large as represented by the board) and the group of investors participating in deliberative process (the engaged shareholders). Second, there are the economic rights of *each* collaborating investor. Indeed, taking part in the deliberative process may involve significant research costs,¹⁴³ which investors will be unwilling to bear unless the share of payoffs they receive from collaboration compensates them for such costs.

We argue that there is a *prima facie* case that the pro-rata sharing rule embodied in the equity security contract efficiently addresses both issues, lending additional support to the view that collaboration is consistent with the existing structure of corporate law. Under that rule, the deliberative process yields a premium to both participating and non-participating investors, making it individually rational for both the board (as representative of the shareholders at large) and the collaborating investors to participate in collaboration. Further, by ensuring that investors

¹³⁸ See *id.* at 660.

¹³⁹ See *supra* note **Error! Bookmark not defined.** and accompanying text.

¹⁴⁰ Cf. WEIRICH, *supra* note 137, at 148 (referring generally to cooperative games).

¹⁴¹ See *supra* note 120 and accompanying text.

¹⁴² As put by Weirich, “[i]ndividuals are unit-coalitions. So each individual must receive at least as much as she can get on her own. ... Whether a coalitional game's outcome gives a coalition at least its value depends on whether it assigns to the coalition's members utilities that sum to at least the coalition's value.” WEIRICH, *supra* note 138, at 156.

¹⁴³ Under the assumption that proxy fight costs are, at least in part, indicative of an investor’s research costs, it is worth observing that a campaign ending in a proxy fight has an average cost for the investor of around \$ 10.71 million. See Nikolay M. Gantchev, *The Costs of Shareholder Activism: Evidence from a Sequential Decision Model*, 107 J. FIN. ECON. 610, 612 (2013).

participate in the value added by collaboration in a degree that is proportional to the size of their equity stake, the pro-rata sharing rule makes it rational for collaborating investors to invest in information up to the increase in value that this information is expected to produce. Lastly, the equity security contract also avoids the concern that insider-shareholder deliberation might be the vehicle through which heavyweight players collude to obtain private benefits. Such concern, for example, undermines the viability of collaboration in the administrative context, where critics worry that collaborative processes might be exploited by powerful industry players and public interest groups to the detriment of the general public interest.¹⁴⁴ In the corporate context, this risk is unlikely, as the equity contract acts to level the bargaining power of all interested parties in the distribution of the gains arising from deliberation.

B. Administrative Rights

In addition to economic rights, a coalition also involves administrative rights, that is, bargained-for rules by which the coalition's members accept to play the cooperative game. As applied to board-shareholder collaboration, examples of administrative rights include issues such as the respective say of the board and the shareholders in the deliberative process, the relative say of each investor, whether the deliberative process should be designed as internal or external to the corporation's organizational structure, and the advisory or binding nature of deliberative outcomes.

1. *The Marginal Contribution Criterion*

Under the benefits yielded by the equity contract in addressing the economic rights involved by board-shareholder collaboration, one could conclude that the "one share, one vote" criterion that is embedded in that contract should naturally govern collaboration's administrative rights. We challenge this conclusion. First, on the board's side, the one share, one vote principle would require the delegated exercise of voting power from all the non-collaborating investors to the board, raising significant coordination issues. Second, on the investors' side, while the principle would be easier to apply, it could still prove functionally problematic. Indeed, while the acquisition of information by investors can be assumed to primarily be a function of their equity stakes, the investor's business model (in this Article's terms, the investors' interpreted model) can also play a major role. For example, a hedge fund that has a private-equity-like investment policy and only invests in a restricted portfolio of companies (such as Value Act)¹⁴⁵ might be better positioned to produce complementary information than a hedge fund of similar size but with a larger portfolio of companies. To some degree, this is true regardless of the equity stake each investor holds in a particular company.

Insights from game theory are again useful here. In cooperative games, gains are distributed according to each player's marginal contribution to the game's outcome, that is, the increment in value that her joining the other players creates.¹⁴⁶ Consistently, we suggest that a party's say over

¹⁴⁴ Jody Freeman, *Collaborative Governance in the Administrative State*, 45 UCLA L. REV. 1, 83 (1997).

¹⁴⁵ See WALKER, *supra* note 62, at 17.

¹⁴⁶ This is referred to as the "Shapley value" criterion. See MASCHLER ET AL., *supra* note **Error! Bookmark not defined.**, at 760-761. More technically, in a cooperative game, the possible efficient joint acts (here, the different coalitions of the board and the investors) are distinguished by the order in which the players may form a coalition of all players. *Id.* The Shapley value then accords each player the average of her marginal contributions to the possible efficient joint acts. *Id.*

collaboration game should be determined according to the marginal contribution of that party's informational inputs. This would avoid the accessibility issues affecting the application of the one share, one vote principle to the board as representative of the shareholders at large.¹⁴⁷

At the same time, while in general one can assume that an investor's marginal contribution will be higher the greater the investor's stake, the marginal contribution criterion would help ensuring that investors that are more likely to produce complementary information do not end up with less say than investors with a larger stake but a business model that is less likely to produce relevant knowledge. Along similar lines, the marginal contribution criterion is also suited to capture the "specificity" of an informational investment in a corporation as under this criterion specific information that belong exclusively to one investor would be valued more than information that is shared by more investors. Put differently, the marginal contribution criterion is well suited to reflect the value of the sunk costs made by an investor in a given corporation, costs that can be to some extent independent from the size of the investor's equity stake.

In practice, the marginal contribution criterion will often entail a presumption that the board is the "player" with the highest marginal contribution. This stylization of the board's contribution to the deliberative process is consistent with the board's role as veto player and the view that the board possesses inside information that would otherwise not be available to the shareholders. Yet, this presumption should not be deemed as absolute. Instead, it weakens in situations in which the board (or even just the CEO) is clearly underperforming, as one can plausibly assume that in this case the marginal contribution of insiders decreases, and the one of investors correspondingly increases. Concretely, this means that investors will tend to gain a greater say when the board is underperforming; for example, by being able to replace some incumbent directors with their own representatives. From this perspective, the marginal contribution criterion helps re-conceptualize settlements in which a board voluntarily appoints hedge funds representatives in a constructive context as a reflection of a relatively high informational contribution on the funds' part. For example, in the Microsoft case discussed above,¹⁴⁸ the appointment of a Value Act's representative to the board can be seen as a manifestation of the importance that the Value Act's "perception problem" approach had for reforming Microsoft's business.¹⁴⁹

More generally, as we shall see in the next sub-section, the marginal contribution criterion is also helpful to organize a taxonomy of the various forms that the deliberative process between insiders and shareholder can assume. It does so by providing the organizational rule for deciding when one form of deliberation should be preferred to another.

2. *Taxonomy*

¹⁴⁷ Conversely, the marginal contribution criterion is unsuited to provide a distributive criterion for the gains arising from board-shareholder collaboration, as investors could have incentives to overstate their contributions (that is, the value of their complementary information) in order to capture higher gains.

¹⁴⁸ See *supra* text accompanying notes **Error! Bookmark not defined.-Error! Bookmark not defined..**

¹⁴⁹ This Article's Appendix employs a modified version of our hypothetical in Part III to better illustrate the practicalities of the marginal contribution criterion.

The deliberative process between insiders and shareholder can assume several forms: it can take place both within and outside the institutional structure of the corporation, have either an explicit or implicit contractual nature (as well as involve a combination of the two), and, still, either advisory or binding nature (depending on whether the deliberative outcome involves collective obligations that cannot be broken). Collaboration thus emerges as a “continuous,” rather than a “binary” choice.¹⁵⁰ More particularly, the continuous of collaborative choices reflects different degrees of variations relative to the alternative of unilateral board decisionmaking, which remains the default hypothesis under the prevailing legal model of the corporation.

Viewed through this lens, the marginal contribution criterion provides a basis for structuring the form of insider-shareholder deliberation. For example, as noted above, the appointment to the board of an “activist” director can be conceptualized as a form of “non-binding within” deliberation, which reflects that investor’s ability to provide a relatively high marginal contribution. Ad-hoc board committees responsible for shareholder relations or advisory shareholder committees could reflect a lower marginal contribution such as that provided by a diversified pension or mutual fund investor.¹⁵¹ To the extent that a group of institutional investors provides a higher marginal contribution but not sufficient to warrant board representation, that contribution could be reflected through forms of “binding within” deliberation, such as the adoption of an insider-shareholder committee vested with veto power over the criteria for director or CEO selection.¹⁵² On the opposite end of the spectrum, relatively low marginal contributions by the investors are likely to be organized in the form of “non-binding outside” deliberation, such as informal meetings, shareholder engagement practices, investors days, privately agreed-upon governance principles, and the like.

In addition to reflecting different informational contributions, the existence of several forms of collaboration also suggests that each deliberative form is likely to involve different firm-specific tradeoffs, which explains why some deliberative modes may only be feasible for some firms. Further, on top of firm-specific tradeoffs, a generalized tradeoff between stable and flexible collaboration exists. On the one hand, a deliberative mode that promotes the stability of the “coalition” between insiders and shareholders reduces the likelihood of a breach of the collaborative contract. For example, “within” deliberation, which institutionalizes insider-shareholder collaboration, makes it less likely that parties may just walk away from collaboration. Similarly, collaboration that is operationalized through an explicit contract makes it less likely that parties may breach such a contract. On the other hand, collaboration that hinges more on the direct exchange of the parties and less on institutional or contractual procedures is likely to enable a swifter decisionmaking process, which may prove vital to effective decisionmaking in uncertain environments.

¹⁵⁰ A binary choice is one where the alternatives are yes or no, acceptance or decline. A continuous choice, instead, is one between a set of differently preferred alternatives. *See, e.g.*, THOMAS SCHELLING, MICRO MOTIVES AND MACRO BEHAVIOR 213-14 (1978); Robert Putnam, *Diplomacy and Domestic Policy: The Logic of Two-Levels Game*, 488

¹⁵¹ At least one corporation has established an advisory committee to allow shareholders to suggest new directors. *See Dangerous Talk? When/How Should Directors Communicate with Shareholders?*, LATHAM & WATKINS (Latham & Watkins, San Diego, C.A.), at 2. Recently, John Coffee has proposed that a steering committee of institutional investors in charge of assembling a team of outside directors in case of an activist attack could provide an effective solution to the problems raised by hedge fund-appointed directors. *See* Coffee, *supra* note 68, at 26.

¹⁵² Institutional investors have paid increasing attention to the selection criteria for board representation. *See, e.g.*, Lipton & Niles, *supra* note 122.

The existence of these tradeoffs holds out a strong normative presumption for favoring private contracting as the most appropriate governance mode of deliberation, rejecting proposals that have been advanced for making some of these modes mandatory.¹⁵³ Private contracting matches the continuous choice nature of collaboration and remits the decision among different deliberative forms to the actors on the ground, who are in the best position to comparatively assess relevant tradeoffs.

3. Implementation

The marginal contribution criterion helps organize and regulate the administrative rights involved in the deliberative process. The next question is how these rights shall be operationalized. We envision two basic mechanisms. As suggested in the prior section, using formal contracts is one such mechanism. The second is using “relational” contracts, that is, informal, implicit agreements rather than explicit ones.

1. Formal Contracts

In some cases, insider and shareholders explicitly use contracts to formalize the deliberative process (or at least part of it). Consider, for example, the use of standstill agreements by incumbents and activist hedge funds.¹⁵⁴ We maintain that at least some of these agreements (those more oriented toward the long term) should be regarded as implementing a contract-based collaborative alternative to hostile hedge fund activism.

Although some scholars question skeptical about the collaborative value of standstill agreements, it is worth emphasizing that the rise of such agreements seems to fall within a broader trend that has seen “shareholder agreements” between activist investors of *all* types (rather than just hedge funds) and insiders increase significantly in recent times.¹⁵⁵ While highly idiosyncratic, shareholders agreements share one central feature with standstill agreements: they are typically executed “when a prospective or current shareholder approaches a firm with a value proposition.”¹⁵⁶ Shareholder agreements, however, tend to have much larger scope, as they typically provide for detailed rights and duties of both managers and shareholders, including about private information access, director and management appointments, buy and sell restrictions and

¹⁵³ Lisa Fairfax, *Mandating Board-Shareholder Engagement?*, ILL. L. REV. 821 (2013) (proposing to make shareholder engagement mandatory)

¹⁵⁴ See text accompanying notes 68-71.

¹⁵⁵ See Jordan Schoenfeld, *Shareholder Manager Contracting in Public Companies*, (unpublished manuscript) (2017), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3046182. (reporting that In 2015 alone, there were 335 shareholder agreements). Investors who have entered shareholder agreements include banks, broker dealers, companies/corporations, employee benefit plans, endowment funds, holding companies, insurance companies, investment advisers, investment companies, partnerships, religious organizations, and savings associations. *Id.* at 2.

¹⁵⁶ As a matter of theory, both standstill agreements and shareholder agreements are consistent with the solutions identified by general equilibrium scholars to ameliorate the shareholder selection problem. See Bratton & Sepe, *supra* note **Error! Bookmark not defined.**, at 31-32. In particular, DeMarzo showed that a dominant blockholder with a financial incentive to move the firm to a production plan that maximizes value can build a majority coalition in a boardroom. Peter M. DeMarzo, *Majority Voting and Corporate Control: The Rule of the Dominant Shareholder*, 60 REV. ECON. STUD. 713, 719 (1993).

strategic alliances.¹⁵⁷ These agreements also tend to be more frequent in firms that are more volatile, less profitable, younger and with weaker information environments.¹⁵⁸

2. *Relational Contracts*

Notwithstanding the recent increase in shareholder agreements, in many cases the board-shareholder deliberative process is likely to be governed by relational and implicit contracts, rather than explicit ones. Relational contracts¹⁵⁹ are agreements characterized by continuing highly interactive exchanges between the contracting parties and which last over-time.¹⁶⁰ Economically, these contracts are framed as a repeated game,¹⁶¹ in which players condition their actions on the way their opponents played in previous stages of the game.¹⁶² Indeed, both boards and collaboration-prone investors are likely to be repeated players in the collaborative context.¹⁶³ First, the relationship between boards and major institutional investors can accurately be described as ongoing and involving regular rather than sporadic communications, as well as periodic consultation. Similarly, once a standstill agreement (or any other agreement that provides for the cessation of hostility between the board and an activist) is concluded, a board's relationship with activist investors also becomes necessarily ongoing.¹⁶⁴

The repeated-game nature of board-shareholder collaboration implies that the current actions of the parties produce effects not just within the particular deliberative process in which these actions are put in place, but also on future collaborative games, as these actions come to constitute a party's reputational capital. In other words, the behavior held by a board or an investor in prior deliberative contexts tends to provide information on the reliability of these parties' promises and engagement, information that will influence the outcome of future interactions between the parties.

¹⁵⁷ *Id.* at 13-27.

¹⁵⁸ *Id.* at 5-6, 27-34. The similarities with VC contracting are striking and ultimately defy objections that comparing board-shareholder collaboration in the public context with VC collaborative schemes is equivalent to comparing "apples with oranges." Other commentators have explained the defining features of shareholder agreements as providing a response to severe asymmetric information between insiders and shareholders. See Schoenfeld, *supra* note 155, at 5. But these features are as well compatible with the combination of asymmetric information and partial information problems examined in this Article and, more importantly, with the attempt of providing a contract-based collaborative response to such problems.

¹⁵⁹ MacNeil was the first to put forth the importance of the principle of solidarity and reciprocity in the study of (relational) contracts. See Ian R. MacNeil, *The Many Futures of Contract*, 47 S. CAL. L. REV. 691, 694-97, (1974); Ian R. MacNeil, *Contracts: Adjustment of Long-Term Economic Relations Under Classical, Neoclassical, and Relational Contract Law*, 72 NW. U. L. REV. 854, 856-57, 862, 895 (1978). For a more recent formalized treatment of relational contracts, see e.g., Jonathan Levin, *Relational Incentive Contracts*, 93 AM. ECON. REV. 835 (2003); Jonathan Levin, *Multilateral Contracting and the Employment Relationship*, QUART. J. ECON. 1075, 1077 (2002).

¹⁶⁰ Another way to think of such contracts is by contraposition: relational contracts share none of the features of discrete contracts, which are characterized by short duration, limited personal interaction, precise measurement of the objects of exchange, and requirement of only a minimum, if any, of cooperation between the parties. Karen Eggleston et al., *The Design and Interpretation of Contracts: Why Complexity Matters*, 95 NW. U. L. REV. 91, 119-20 (2000).

¹⁶¹ See Simone M. Sepe, *Making Sense of Executive Compensation*, 36 DEL. J. CORP. L. 189, 212-13 (2011) (investigating the relational contract features of executive compensation).

¹⁶² See DREW FUDENBERG & JEAN TIROLE, *GAME THEORY* 110 (1991).

¹⁶³ See *supra* text accompanying notes 141-164

¹⁶⁴ See Coffee, *supra* note 68, at 10 (stating that in 2016, a "ten well-known activists won 76 seats," out of 131 overall disputed seats on the boards of directors of targeted companies).

More particularly, the transmission of reputational information produces a two-fold effect. First, it incentivizes participants in a collaborative game not to deviate from the game's agreed upon rules. Doing otherwise could trigger a loss in the parties' reputational capital, which would likely prove costly in the future; for example, because a lower reputational capital could affect the parties' ability to participate to other collaborative games. Second, boards and investors can be expected to develop a reputation for being more or less collaborative over time, which, in turn, should allow interested parties to screen collaborative and non-collaborative actors. Indeed, under the assumption of complete markets (that is, a world without frictions),¹⁶⁵ collaboration would always be a self-enforceable outcome, as the equity contract makes board-shareholder collaboration compatible with the parties' self-interest.

The foregoing discussion analyzes the value of collaboration when both shareholders and insiders act unselfishly to maximize firm value. Under the realistic assumption of incomplete markets,¹⁶⁶ however, the parties' behavior may fall out of the equilibrium path. As a result, both insiders and shareholders may engage in deviating behaviors in which they sacrifice firm value to further their private interests. On the board's side, these behaviors are commonly characterized as managerial entrenchment. In particular, within this Article's analytical framework, an entrenched board is also likely to be a systematically non-responsive and non-collaborative board. This is because refusing to collaborate is rational for the board if it allows directors to preserve private benefits that they could lose in a deliberative process. Correspondingly, on the investors' side, deviating behaviors will typically take the form of short-termism,¹⁶⁷ as some investors (for example hedge funds with short-term oriented business models) might be in the position to competitively exploit asset pricing imperfections to profit from short-term speculative options.¹⁶⁸

The common feature shared by these deviating behaviors is the creation of a power imbalance, either in favor of the investors or the board. The related domain of correction, however, is not unconstrained. For if the risk of speculative investor interventions calls for board protection, enhanced board protection may increase the risk of board entrenchment. There results a tradeoff between protecting board authority against non-collaborative investor behavior and ensuring that such protection does not lead to non-collaborative board behavior.

Reputation provides one mechanism to optimize on this tradeoff and contextually address the nuanced situations that may arise when one considers the overlapping of issues of informational asymmetry and partial information. Consider, for example, a board that refuses to collaborate with an investor because the investor's informational input is incompatible with the board's private information. More concretely, assume that the investor wants to redirect corporate production

¹⁶⁵ When markets are complete, "there is a market for each good in the economy, information is symmetric (none knows more than does anybody else), and all externalities are taken into account and priced (which, as a practical matter means excluding externalities). All producers and consumers must also be price takers . . ." See Bratton & Sepe, *supra* note **Error! Bookmark not defined.**, at 7-8. See also 1 MICHAEL MAGILL & MARTINE QUINZII, THEORY OF INCOMPLETE MARKETS 2 (1996) (providing a more technical description of complete markets).

¹⁶⁶ See Cremers & Sepe, *supra* note 16, at 111 (stating that among other factors, transaction costs, nonverifiable symmetric information, and asymmetric information make markets incomplete).

¹⁶⁷ The problem of whether some investors have short term economic incentives that are in conflict with the maximization of long term firm value has been extensively debated in the literature. See, e.g., George W. Dent, Jr., The Essential Unity of Shareholders and the Myth of Investor Short-Termism, 35 Del. J. Corp. L. 97 (2010) (explaining and challenging the "myth" of investor short-termism). We identify the short-termism as a potential concern here without exploring the extent to which that concern is valid.

¹⁶⁸ See *supra* text accompanying notes **Error! Bookmark not defined.**-**Error! Bookmark not defined.**.

toward a particular industry segment. Also assume that the board has private information about an innovation that is being developed and that can dramatically improve the corporation's performance in the current industry segment. The board may be unable to fully disclose information about the innovation because of concerns about the corporation's competitors or because the information is soft and hence not verifiable by the investors. In similar circumstances, asymmetric information problems prevail over partial information ones, but not because the board is entrenched.

Making the board the veto player – the party with the last say on a prospective collaboration with the investors – grants the board the authority to refuse collaboration, which helps address the asymmetric information problem. From an external perspective, however, how can one tell if a board is refusing to collaborate because of superior private information or, rather, moral hazard issues? Reputation helps in the task. If a board that has developed a reputation for being collaborative refuses to collaborate with a particular investor, there should be a presumption that the board is efficiently exercising its veto power to protect some private information. Conversely, if the board's reputational capital is relatively low, the refusal to collaborate would be more likely to raise a red flag about the possible entrenchment of the board.

Similar considerations apply to the risk of opportunistic behavior by the investors. From an external perspective, it might be difficult to tell whether competitive investor behavior aims to exploit a speculative option or to displace an entrenched board. In principle, the board's ability to exercise veto power produces a presumption that any non-collaborative investor behavior is likely to signal opportunism on the investor side. But reputation intervenes again to strengthen or weaken that presumption. For example, an investor with a reputation for being collaborative that suddenly turns hostile is a circumstance that should weaken the presumption that the board is legitimately exercising its veto power. Conversely, the action a board takes against an investor with low reputational capital should be more likely to benefit from that presumption.

Reputation, however, cannot fully address the distortions arising from possible deviating behaviors; for example, what about the possibility that a board with high reputational capital may later become entrenched or that an investor with a constructivist reputation suddenly looks out for short-termist changes? Part V will address these and other questions concerning the policy implications of our analysis.

V. POLICY IMPLICATIONS OF THE COLLABORATIVE MODEL

We base the discussion of the policy implications of the collaborative model on three main points the analysis has yielded.

1. Breaking old confrontational patterns, corporate insiders and shareholders are increasingly uniting to promote collaborative corporate decisionmaking.
2. Collaboration adds value that neither unilateral decisionmaking nor the mediated aggregation of information through markets can provide. This value flows from the aggregation of the diverse and complementary information insiders and shareholders are likely to possess in a world of complex investments and reconcentrated equity ownership.

3. In incomplete markets, corrective mechanisms are necessary to promote collaboration and minimize the risks of board entrenchment and speculative investor behavior.

This Part explores these points' further policy implications. In particular, we highlight three major implications. First, to enhance collaboration, core governance provisions should be the product of bilateral action involving both insiders and shareholders. Second, board insulation mechanisms should require shareholder input. Finally, doctrines constraining director use of corporate information should facilitate rather than frustrating information sharing between activist directors and their principals. Notably, implementation of these principles requires rethinking and adapting several existing principles of corporate law, and we note those concerns in our analysis.

A. Corporate Charters vs. Bylaws

Within the enabling structure of Delaware law, charters and bylaws are the legal means through which corporate actors set firm-specific rules of the games.¹⁶⁹ Some of these rules (whether designed to opt out of statutory provisions or select a contract-like term) can only be included in the charter, which is accordingly described as the core corporate document.¹⁷⁰ For example, limitations or exclusions of certain director liability for monetary damages or breach of the duty of care must be included in this document.¹⁷¹ Other rules, instead, can be included in either the charter or the bylaws. For example, the Delaware statute allows a corporation to adopt a forum selection provision through either a charter provision or a bylaw provision.

Although some authority characterizes the scope of the bylaws as limited to procedural issues,¹⁷² Delaware law provides that they can include “any provision, not inconsistent with law or with the certificate of incorporation, relating to the business of the corporation the conduct of its affairs, and its rights or powers or the rights or powers of its stockholders, directors, officers or employees.”¹⁷³ In actuality, corporations have adopted bylaws to address a wide variety of issues.¹⁷⁴ Thus, the critical distinction between charters and bylaws does not concern their contractual scope, but instead the procedure for amending each document.

Charter amendments can only be initiated by the board, although they require shareholder approval.¹⁷⁵ Charter amendments are thus characterized by a bilateral veto, as neither the shareholders nor the board can amend the charter alone.¹⁷⁶ In contrast, both the shareholders and the board may unilaterally amend the bylaws.¹⁷⁷ In Delaware and most other states, shareholders

¹⁶⁹ See, e.g., *Airgas, Inc. v. Air Prods. & Chems., Inc.*, 8 A.3d 1182, 1188 (Del. 2010) (defining the charter and the bylaws as “contracts among the corporation’s shareholders).

¹⁷⁰ See WILLIAM T. ALLEN ET AL., COMMENTARIES AND CASES ON THE LAW OF BUSINESS ORGANIZATION 84 (5th ed. 2016).

¹⁷¹ DEL. CODE ANN. tit. 8, § 102 (b) (7).

¹⁷² *CA, Inc. v. AFSCME Emples. Pension Plan*, 953 A.2d 227, 234-36 (Del. 2008) (using a substance/procedure distinction to demarcate the scope of a permissible bylaw under Delaware law).

¹⁷³ DEL. CODE ANN. tit. 8, § 109(b).

¹⁷⁴ See Fisch, Cal.

¹⁷⁵ See *supra* text accompanying notes **Error! Bookmark not defined.-Error! Bookmark not defined.**

¹⁷⁶ See Marcel Kahan & Edward B. Rock, *Corporate Constitutionalism: Antitakeover Charter Provisions as Precommitment*, 152 U. PA. L. REV. 473, 517 n.175 (2003).

¹⁷⁷ The precise scope of board and shareholder authority to adopt and amend the bylaws varies from state to state. For a more detailed explanation see Fisch, *supra* note **Error! Bookmark not defined.**

have the authority to adopt, amend and repeal the bylaws.¹⁷⁸ Corporations, may also grant the power to amend the bylaws to the board through a charter provision, and the vast majority of publicly-traded corporations grant such authority to the board.¹⁷⁹

Combined with the broad scope of governance bylaws, the fact that bylaws may be unilaterally adopted by either the board or the shareholders explains why a substantial amount of private ordering in Delaware corporations takes place through the adoption of issuer-specific bylaws.¹⁸⁰ In recent years, boards and investors alike have engaged in the endeavor. Shareholders, for example, have proposed a variety of governance reforms through bylaw amendments, including majority voting, proxy access, and the right to call special meetings.¹⁸¹ Boards have used bylaws to respond to shareholder-initiated governance proposals, for example imposing procedures or conditions on the exercise of new shareholder governance rights.¹⁸²

In practice, however, several factors contribute to constrain the shareholders' ability to modify board-adopted governance bylaws with which they disagree.¹⁸³ This limitation, in turn, creates a presumption in favor of unilateral board decisionmaking, one that may be exploited by opportunistic insiders for entrenchment purposes. In order to address this disparity, some commentators have advocated broadening the shareholders' bylaws authority.¹⁸⁴ The collaborative model of the corporation counsels a different approach -- a presumption for addressing rules-of-the-games provisions in the charter rather than the bylaws -- to ensure that these rules are the product of the consensus of both the board and the shareholders.¹⁸⁵

The recent decision in *Frechter v. Zieri* suggests that the Delaware courts might be moving in this direction and, in any event, are in the position to operationalize such a presumption. In *Frechter v. Zieri*, the court held that a board-adopted bylaw requiring approval by a two-third shareholder vote to remove directors was invalid because it conflicted with a statutory provision establishing that a majority vote is sufficient to remove directors.¹⁸⁶ In footnote 19, however, Chancellor Strine contrasted the impermissibility of a supermajority bylaw with a *permissible charter-based* supermajority voting requirements.¹⁸⁷ Notably, the Delaware statute explicitly authorizes supermajority voting requirements in the form of charter provisions.¹⁸⁸

¹⁷⁸ DEL. CODE ANN. tit. 8, § 109(a) (2015).

¹⁷⁹ Ann Lipton, *Manufactured Consent: The Problem of Arbitration Clauses in Corporate Charters and Bylaws*, 104 GEO. L.J. 583, 589 n. 25 (2016) ("Universally, publicly traded corporations grant directors such powers from their inception").

¹⁸⁰ See Fisch, *supra* note **Error! Bookmark not defined.**, at 8; David A. Skeel, Jr., *The Bylaw Puzzle in Delaware Corporate Law*, 72 BUS. LAW. 1, 3 (2016).

¹⁸¹ See Jill E. Fisch, *The New Governance and the Challenge of Litigation Bylaws*, 81 BROOKLYN L. REV. 1637, 1638 (2016).

¹⁸² See *id.*

¹⁸³ See Fisch, *supra* note **Error! Bookmark not defined.**, at 8.

¹⁸⁴ See Fisch, *supra* note **Error! Bookmark not defined.**, at 32-35 (discussing several of these studies).

¹⁸⁵ One of us has argued elsewhere for an alternative approach in which courts subject board-adopted bylaws that interfere with shareholder rights to heightened scrutiny. See Fisch, *supra* note **Error! Bookmark not defined.**

¹⁸⁶ *Frechter v. Zier*, C.A. No. 12038-VCG (Del. Ch. Jan. 24, 2017).

¹⁸⁷ *Id.* at 19.

¹⁸⁸ DEL. CODE ANN. tit. 8, § 102 (b) (4).

While state corporate law statutes may not provide clear guidance as to when a provision constitutes a sufficiently important “rule of the game” that it must be included in the charter, the Delaware courts may be able to rely on judge-made equity principles to remedy opportunistic unilateral abuses of rules-of-the-game provisions, incentivizing the adoption of value-maximizing charter-based consensual governance.¹⁸⁹ Support for such an approach can be found in *Schnell v. Chris-Craft Industries*, where the Delaware Supreme Court sanctioned the board’s unilateral, and opportunistic, amendment of the company’s bylaws by holding that “inequitable action [by corporate fiduciaries] does not become permissible simply because it is legally possible.”¹⁹⁰ As remarked by Justice Jacobs, “[f]rom [Chris-Craft] onward, judicial review of corporate fiduciary conduct would not be limited to what the company’s foundational documents prescribed, but that conduct would also be subject to the overriding application of judge-made equitable principles.”¹⁹¹

We note that the limitations of the IPO market in disciplining corporations to adopt efficient governance provisions presents a substantial limitation to our proposal. Studies suggest that the market does not effectively price charter provisions chosen by the company’s founders at the IPO stage and, as a result, those provisions do not share the usual consensual features of charter-based governance. Because of the board’s exclusive power to initiate charter amendments, these provisions are largely immune from shareholder attack.

Two solutions to this problem are possible. One would be a requirement that IPO charter provisions be sunsetted as the company matures. Retention of the provisions would require an affirmative vote of the existing shareholders. Another alternative would be to enable shareholders to initiate the process of amending the charter, while retaining for the board the authority to refuse to amend, even in the face of such a shareholder vote. Enabling shareholders to initiate the amendment process subject to board veto would be sufficient to produce a reaction in the secondary market and enable the exercise of market-driven shareholder discipline—if needed—without producing a disruptive imbalance in the power of insiders and shareholders. Either of these approaches would introduce desirable bilateral features in the governance of such provisions.

B. Balancing Board and Shareholder Power

As seen above, promoting collaboration by limiting the ability of shareholders to act unilaterally and opportunistically involves a tradeoff between board protection and board entrenchment.¹⁹² Under this tradeoff, a normative presumption arises for favoring board protection that is agreed upon by the shareholders and lasts a “finite” time (as opposed to being perpetual).

¹⁸⁹ Recent empirical evidence produced by one of us in a prior study also supports our policy recommendation for according legal preference to charter-based bilateral governance, showing that the adoption of a supermajority voting requirement to amend the bylaws is negatively associated with firm value in the time series. See Cremers, Masconale, and Sepe, *supra* note **Error! Bookmark not defined.**, at 767-68. Indeed, subjecting the shareholders’ bylaws power to a supermajority requirement is one of those limitations that constrains the ability of shareholders to modify board-adopted governance bylaws, with the result that the board bylaw power becomes de facto unilateral upon the adoption of such a governance provision. See Fisch, *supra* note **Error! Bookmark not defined.**, at 28-29.

¹⁹⁰ In *Chris-Craft*, where the incumbent directors decided to amend the bylaws to the sole purpose of setting the annual meeting date five weeks earlier than the original date so to materially disadvantaged the dissidents and substantially perpetuated the incumbents in control. *Schnell V. Chris-Craft Industries, Inc.* 285 A.2d 437 (Del. 1971).

¹⁹¹ Jack B. Jacobs, *Fifty Years of Corporate Law Evolution: A Delaware Judge’s Retrospective*, 5 HARV. BUS. L. REV. 144, 144 (2015).

¹⁹² See *supra* Part III.C.2.

The first prong of this presumption reflects, again, a preference for bilateral governance arrangements, as protection that is based on consensus is less likely to camouflage entrenchment. The second prong captures the need to preserve the benefits of shareholder discipline in the long term, when prices are more likely to provide an accurate informational focal point on insider performance.¹⁹³ Combined, these prongs bear important implications for several governance features, including staggered boards, poison pills, say on pay votes, and special shareholder meetings.

1. *Staggered Boards vs. Poison Pills*

Under this Article's presumption in favor of bilateral protective arrangements, staggered boards should be preferred to the poison pill as a defense against the risk of speculative, non-collaborative investor behavior. Indeed, the adoption of a staggered board requires both board and shareholder approval.¹⁹⁴ Hence, shareholders who are displeased with the adoption of this measure can withhold their consensus and veto its adoption. On the contrary, a poison pill can be unilaterally adopted by the incumbent board at any time, even in the face of shareholder opposition.¹⁹⁵ As a result, it is plausibly easier for incumbents to adopt a pill for opportunistic reasons (rather than to protect the corporation from non-collaborative shareholder interventions).¹⁹⁶ Further, a board can unilaterally adopt "on the shelf" (that is, inactive but readily available) pills for use at any time.¹⁹⁷ This entails an additional risk that the board might employ a poison pill to gain potentially perpetual protection.

The adoption of a staggered board avoids both complications. First, the requirement of bilateral consensus increases the likelihood that a staggered board might serve a positive governance function that benefit *both* incumbents *and* shareholders,¹⁹⁸ including by mitigating the risk of non-collaborative intervention by speculators. Second, because in the typical hypothesis of a three-class staggered board each class of directors is only protected for a limited period of three years,¹⁹⁹ a staggered board does not permanently remove corporate insiders from shareholder discipline. Instead, it sets a longer time frame for the evaluation of insiders, one that is more likely to provide accurate information about their performance.²⁰⁰

A normative presumption in favor of the staggered board, accompanied by one disfavoring the poison pill, would help ease the tradeoffs. There are a variety of reasons, however, why an issuer

¹⁹³ See *supra* text accompanying notes 124-125.

¹⁹⁴ See DEL. CODE ANN. tit. 8, § 141(d) (2015) (requiring shareholder approval to adopt a staggered board after the initial charter or bylaws are in place).

¹⁹⁵ See John C. Coates IV, *Takeover Defenses in the Shadow of the Pill: A Critique of the Scientific Evidence*, 79 TEX. L. REV. 271 287 n.62 (2000) ("Technically, pill adoption is a dividend of rights to purchase stock. Dividends . . . are within the authority of the board and do not require shareholder approval.").

¹⁹⁶ Cremers, Masconale, & Sepe, *supra* note **Error! Bookmark not defined.**, at 769-70.

¹⁹⁷ See Stephen M. Gill et al., *Structural Defenses to Shareholder Activism*, 47 REV. SEC. & COMMODITIES REG. 151, 169-70 (2014).

¹⁹⁸ See Cremers, Masconale, and Sepe, *supra* note **Error! Bookmark not defined.**, at 770.

¹⁹⁹ See Cremers & Sepe, *supra* note 16, at 77.

²⁰⁰ See *id.* at 792 (pointing out that shareholder advocates inaccurately portray staggered boards as permanently removing incumbents from shareholder discipline); Sepe, *supra* note **Error! Bookmark not defined.**, at 1438 ("absent a supermajority requirement and the simultaneous presence of a pill, a staggered board only delays but does not impede the exercise of voting control.").

might prefer a poison pill to a staggered board. As a result, and because banning the poison pill altogether might also be politically infeasible, we propose adding a bilateral dimension to the adoption of a poison pill through a statutory or charter provision providing shareholders with a binding “say on the pill” vote.²⁰¹ The provision would provide for the automatic expiration of a pill unless shareholders approve it for another voting cycle. As a reference term, we suggest that the timing of the shareholder vote should capture the passage from a short-term perspective (under which the pill is more likely to have an actual justification) to a long-term one (under which the adoption of a pill should never be justified unless it is approved by the shareholders).²⁰² This modification would import a bilateral feature in the governance of the poison pill, making its use more compatible with a collaborative model.²⁰³

The above discussion on the different collaborative implications of charters and bylaws also suggests that staggered boards should be charter-based, as to ensure that not only the adoption, but also the dismissal, of a staggered board reflects a participatory process. When a staggered board is established in the bylaws, shareholders can unilaterally decide to reinstate a unitary board.²⁰⁴ In this situation, shareholders determined to remove a majority of the board may be able to do so in a single vote at the next annual shareholder meeting.²⁰⁵ This, however, can nullify the ability of the staggered board to provide meaningful protection against speculative shareholder interventions.²⁰⁶ By contrast, with a staggering provision in the charter, shareholder discipline is delayed to a longer interval of two election cycles (each likely separated by at least a year),²⁰⁷ which is more likely to preserve the defensive strength of the staggered board against speculative interventions.²⁰⁸

²⁰¹ See Sepe, *supra* note **Error! Bookmark not defined.**, at 1433 (proposing that defensive measures in general should automatically expire as a corporation’s business cycle transitions from the short to the long term), 1437-38 (focusing on the poison pill).

²⁰² Consistent with recent indications that have come from the market place, this term could correspond to a period of one or two years, although this rule-of-thumb comes with the obvious caveat that this break point should be modifiable by the parties to reflect firm-specific circumstances. See ISS Governance, US Policy – Directors Elections – Poison Pills, <https://www.issgovernance.com/file/policy/3-2017-comment-period-template-us-director-elections-poison-pills.pdf> (stating that the ISS will oppose the adoption of any poison pill that has not received shareholder approval unless the pill expires within a term of twelve months or less and is adopted in response to a specific threat.)

²⁰³ It is worth emphasizing that some among earlier poison pills contained bilateral features, as shareholders were permitted to remove the pill. These bilateral features, however, disappeared in later pills. See Kahan & Rock, *supra* note **Error! Bookmark not defined.**, at 910.

²⁰⁴ See DEL. CODE ANN. tit. 8, § 109(a).

²⁰⁵ See John C. Coates IV, *Explaining Variation in Takeover Defenses: Blame the Lawyers*, 89 CALIF. L. REV. 1301, 1392-93 (2001) (explaining that as long as provisions that interfere with the shareholders’ ability to take control of a board are not established in the charter, shareholders can “work around” them by amending the bylaws).

²⁰⁶ See Bebchuk et al., *supra* note **Error! Bookmark not defined.**, at 893 (stating that only charter-based staggering provisions can be considered as “effective” insulation mechanisms).

²⁰⁷ *Id.*

²⁰⁸ Similar to the case of charter-based vs. bylaws-based governance, our policy recommendation that the staggered board should be preferred to the poison pill as a means to protect the board against speculative investor interventions finds support in recent empirical evidence. This evidence documents that while the adoption of a staggered board is associated with an increase in firm value in the time series, the adoption of a poison pill is associated with a decrease in firm value. See Cremers, Masconale, and Sepe, *supra* note **Error! Bookmark not defined.**, at 767, 772-73. Along similar lines, this recommendation is also consistent with a series of recent empirical studies supporting the view that staggered boards might serve a positive function in corporate governance. See, e.g., Cremers & Sepe, *supra* note 16, at 73-74, 114-15 (2016) (documenting evidence that staggered boards positively affect firm value); K.J. Martijn Cremers, Lubomir Litov & Simone M. Sepe, *Staggered Boards and Long-Term Firm Value, Revisited*, 123 J. FIN.

2. *Say on Pay*

In principle, say-on-pay provisions²⁰⁹ respond exactly to the call for consensual governance advocated by this Article, as they increase the scope for constructive dialectical confrontation between boards and shareholders. In practice, the extent to which these provisions have led to insider-shareholder collaboration is unclear. Some institutional investors have defended the dialogue that has resulted from the legislation.²¹⁰ On the other hand, Chief Justice Strine has characterized say on pay as a “frantic cycle,” which is unlikely to be “conducive to thoughtful voting.”²¹¹

It is worth considering whether the annual nature of the say on pay vote has diminished the collaborative role and instead transformed the say-on-pay vote into a unilateral bargaining lever that shareholders can exploit *against* corporate insiders to express dissatisfaction with firm performance.²¹² And as argued by both of us in independent prior work, this distortion in the current use of say-on-pay votes may lead to counterproductive short-term pressure on boards.²¹³ It is also worth emphasizing that the Dodd-Frank Act did not require say-on-pay votes to be held annually, instead delegating regulation of the matter to the SEC.²¹⁴ Our analysis offers another reason to reconsider the scope of the say on pay vote. In particular, it is unlikely that an annual vote is necessary for shareholders to bring meaningful information to a discussion with the board over pay practices.

3. *Special Shareholder Meetings*

Provisions giving shareholders the power to call a special meeting (that is, outside of the annual shareholder meeting) have been among the most popular in the surge of shareholder proposals that has accompanied the rise of shareholder empowerment.²¹⁵ These proposals seek to derogate to the

ECON. (forthcoming 2017) (providing robust evidence that staggered boards *are not* negatively related to firm value); William C. Johnson et al., *The Bonding Hypothesis of Takeover Defenses: Evidence from IPO Firms*, 117 J. FIN. ECON. 307 (2015) (empirically documenting that in IPO firms, takeover defenses reduce the possibility that a change in control will harm the firm’s stakeholders, promoting more favorable contracting terms and increasing firm value).

²⁰⁹ See Dodd–Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, sec. 951, § 14A(a)(1), 124 Stat. 1376, 1899 (2010) (codified as amended at 15 U.S.C. § 78n-1).

²¹⁰ See, e.g., Seymour Burchman & Blair Jones, *Righting the Say On Pay Ship After a “No” Vote*, SEMLER BROSSY (Sept. 2013), <http://www.semlerbrossy.com/wp-content/uploads/ATD-Shareholder-Engagement.pdf> (“One of the positive outcomes of the Say on Pay provision in the Dodd-Frank legislation has been more regular dialogue between companies and shareholders.”).

²¹¹ Leo E. Strine, Jr., *Who Bleeds When the Wolves Bite? A Flesh-and-Blood Perspective on Hedge Fund Activism and Our Strange Corporate Governance System*, 126 YALE L. J. 1870, 1968 (2017).

²¹² See Jill E. Fisch et al., *Is Say on Pay All About Pay? The Impact of Firm Performance*, 8 HARV. BUS. L. REV. (forthcoming 2017) (showing empirically that an issuer’s economic performance has a substantial effect on the outcome of say-on-pay votes).

²¹³ See *id.*; Cremers, Masconale and Sepe, *supra* note **Error! Bookmark not defined.**, at 802.

²¹⁴ 15 U.S.C. § 78n-1(a)(1) (2012) (requiring that “[n]ot less frequently than once every 3 years” a company “include a separate resolution subject to shareholder vote to approve the compensation of executives” in its proxy materials for a shareholder meeting).

²¹⁵ Fisch, *supra* note 181, at 1650 (focusing on shareholders proposals concerning special meetings); see also Marcel Kahan & Edward Rock, *Embattled CEOs*, 88 TEX. L. REV. 987, 995-1005, 1011-13 (2010) (discussing the general increase in shareholder proposals).

general statutory rule that vests the authority to call a shareholder meeting in the board of directors.²¹⁶ Delaware law explicitly authorizes shareholders to adopt bylaws that empower a percentage of shareholders to call special meetings.²¹⁷ Shareholder petitions to the board for special meeting rights have led to a remarkable increase in both the number of companies granting their shareholders the right to call special meetings and the actual number of such meetings.²¹⁸

The increased use of special shareholder meetings involves concerns that are similar to those raised by the frantic use of say-on-pay votes, as the right to call such meetings also grants shareholders a unilateral bargaining lever that they can exploit against insiders. On the other hand, the potential for shareholder can be limited by restricting the right to a relatively high minimum ownership threshold, such as 25 percent, which is the upper bound of the ownership threshold that several large institutional investors endorse.²¹⁹ Alternatively, it may be appropriate to consider whether shareholder rights to call special meetings should be the product of a charter rather than a bylaw provision. This would grant the board veto power over the adoption of a provision that allowed shareholders to call special meetings too frequently while retaining shareholder pressure on the board if it refused to agree to a charter amendment in the face of substantial shareholder support.

C. Information-Sharing

Effective collaboration requires that corporate insiders share information with investors. This, in turn, may create both confidentiality issues between insiders and investors' representatives and information sharing issues between these representatives and others at their institutions or funds.

Activist directors raise particular concerns. Activist directors (also referred to as "blockholder"²²⁰ or "constituency"²²¹ directors) raise unique fiduciary issues because they are called to serve both the corporation (that is, the shareholders at the large) and their nominating sponsor.²²² Delaware law imposes a duty of confidentiality on directors as part of their duty of

²¹⁶ DEL. CODE ANN. tit. 8, § 211 (d) (2009). The MBCA takes a different approach. Shareholders with at least 10 percent of the outstanding voting shares may call a special meeting, although the percentage may be raised to as high as 25 percent in the articles of incorporation. See MBCA § 7.02.

²¹⁷ DEL. CODE ANN. tit. 8, § 211 (d) (2009). While shareholders have the ability to unilaterally amend a company's bylaws, including to the end of providing for the right to call special shareholder meetings, they will need to petition the board to implement that change if the corporate charter includes a preexisting limitation on that ability.

²¹⁸ See Fisch, *supra* note 181, at 1650; Yafit Cohn et al., *Special Meetings Proposal*, HARV. L. SCH. F. ON CORP. GOVERNANCE & FIN. REG. (Sept. 2, 2016), <https://corpgov.law.harvard.edu/2016/09/02/special-meeting-proposals-2/>.

²¹⁹ See Cohn et al., *supra* note 218 (observing that State Street, for example, votes for proposals that set the threshold at 25% or less but not less than 10%; BlackRock supports proposals that set the threshold at 25% or less but not less than 15%; and still other investors, like Fidelity Management & Research Co., recommend voting for a proposal if the threshold is 25% or more.).

²²⁰ See J. Travis Laster & M. Zeberkiewicz, *The Rights and Duties of Blockholder Directors*, 70 BUS. LAW. 33, 54-57 (2015).

²²¹ The term "constituency directors" is more generic, as it includes all directors nominated by some specific constituencies, rather than just directors nominated by certain classes of investors. See Sepe, *supra* note **Error! Bookmark not defined.**, at 335-40 (examining different types of constituency directors).

²²² *Id.* at 341-60 (providing a detailed law and economics discussion of the matter).

loyalty.²²³ Although case law on the duty of confidentiality is rather sparse,²²⁴ it requires directors to maintain material company information confidential.²²⁵ It also limits the potential for collaboration as, without full access to information, the activist director cannot be an informed participant in board discussions.

Insiders' historic mistrust of activist directors has led to a reluctance of incumbent directors to share information with a newly-appointed or elected activist representative.²²⁶ This can create "a wall between the new board member and his or her board."²²⁷ Legally, however, activist directors are entitled to equal access to corporate information as their fellow directors.²²⁸ Some companies have responded to the concern by increasing the use of confidentiality agreements,²²⁹ although in some cases, such agreements have been used to "oppress directors."²³⁰

A second concern is information sharing by the activist director with his or her hedge fund sponsor. Recall that collaborative model relies on the fact that shareholders supply complementary information due to their information advantages in the market, expertise and differential knowledge base. This information is not contained within the brains of the hedge fund's directors, but located throughout the fund, and for the activist director to operate most effectively, he or she must be able to evaluate company-specific information in the context of the fund's knowledge base. This necessarily will involve sharing firm-specific information with other fund representatives.

Whether such sharing is legally permissible has been the subject of extensive debate. A number of commentaries have claimed that constituency directors navigate in perilous waters in

²²³ See Cyril Moscow, *Director Confidentiality*, 74 LAW & CONTEMP. PROBS. 197 (2011). The duty of confidentiality is part of a director's general duty of loyalty. See Sepe, *supra* note **Error! Bookmark not defined.**, at 344.

²²⁴ See *id.* at 200-202.; Randy J. Holland, *Delaware Directors' Fiduciary Duties: The Focus on Loyalty*, 11 U. PA. J. BUS. L. 675 (2009); Charles M. Nathan et al., *Maintaining Board Confidentiality*, THE HARVARD L. SCH. F. ON CORP. GOVERNANCE & FIN. REG. (Jan. 23, 2010, 2:12 PM), <http://blogs.law.harvard.edu/corpgov/2010/01/23/maintaining-board-confidentiality>.

²²⁵ See, e.g., *Malone v. Brincat*, 722 A.2d 5, *12 (Del. 1998)). ("The directors' duty to disclose all available material information in connection with a request for shareholder action must be balanced against its concomitant duty to protect the corporate enterprise, in particular, by keeping certain financial information confidential."); COMM. ON CORPORATE LAWS, ABA SECTION OF BUS. LAW, CORPORATE DIRECTOR'S GUIDEBOOK (5th ed. 2007), reprinted in 62 BUS. LAW. 1479, 1500 (2007) ("A director must keep confidential all matters involving the corporation that have not been disclosed to the public.").

²²⁶ Lindsay Frost, *Activist-Appointed Directors Causing Confidentiality Concerns, Agenda*, Apr. 4, 2016, <https://www.conference-board.org/retrievefile.cfm?filename=AgendaWeek-040416.pdf&type=subsite>

²²⁷ *Id.*

²²⁸ See, e.g., *Hall v. Search Capital Group, Inc.*, 1996 WL 696921, at *2 (Del. Ch. Nov. 15, 1996) ("When management communicates with the directors on matters of concern to the Board collectively, it cannot pick and choose which directors will receive that information. Absent a governance agreement to the contrary, each director is entitled to receive the same information furnished to his or her fellow board members")

²²⁹ See, e.g., David Katz, *Boardroom Confidentiality Under Focus*, Harv. L. Sch. Forum on Corp. Gov. & Fin. Reg., Jan. 23, 2014, <https://corpgov.law.harvard.edu/2014/01/23/boardroom-confidentiality-under-focus/> "Having a detailed and robust board confidentiality policy will serve both to advise directors (and their sponsors, if any) as to their obligations with respect to sensitive board information and to create a board culture that views leaking as unacceptable and dishonorable behavior.").

²³⁰ Frost, *supra* note __ (quoting director Charles Elson).

transmitting information to their sponsors.²³¹ One solution is for the activist director to make his intentions clear at the outset. When Pershing Square named Stephen Fraidin to the board of Valeant as part of a settlement agreement, Fraidin wrote a letter to then-CEO Michael Pearson stating “ ‘I hereby undertake, consistent with my fiduciary duties and confidentiality obligations as a Valeant director, to refrain from communicating to anyone (whether to any company in which we have an investment or otherwise) confidential information I learn in my capacity as a director of Valeant; provided that I may communicate such information to members of my firm, Pershing Square.’ ”²³²

Despite the concerns expressed by some commentators, case law suggests that activist directors are permitted to share firm information with their sponsors.²³³ This is because a rule against information sharing would be both unrealistic²³⁴ and potentially detrimental.²³⁵ Moreover, firms can protect themselves both through the enforcement of classic fiduciary duties to which the activist director is held and confidentiality agreements restricting the ability of the sponsors to further disseminate the information they receive.²³⁶

There are situations in which information sharing is more problematic. One highly publicized example involved Bill Ackman, then a director of J.C. Penney, leaking confidential board information to the press.²³⁷ It is clearly a violation of a director’s fiduciary duty to share information with a competitor or in a way that causes the corporation harm.²³⁸ As is information sharing for the purposes of competition with the corporation. And it is clear that directors and their funds cannot use company information for personal benefit as this would constitute a violation of the duty of loyalty.²³⁹

²³¹ See E. Norman Veasey & Christine T. Di Guglielmo, *How Many Masters Can a Director Serve? A Look at the Tensions Facing Constituency Directors*, 63 BUS. LAW. 761, 773-74 (2008); Robert Little & Chris Babcock, *Walking the High Wire: Guidelines for Board of Director Designees of Private Equity Funds, Activist Stockholders and Other Investors*, 44 SEC. REG. & L. REP. 2245, 2246 (2012).

²³² Frost, *supra* note ____.

²³³ See, e.g., *Kalisman v. Friedman*, Civ. A. No. 8447-VCL, 2013 WL 1668205, *6 (Del. Ch. Apr. 17, 2013) (“When a director serves as the designee of a stockholder on the board, and when it is understood that the director acts as the stockholder’s representative, then the stockholder is generally entitled to the same information as the director.”); *Schoon v. Smith*, 953 A.2d 196, 208-209 (Del. 2008) (implicitly confirming the position that constituency directors can share information with their sponsors).

²³⁴ See Laster & Zeberkiewicz, *supra* note **Error! Bookmark not defined.**, at 49-52; *Id.* at 55 (“This rule reflects the practical reality that director representatives in both public and private companies routinely share confidential corporate information with colleagues at their affiliated investment funds.”).

²³⁵ *Id.* (arguing that a rule against information sharing would entail both a breach of duty of blockholder directors as corporate insiders and investors’ fiduciaries).

²³⁶ *Id.* at 56.

²³⁷ Priya Cheria Huskins, *Boardroom Confidential: Directors and Their Duty*, Woodruff, Sawyer & Co., Sept. 13, 2016, <https://wsandco.com/do-notebook/boardroom-confidential/>

²³⁸ See, e.g., *Shocking Techs., Inc. v. Michael*, No. 7164-VCN, 2012 BL 257554, *10–11 (Del. Ch. Oct. 1, 2012) (director held liable for disclosing information to a potential investor); *Venoco*, 2002 Del. Ch. LEXIS 65, *20–21 (directors held liable for breach of the duty of confidentiality in assisting their sponsor to prepare an unsolicited bid for the company). See also *eBay Domestic Holdings, Inc. v. Newmark.*, 2010 WL 3516473, at *28 (Del. Ch. Sept. 9, 2010) (“Preventing a competitor that is also a minority stockholder from unilaterally placing a director on the board so that confidential corporate information will not be freely shared with that competitor is a legitimate and rational business purpose”).

²³⁹ See *Hollinger International, Inc. v. Black*, (director violated his duty of loyalty “improperly using confidential information belonging to International to advance his own personal interests and not those of International, without

Trading on the basis of confidential corporate information is another matter. The federal securities laws prohibit activist directors and their sponsors from trading on the basis of material nonpublic information. In addition, Regulation Fair Disclosure (Regulation FD) makes it unlawful for corporations and their agents to provide certain kinds of selective disclosure to shareholders, as this could promote insider trading.²⁴⁰ One recent study finds that activist directors are associated with information leakage into securities prices.²⁴¹ Nonetheless, at least in theory, robust confidentiality procedures including adherence to Regulation FD, should enable insiders to share information in furtherance of collaborative decisionmaking.²⁴² Notably SEC guidelines explain that with appropriate procedural planning—such as preapproving topics for meeting, ensuring the presence of legal counsel, and signing non-disclosure agreements²⁴³—Regulation FD does not prevent insiders from engaging privately with shareholders.²⁴⁴

CONCLUSION

authorization from his fellow directors.”; *Venoco, Inc. v. Eson* (explaining that directors “are not permitted to use their position of trust and confidence to further their private interests.”)

²⁴⁰ See Selective Disclosure and Insider Trading, Securities Act Release No. 7881, Exchange Act Release No. 43,154, Investment Company Act Release No. 24,599, 65 Fed. Reg. 51,716 (Aug. 24, 2000).

²⁴¹ Robert E. Bishop, Robert J. Jackson Jr. & Joshua R. Mitts, *Activist Directors and Information Leakage*, (unpublished manuscript) (2017), available at http://www.law.nyu.edu/sites/default/files/upload_documents/20170303%20Activist%20Directors%20%28As%20Distributed%29.pdf. See also John C. Coffee, Jr. Coffee, John C., *The Agency Costs of Activism: Information Leakage, Thwarted Majorities, and the Public Morality* (October 24, 2017). European Corporate Governance Institute (ECGI) - Law Working Paper No. 373/2017. Available at SSRN: <https://ssrn.com/abstract=3058319> (identifying similar concerns).

²⁴² As put by one asset manager, when the SEC guidelines are taken into account, Regulation FD concerns sound “more of an excuse cited by issuers than an actual obstacle.” MARC GOLDSTEIN, *THE STATE OF ENGAGEMENT BETWEEN U.S. CORPORATIONS AND SHAREHOLDERS: A STUDY CONDUCTED BY INSTITUTIONAL SHAREHOLDER SERVICES FOR THE INVESTOR RESPONSIBILITY RESEARCH CENTER INSTITUTE 20* (2011), available at http://www.irrcinstitute.org/pdf/IRRC-ISS_EngagementStudy.pdf. See also Schoenfeld, *supra* note 155, at 16 (providing several examples of shareholder agreements granting shareholders access to material non-public information).

²⁴³ See Regulation FD, SEC (last updated June 4, 2010), <http://www.sec.gov/divisions/corpfin/guidance/regfd-interp.htm> [hereinafter, SEC Regulation FD]

²⁴⁴ As put by one asset manager, when the SEC guidelines are taken into account, Regulation FD concerns sound “more of an excuse cited by issuers than an actual obstacle.” MARC GOLDSTEIN, *THE STATE OF ENGAGEMENT BETWEEN U.S. CORPORATIONS AND SHAREHOLDERS: A STUDY CONDUCTED BY INSTITUTIONAL SHAREHOLDER SERVICES FOR THE INVESTOR RESPONSIBILITY RESEARCH CENTER INSTITUTE 20* (2011), available at http://www.irrcinstitute.org/pdf/IRRC-ISS_EngagementStudy.pdf. See also Schoenfeld, *supra* note 155, at 16 (providing several examples of shareholder agreements granting shareholders access to material non-public information). Further, under the SEC guideline if corporations inadvertently disclose material nonpublic information, they can avoid violating Regulation FD simply by promptly disclosing the information to the public. See SEC Regulation FD, *supra* note **Error! Bookmark not defined.**

APPENDIX

In order to better examine the practicalities of the marginal contribution criterion, we consider a modification of the hypothetical introduced in Part II. Under this modification, assume that the potential coalition members include the *Board* of *NewSys* (also referred to as *B*) in addition to *Avant-Garde* (also referred to as *AG*) and *RedRock* (also referred to as *RR*). Also assume that both *Avant-Garde* and *RedRock* have already invested in *NewSys*. This assumption simplifies the analysis by avoiding optimal capital structure issues, which remain outside the scope of this Article's discussion of board-shareholder collaboration.²⁴⁵ Further, as our focus here is on examining the administrative rights of a worthy coalition, we assume away both the possibility of moral hazard or short-termist issues.

Under these assumptions, imagine that the *Board* has launched a project to develop a new computer and is considering the next implementation steps to be taken to pursue this project, similar to the hypothetical in Part II. The *Board* has full information on the blueprint of producing the new computer (that is, firm-specific private information). *Avant-Garde* has information on hardware competitors (of course also the *Board* has some of this information, but *Avant-Garde* may have additional information the *Board* does not have). Lastly, *RedRock* has information on the compatibility of available or new software with the new computer (the *Board* also has information on software compatibility, but not the same information *RedRock* has).

To determine the parties' Shapley values, we then need to consider any possible order of coalition formation and the marginal contribution of each player in any ordered coalition. For example, consider the coalition formed, in sequence, by *B*, *AG*, and *RR*. Within this ordered coalition, we have that the expected impact of unilateral board decisionmaking (that is, decisionmaking excluding any deliberative mechanism) on *NewSys* stock is $v(B) = 0\%$, as unilateral board decisionmaking wastes the value of the investors' complementary information. The expected impact of *Avant-Garde*'s participation in the deliberative process corresponds to an increase in *NewSys* stock of: $v(\{B, AG\}) - v(\{B\}) = 12\%$, which reflects the value of including information about hardware competitors on top of the *Board*'s private information. The expected sequential impact of *RedRock*'s on *New Sys* stock is equal to: $v(\{B, AG, RR\}) - v(\{B, AG\}) = 18\%$, which reflects the value of including additional information about software products.

Similarly, if one considers, for example, the coalition formed in sequence by *AG*, *B*, and *RR*, we have that the expected increase on *NewSys* stock arising from *Avant-Garde*'s unilateral decisionmaking is zero: $v(\{AG\}) = 0\%$, as *Avant-Garde* alone cannot change the project that the *Board* has already selected (recall that the board always is the game's veto player). The value of adding *B* in sequence is $v(\{B, AG\}) - v(\{AG\}) = 12\%$, as the *Board* is essential to run the project and its private information adds fundamental value to *Avant-Garde*'s information on hardware competitors. The value of adding *RR* stays the same, with $v(\{B, BC, RR\}) - v(\{B, BC\}) = 18\%$ as in the previous case.

²⁴⁵ Here we assume that the capital (physical and financial) to launch the project is already available and hence locked in. This assumption, which is realistic, avoids the issues of capital contribution and profit shares that would arise, for example, upon the formation of a partnership.

In Figure 1 below, we report the value contribution of each player for any possible coalition formation:

Figure 1: Informational Value of Coalitions

Coalition	Board	Avant-Garde	RedRock
{B, AG, RR}	0%	12%-0% = 12%	30%-12% = 18%
{B, RR, AG}	0%	30%-24% = 6%	24%-0% = 24%
{AG, B, RR}	12%-0% = 12%	0%	30%-12% = 18%
{AG, RR, B}	30%-0% = 30%	0%	0%
{RR, B, AG}	24%-0% = 24%	30%-24% = 6%	0%
{RR, AG, B}	30%-0% = 30%	0%	0%

The Shapley value computation also reasonably assumes that each sequence coalition of the grand coalition formed by all players is equiprobable, having a 1/6 probability of being formed ex ante. (Indeed, there is no reason to believe that coalitions have different probabilities of being formed ex ante.)

We can now compute the value of the average marginal contribution of each coalition member. To this end, we simply divide the sum of the members' marginal contributions in each possible coalition sequence by six. There results that the expected 30 percent stock value increase held by the grand coalition²⁴⁶ can be broken down as follows: 16 percent (out of the overall 30 percent increase) is imputable to the *Board*,²⁴⁷ 4 percent is imputable to *Avant-Garde*,²⁴⁸ and 10 percent is imputable to *RedRock*.²⁴⁹ It follows that rational members will expect to have a say in the deliberative process that is proportional to the relative weight of these marginal contributions. Specifically, the *Board* will expect a say weighing 53.3 percent,²⁵⁰ *Avant-Garde* a say weighing 13.3 percent,²⁵¹ and *RedRock* a say weighing 33.3 percent.²⁵²

²⁴⁶ See *supra* Part III, A.

²⁴⁷ This figure is obtained by summing up the marginal percentage values of the column Board in Fig. 1 and then dividing the sum by 6. Both this figure and the investors figures are approximated to the first decimal digit.

²⁴⁸ This figure is obtained by summing up the marginal percentage values of the column Avant-Garde in Fig. 1 and then dividing the sum by 6.

²⁴⁹ This figure is obtained by summing up the marginal percentage values of the column RedRock in Fig. 1 and then dividing the sum by 6.

²⁵⁰ This figure is computed by dividing the average marginal contribution percentage effect of the Board, that is 16 percent, by the expected percentage effect of the grand coalition, 30 percent.

²⁵¹ This figure is computed by dividing the average marginal contribution percentage effect of Avant-Garde, that is 4 percent, by the expected percentage effect of the grand coalition, 30 percent.

²⁵² This figure is computed by dividing the average marginal contribution percentage effect of RedRock, that is 10 percent, by the expected percentage effect of the grand coalition, 30 percent.