BOARD INTERLOCKS AND CORPORATE GOVERNANCE

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ABSTRACT

This paper argues that director interlocks, a phenomenon in which directors sit on more than one corporate board, ought to be an object of expanded discussion in corporate governance research and practice. Thus far, interlocks have attracted little attention from legal scholars, and when interlocks have received attention from regulators, it is usually negative. A growing body of evidence points to interlocks as having a significant role in governance propagation and evolution. Core governance practices, including ones that are closely monitored by professionals, propagate via interlocks. Interlocks are not purely channels for the spread of information; they have a significant impact even in an informationally rich environment. Both bad and good governance practices propagate via interlocks, and overall board connectivity is associated with higher returns. Interlocks help explain similarities and variations in corporate governance practices between firms. Drawing strong normative conclusions in light of the state of the literature would be premature. Instead, we summarize the literature on interlocks and governance, analyze how and why interlocks could matter for governance, and suggest that it is important, at the very least, to recognize that interlocks facilitate the diffusion of governance practices, and that highly connected firms are potentially influential in setting governance practices.

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I. INTRODUCTION

American boards are connected.[1] Many board members sit on multiple boards, and most firms share at least one director with another firm.[2]

A growing body of scholarship in finance points to interlocks—connections between companies via shared directors—as having important impacts on firm governance and performance, and as providing channels through which practices, good and bad, propagate

[1] *See, e.g.*, David F. Larcker et al., *Boardroom Centrality and Firm Performance*, 55 J. ACCT. & ECON. 225, 225, 229-30 (2013) (discussing boardroom social networks and measures of board interconnection).

[2] *See id.* at 229-30 (finding that during 2000-2007 more than 70% of the firms in their sample, which included all public firms traded on NYSE, AMEX and NASDAQ, shared at least one director); John M. Bizjak et al., *Option Backdating and Board Interlocks*, 22 REV. FIN. STUD. 4821, 4826 (2009) (reporting that 80% of the firms in their sample shared at least one director).

between firms. Despite the prevalence of interlocks and growing evidence of their importance, legal scholars have not paid much attention to interlocks as a component of corporate governance. This paper begins to correct this omission by describing the current treatment of interlocks, analyzing their potential interaction with corporate governance, and identifying contexts in which interlocks have been empirically shown to be important.

Several studies of interlocks, including some early ones, focused on the capacity of interlocks to spread negative "contagious" practices.[3] Interlocks contributed to the diffusion of option backdating,[4] earnings management,[5] and the poison pill.[6] A particular subset of interlocks, known as "reciprocal interlocks," between top executives who serve on each other's boards, has attracted special attention.[7] CEO reciprocal interlocks are associated with worse performance and less efficient compensation,[8] potentially due to a "back-scratching" effect.[9]

Recent research, however, suggests that interlocks can bring benefits as well.[10] Board connectivity is associated with better operational performance and higher returns, especially in new high-growth firms,[11] with better post-merger performance,[12] and with lower rates of accounting restatements.[13] Furthermore, interlocks also

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[3]*See e.g.*, Bizjak et al., *supra* note 2, at 4845 ("[O]ur results indicate that board interlocks appear to be an important factor in facilitating the spread of [backdating of option grants.]").

[4]*See id.*

[5]*See* Peng-Chia Chiu et al., *Board Interlocks and Earnings Management Contagion*, 88 ACCT. REV. 915, 916 (2013).

[6]Gerald F. Davis, *Agents Without Principles? The Spread of the Poison Pill Through the Intercorporate Network*, 36 ADMIN. SCI. Q. 583, 606 (1991) ("These results provide . . . support for the interorganizational hypotheses for when and why firms would adopt poison pills.").

[7]Eliezer M. Fich & Lawrence J. White, *Why Do CEOs Reciprocally Sit on Each Other's Boards?*, 11 J. CORP. FIN. 175, 176 (2005) (noting the development of new information regarding reciprocal CEO interlocks).

[8]*See infra* note 101 and accompanying text.

[9]Indeed, these interlocks are not randomly created but are positively correlated with measurements for CEO power. *See infra* note 100 and accompanying text.

[10]*See, e.g.*, Larcker et al., *supra* note 1, at 248 (finding companies with better-connected boards earn significantly higher returns); Thomas C. Omer et al., *Do Director Networks Matter for Financial Reporting Quality? Evidence from Restatements* 6 (Jun. 1, 2014), *archived at* http://perma.cc/J2SX-EETY (finding that companies with more-connected directors are less likely to misstate their annual results).

[11]*See* Larcker et al., *supra* note 1, at 248.

[12]*See* Robert Schonlau & Param Vir Singh, *Board Networks and Merger Performance*, 2 (Working Paper 2009), *archived at* http://perma.cc/UB4C-2V3R?type=pdf.

[13]*See* Omer et al., *supra* note 10, at 29.

contribute to the diffusion of good governance practices such as accurate reporting,[14] nominating a high proportion of independent directors,[15] and the separation of the roles of the CEO and the chairman of the board.[16] In fact, recent evidence suggests that the effect of interlocks on the spread of good governance practices might be larger than their effect on the spread of bad ones.[17]

Furthermore, recent evidence suggests that interlocks are not purely channels for the spread of information; they have a significant impact even in an information-rich environment. A recent study by the authors of this paper found that interlocks were associated with the spread of changes in indemnification arrangements after a surprising Delaware Court of Chancery decision.[18] The case, which exposed directors to the risk of having their boards eliminate their indemnification rights retroactively, was followed by numerous legal opinions to general counsels, directors, and the public, highlighting the importance of restoring protection.[19] Nevertheless, we found that having an outside director sitting on a board that responded to *Schoon* substantially increased a firm's likelihood of responding.[20]

What explains the role of interlocks in the diffusion of information about a legal development in an already information-rich environment? Why do the effects of interlocks reach both positive and negative core governance practices, including ones that are closely monitored by professionals? How do interlocks impact governance and board behavior?

Interlocks could potentially affect governance in several ways. Most obviously, interlocks spread information, including information about governance practices.[21] Thus, they could affect directors' decision

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[14]*See id.* (finding companies with more-connected directors less likely to misstate their annual results); Chiu et al., *supra* note 5, at 918 (finding that both low quality and high quality reporting spread via interlocks).

[15]*See* Christa H. S. Bouwman, *Corporate Governance Propagation Through Overlapping Directors*, 24 REV. FIN. STUD. 2358, 2358-59 (2011).

[16]*See id.*

[17]*See id.*

[18]Michal Barzuza & Quinn Curtis, *Interlocking Board Seats and Protection for Directors After Schoon*, 3 (Va. L. & Econ. Res. Paper No. 2013-11, 2013), *archived at* http://perma.cc/R9S8-8GFE ("[C]ompanies with outside directors sitting on the board of firms that had already altered their indemnification arrangements were significantly more likely to adopt *Schoon* protection themselves.").

[19]*See id.* at 10-11.

[20]*See id.* at 3.

[21]*See* Larcker et al., *supra* note 1, at 225.

making. For example, a director may take comfort in another board's choice, good or bad, and approve a similar decision at his own firm. Interlocks could also assist outside directors who would otherwise suffer from an informational disadvantage, by spreading information about good governance practices and giving directors broader insight into the general state of the economy.[22] Furthermore, interlocks can provide outside directors with leverage in the boardroom.[23] For instance, raising a sensitive issue is easier if a director can refer to a discussion at another company, since it is less likely to send a negative signal to the other board members, and is more persuasive than merely speculating or offering an opinion.[24] Interlocks, thus, could empower outside directors in their monitoring activities. Given the subtlety of interlocks' interaction with governance, a fuller understanding of the operation of interlocks, and the potential tradeoffs that accompany them, is important to a more complete understanding of corporate governance.

In light of the mounting evidence that interlocks matter, the absence of discussion of interlocks in the legal corporate governance literature is striking. Historically, corporate governance practitioners, as well as regulators in a variety of fields, have given some, but not much attention to board interlocks.[25] Much of this attention has been motivated by concerns that reciprocal interlocks may lead to corporate governance problems[26] or that overlapping directors could lead to anticompetitive behavior.[27] Other regulations address overlapping directors in certain competitive contexts.[28] Importantly, almost all of the attention interlocks currently receive arises out of concern about the potential negative consequences.[29] Drawing attention to the potential benefits of interlocks is therefore useful. A fuller understanding of the importance of interlocks, and their potential tradeoffs, could contribute to our understanding of governance.

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[22] *See id.* at 226 ("[D]irectors possess a wealth of information on industry trends, market conditions, regulatory changes, and other key market data, which can flow across the boardroom network.").

[23] *See id.* ("[B]oardroom networks allow firms to leverage social relationships . . . .").

[24] *See* Thomas C. Omer et al., *Do Well-Connected Directors Improve Firm Value?*, at 6 (May 1, 2014) *archived at* http://perma.cc/97XN-7GHZ (discussing how multiple-board membership can provide valuable knowledge and insight); *see also* Barzuza & Curtis, *supra* note 18, at 8.

[25] *See infra* Part II.B.

[26] *See infra* Part II.A.2.

[27] *See infra* note 69.

[28] *See infra* Part II.B.

[29] *See infra* Part II.B.

This paper makes several contributions aimed at putting interlocks into sharper focus in the corporate law literature. In Part II, we review and clarify the different ways in which the term "interlock" is used, and board connectivity is measured, with respect to their interaction with governance. We also give an overview of various regulations that address interlocks.[30] In Part III, we provide a detailed summary of the current state of the board connectivity literature, with an emphasis on the effect of connectivity on measures related to corporate governance.[31] The evidence we survey shows that interlocks have a significant role in the propagation and evolution of governance practices. We discuss potential explanations for the observed effects of interlocks on governance. Part IV discusses empirical challenges to this research (most notably endogeneity), identification strategies that have been used, and the potential for future research.[32] Part V concludes. While it is too early to derive a strong normative conclusion, we suggest that, at the very least, is important to recognize that interlocks facilitate the diffusion of governance practices, and that highly connected firms are potentially influential in setting governance practices.

II. BACKGROUND

This section provides background information on interlocks.[33] We begin with a discussion of the various definitions and measures of board connectivity used in the literature.[34] We then turn to the role that interlocking directorships play within the current regulatory and corporate governance practitioner world.[35]

A. *Classifying Interlocks*

We first clarify the vocabulary around overlapping directorships, and survey different connectivity measures that have been applied in various studies. By and large, there are three dimensions over which interlocks have been shown to matter for governance: reciprocity,

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[30] *See infra* Part II.
[31] *See infra* Part III.
[32] *See infra* Part IV.
[33] *See infra* Part II.A-B.
[34] *See infra* Part II.A.
[35] *See infra* Part II.B.

diffusion and overall connectivity. Other types of connectivity, such as geographic and social networks, have been shown to matter as well.

1. Simple Interlocks

Simple interlock, the most straightforward measure for connectivity, occurs when a board member sits on more than one board.[36] A board is typically considered connected if at least one board member sits on another board, since information could transfer from the outside board via the interlock.[37] A board's level of connectivity is also affected by the number and proportion of board members that sit on other boards.[38] The greater the number of interlocks, the more likely it is for practices to diffuse.[39] A higher proportion of interlocked directors might provide, for example, more leverage in getting a board to act on information transmitted through an interlock.[40] Indeed, several studies include measures for the number or proportion of interlocked directors on a board.[41]

Simple interlocks are quite common among companies, and reflect that many directors hold more than one board seat.[42] This definition of interlock is commonly used in the finance literature[43] as well as in anti-trust regulations.[44] Studies that examine diffusion of governance practices typically focus on simple interlocks.[45]

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[36]Bizjak et al., *supra* note 2, at 4831-32.

[37]*See, e.g.*, *id.* at 4826 (considering boards interlocked where at least one member is connected to another firm); Davis, *supra* note 6, at 591-92 (discussing the flow of information through interlock networks).

[38]*See* Davis, *supra* note 6, at 592 (discussing the position of relative importance of firms with the greatest number of firm-to-firm ties).

[39]*See id.* ("Greater centrality gives a firm . . . more abundant access to the information that flows through the network . . . .").

[40]*See id.* (positing boards with greater numbers of interlocked directors are able to act on stimuli more quickly).

[41]*See, e.g.*, Barzuza & Curtis, *supra* note 18, at 6 (citing studies that have measured the number of interlocked directors on boards).

[42]Jackie Cook, *Survey of U.S. Corporate Board Structure and Board Network, 2002-2005*, THE CORPORATE LIBRARY 2 (2006).

[43]*See, e.g.*, Mara Faccio & Ronald W. Masulis, *The Choice of Payment Method in European Mergers and Acquisitions*, 60 J. FIN. 1345, 1383 (2005) (defining interlock as one shared director).

[44]*See infra* note 69.

[45]*See, e.g.*, Gerald F. Davis & Henrich R. Greve, *Corporate Elite Networks and Governance Changes in the 1980s*, 103 AM. J. SOC. 1, 12 (1997) ("The interlock network is composed of the ties formed through shared board members.").

2. Reciprocal Interlocks

Reciprocal interlocks occur when an inside director at Company A sits on Company B's board as an outside director, and an inside director of Company B sits on Company A's board. Thus, each director serves as an independent director at a firm with at least one executive that sits as an independent director on that director's own board. These types of interlocks have garnered significant regulatory and academic attention because they raise concerns about whether a director charged with overseeing an executive who is, in a different context, acting as one of his own directors, can be truly independent.[46]

Indeed, studies show that when CEOs sit on each other's boards, their compensations tend to be higher.[47] Studies have also revealed that the creation of reciprocal interlocks is not random.[48] Concerns about the back-scratching effect of reciprocal interlocks motivate the regulatory limitations on such interlocks discussed below.[49]

3. Measures of Board Connectivity

Interlocks vary in their contribution to overall connectivity. To capture these differences, social network theory has developed measures that distinguish interlocks based on their potential contribution to board connectivity.[50] The first measure, "Degree Centrality," measures the number of direct connections a board has with other boards.[51] More precisely, it can be defined as the number of shared directorships a board has with other boards.[52] Degree Centrality attempts to measure the direct

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[46]*See, e.g.*, Kevin F. Hallock, *Reciprocally Interlocking Boards of Directors and Executive Compensation*, 32 J. FIN. & QUANTITATIVE ANALYSIS 331, 332 (1997) ("If two CEOs, or their subordinates, serve on each other's boards (they are reciprocally interlocked), then these CEOs may have both the incentive and the opportunity to raise each other's pay.").

[47]*See id.* at 334 (finding CEO compensation in any-employee interlocked firms tends to be between 34% and 43% higher than in other firms, and that CEO compensation in current-CEO interlocked firms tends to be between 46% and 52% higher than in other firms).

[48]*See id.* at 340 (finding evidence that reciprocal interlocks are not created randomly).

[49]See *infra* Part II.B.

[50]*See, e.g.*, Larcker et al., *supra* note 1, at 225 ("[T]his paper . . . directly investigate[s] the empirical relations between a board's well-connectedness and the firm's future performance."); Omer et al., *supra* note 24, at 2 ("[This paper] examine[s] the connectedness of individual directors using measures from the social network literature that have been used extensively to study group interactions and information transfer.").

[51]*See* Larcker et al., *supra* note 1, at 231.

[52]*See id.* For example, take the board of Company A, with eight board members, two of which, John and Steve, sit on other boards. If John also sits on the boards of Companies B

channel of communications a director has,[53] but also attempts to measure the immediate risk of "catching," in an epidemiological sense, practices from other firms.[54]

The second measure, "Eigenvector Centrality," builds on Degree Centrality in counting direct interlocks, but unlike Degree Centrality Eigenvector Centrality gives more weight to interlocks with boards that are better-connected than to interlocks with boards with few or no other direct connections.[55] Being connected to well-connected boards increases the likelihood of receiving information promptly.[56] In addition, it increases influence and prestige.[57] Thus, the measure can be interpreted as linking a board to power and influence as well as an informational advantage.[58]

A third common measure, "Closeness Centrality," pertains to the speed in which information is transferred.[59] Closeness Centrality is high when the ties are close, with respect to the number of steps between a given board and other boards.[60] The fewer the degrees of separation between other boards, the faster relevant information will reach a well-connected board.[61]

The fourth measure, "Betweenness Centrality," focuses on the location of a board within ties with other boards, and in particular whether a board is at the center of ties.[62] Betweeness centrality therefore attempts to measure how crucial a particular board is in transferring

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and C, and Steve sits on the board of Company C, the board of Company A's degree is 3.

[53] *See id.*

[54] *See id.* at 226.

[55] *See* Larcker et al., *supra* note 1, at 232; Omer et al., *supra* note 24, at 9 ("In general, connections to other well-connected individuals will increase eigenvector centrality more than connections to less well-connected individuals.").

[56] *See* Larcker et al., *supra* note 1, at 232; Omer et al., *supra* note 24, at 9 ("One perspective on connectedness is that directors with many connections have more power and access to more information because they can directly access more individuals.").

[57] *See* Larcker et al., *supra* note 1, at 232 ("[Eigenvector] centrality can be interpreted as capturing notions of power and prestige.").

[58] *See id.*

[59] *See id.* at 231; Omer et al., *supra* note 24, at 8 ("Closeness centrality is frequently used as a measure of the speed at which information is transferred through the network to an individual . . . .").

[60] *See* Larcker et al., *supra* note 1, at 231 ("[Closeness Centrality] is defined as the inverse of the average distance between a board and any other board.").

[61] *See id.* (discussing the quick exchange of resources and information in closely connected boards); Omer et al., *supra* note 24, at 8-9 (positing directors with high Closeness Centrality scores will receive useful news early).

[62] *See* Larcker et al., *supra* note 1, at 231 ("Betweenness is defined to be the average proportion of paths between two outside boards on which a board lies.").

information from one board to another.[63] A high Betweenness score could make the relevant board members akin to information brokers.[64]

While studies of diffusion focus on simple interlocks, these more sophisticated social network measures are useful in developing empirical frameworks for testing the effects of connectivity over large samples that allow for utilization of connectivity changes.[65] Studies that rely on these measures have found significant effects of connectivity, including evidence that connectivity is associated with positive performance and reporting quality.

4. Peer Networks

Peer influence is not limited to interlocks. Directors socialize, play golf, and participate in other activities in which information is exchanged. Social and Peer networks could be associated with geographical location. Consistent with that, Davis and Greve found that the diffusion of golden parachutes in firms could be explained by geographical proximity to other firms that adopted golden parachutes.[66] Peer networks could also emerge in other frameworks, such as graduate studies. A recent study found that a random assignment to sections at the MBA program at Harvard Business School affects executive compensation and acquisitions strategies, and that these effects are stronger following alumni reunions.[67]

B. *Interlocks in Law and Practice*

Interlocks among directors have not gone completely unnoticed in law. Louis Brandeis famously observed, "The practice of interlocking directorates is the root of many evils. It offends laws, human and divine . . . . [I]t tends to disloyalty and to violation of the fundamental law that no man can serve two masters."[68] Brandeis was speaking to anti-

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[63] *See id.*

[64] *Id.* (describing boards with high betweenness scores as "key brokers" of information, which must necessarily flow through particular board members). Several studies also used a fifth measure that is constructed based on these four measures. *See id.*

[65] *See supra* Parts II.A.4-5.

[66] Davis & Greve, *supra* note 45, at 33-34.

[67] *See* Kelly Shue, *Executive Networks and Firm Policies: Evidence from the Random Assignment of MBA Peers*, 26 REV. FIN. STUD. 1401, 1402-03 (2013).

[68] LOUIS D. BRANDEIS, OTHER PEOPLE'S MONEY AND HOW THE BANKERS USE IT 51 (1914).

trust concerns[69] as well as executive loyalty concerns arising out of interlocks,[70] but his skepticism toward the practice is hardly unique.[71] Indeed, a number of regulations address the potential risks of interlocks.

Most relevant for discussions of corporate governance, the NYSE[72] and NASDAQ[73] both address what we term reciprocal interlocks as part of their listing standards for director independence.[74] In particular, a director would not be considered independent under either exchange's rules if the director or a family member served as an executive officer of another entity where, at any time during the past three years, any of the listed company's executive officers served on the compensation committee of such other entity.[75] These independence requirements determine, among other things, which directors may serve, for example, on a firm's compensation committee, which must be fully independent under SEC and exchange rules.[76] The rule thus prevents interlocking compensation committee membership.

In addition to these exchange rules, private corporate governance firms have given some attention to both reciprocal and simple interlocks in the corporate governance context. Both ISS and Glass Lewis track reciprocal interlocks, and both firms recommend voting against reciprocal interlocks, even when the interlocks do not involve the compensation committee (and therefore do not run afoul of the exchange rules).[77] While simple interlocks have garnered less attention, the

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[69]Interlocks have historically been a concern for antitrust law. Section 8 of the Clayton Act provides that no person can sit as a director on the board of two companies if "elimination of competition by agreement between them would constitute a violation of any of the antitrust laws." 15 U.S.C. § 19(a)(1)(B).

[70]*Id.*

[71]*See, e.g.*, Paul Hodgson, *Groupon, Never Mind the Audit Committee, What About the Board?*, GMI RATINGS (Apr. 16, 2012), *archived at* http://perma.cc/9SUK-48M8 [hereinafter Hodgson, *Groupon*] (discussing concerns about director interlocks).

[72]NYSE LISTED CO. MANUAL § 303A.02(b)(iv) (2009).

[73]NASDAQ STOCK MKT. RULES, R. 5605(a)(2)(E-F) (regulating reciprocal interlocks for audit-committee members).

[74]*See supra* Part II.A.2.

[75]Securities Client Advisory, *Considering Director Independence*, COVINGTON & BURLING, LLP 16 (July 12, 2007), *archived at* http://perma.cc/399-GMFU.

[76]*See* 17 C.F.R. § 240.10C-1 (2013); *see also id.* § 229.407 (2013) (prescribing director independence disclosure rules).

[77]*See Proxy Paper Guidelines: An Overview of the Glass Lewis Approach to Proxy Advice*, GLASS LEWIS & CO. 15 & n.40 (2014), *archived at* http://perma.cc/VT29-MSBG (recommending shareholders vote against interlocked directors); *see also* 2014 *U.S. Proxy Voting Summary Guidelines*, ISS 14-15 (2014), *archived at* http://perma.cc/WFE6-K7H4 (recommending shareholders vote against affiliate outside directors defined as having (or an immediate family member having) an interlocking relationship as defined by the SEC

corporate governance analytics firm GMI Ratings has argued that investors ought to be vigilant in screening for simple corporate interlocks lest they spread bad practices, such as excessive pay and retirement benefits or options backdating,[78] and has developed a data visualization tool to aid practitioners in analyzing board networks.[79] Since firms must disclose on which other boards their directors sit in their SEC filings, interlocks are readily available public information.[80]

Overall, interlocking board seats are treated as a cause for concern. Furthermore, some regulations have, perhaps unintentionally, reduced board connectivity. After the passage of Sarbanes Oxley, for example, there was decline in the average number of other boards to which the average company's board was linked, partly due to large-firm CEOs sitting on a declining number of boards.[81] Moreover, firms are increasingly limiting the number of boards on which their outside directors may sit, a practice that could tend to reduce the incidence of interlock.[82]

Overlapping directorships are not, however, solely a risk.[83] Being embedded in the business community is critical for executives and directors, and can provide information and business opportunities.[84] It may also be helpful for firms to have interlocking directorships with important suppliers and customers.[85] Interlocks at customer-supplier firms may, for example, reduce contracting costs by reducing asymmetric information.[86] Finally, as explained below, interlocks could

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involving members of a board of directors or its Compensation Committee, including: executive officers serving as directors on each other's compensation or similar committees, or executive officers sitting on each other's boards, with at least one sitting on a compensation committee).

[78]Paul Hodgson, *Why Should We Care About Corporate Interlocks?*, FORBES (Dec. 5, 2012, 2:03 PM), *archived at* http://perma.cc/D6SV-3UUX [hereinafter Hodgson, *Why Should We Care*].

[79]*See id.*

[80]Reg. S-K Item 401(c)(2), 17 CFR 229.401(c)(2).

[81]Cook, *supra* note 42, at 2.

[82]*See* Antonio Falato, Dalida Kadryzhanova, & Uger Lel, *Distracted Directors: Does Board Busyness Hurt Shareholder Value?*, 113 J. FIN. ECON. 404, 404 (2014).

[83]*See* ZABIHOLLAH REZAEE, CORPORATE GOVERNANCE POST-SARBANES-OXLEY: REGULATIONS, REQUIREMENTS, AND INTEGRATED PROCESSES 111 (2007) (espousing the virtues of interlocking directorships).

[84]*See id.* (discussing reasons CEOs desire to sit on other boards).

[85]*See* Beth Mintz & Michael Schwartz, *Sources of Intercorporate Unity*, *in* THE STRUCTURE OF POWER IN AMERICA: THE CORPORATE ELITE AS A RULING CLASS 16, 30 (Michael Schwartz ed., 1987) (discussing relationships between interdependent firms).

[86]*See* Larcker et al., *supra* note 1, at 226 (discussing how the boardroom network may foster symbiotic economic relationships between firms).

also contribute to robust corporate governance.[87] For example, interlocks could empower outside directors by providing them with information and leverage in the boardroom. Indeed, growing evidence suggests that interlocks also facilitate the diffusion of robust governance practices and enhance monitoring. In the next section we present a more nuanced picture of interlocks.

III. THE ACADEMIC LITERATURE ON BOARD CONNECTIVITY AND GOVERNANCE

This part discusses the empirical academic literature related to board interlocks as well as several other measures of board connectivity that have been shown to be important. It then turns to the question of how and why interlocks matter, in light of this empirical evidence.

A. *Empirical Evidence of Board Connectivity and Governance*

An expansive literature in finance and economics has explored how connections between firms matter for various aspects of corporate operation. This section provides a detailed overview of this literature as it applies to executive compensation, propagation of different governance practices such as the poison pill, indemnification protection, board characteristics, disclosure practices, and firm performance.

1. Board Connectivity and Executive Compensation

Executive compensation is one of the most important and challenging topics in the corporate governance field.[88] A well-designed compensation plan has the potential to align management incentives with the interests of shareholders and incentivize management to maximize firm value.[89] A poorly designed compensation plan has the potential to distort incentives and cause significant harm.[90] Indeed, some of the perils

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[87] *See infra* Part III.

[88] *See* Claire Hill & Brett McDonnell, *Executive Compensation and the Optimal Penumbra of Delaware Corporation Law*, 4 VA. L. & BUS. REV. 333, 345-46 (2009).

[89] *See id.*

[90] *See id.* at 346.

of the last financial crisis were arguably related to poorly designed compensation schemes.[91]

Regulating compensation has always been a challenge.[92] Direct intervention in compensation could impose significant costs.[93] A board should have the flexibility to offer compensation that will attract and retain talent.[94] Yet, management nominates most board members, so the ability of board members to conduct arm's length negotiations is limited.[95] Disclosure of compensation can be a double-edged sword, leading to an increase in compensation.[96] Shareholder approval is also only a limited constraint.[97] Given the dearth of tools to reach efficient compensation outcomes,[98] any governance factor that affects compensation is important. As the following discussion will show, interlocks play a significant role in setting executive compensation.

Several papers have focused on executive compensation and reciprocal interlocks.[99] The motivation to research these interlocks was grounded in potential concerns about "back-scratching."[100] Indeed,

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[91]*See, e.g.*, Lucian A. Bebchuk et al., *The Wages of Failure: Executive Compensation at Bear Stearns and Lehman 2000-2008*, 27 YALE J. REG. 257, 274 (2010) (explaining that the collapse of Bear Stearns and Lehman during the financial crisis was caused, in part, by the poorly designed performance-based compensation).

[92]*See* Mark J. Loewenstein, *The Conundrum of Executive Compensation*, 35 WAKE FOREST L. REV. 1, 24–25 (2000) (noting disclosure requirements and tax reform are both ineffective at decreasing compensation); Nathan Knutt, Note, *Executive Compensation Regulation: Corporate America, Heal Thyself*, 47 ARIZ. L. REV. 493, 500 (2005) ("The federal disclosure and tax regulations have been unable to reduce executive compensation packages.").

[93]*See, e.g.*, Loewenstein, *supra* note 92, at 21 (positing direct judicial involvement with executive compensation could produce a deluge of litigation).

[94]*See* Erica Beecher-Monas, *The Risks of Reward: The Role of Executive Compensation in Financial Crisis*, 6 VA. L. & BUS. REV. 101, 106-07 (2011) (discussing the justifications behind CEO pay).

[95]*See* LUCIAN BEBCHUK & JESSE FRIED, PAY WITHOUT PERFORMANCE: THE UNFULFILLED PROMISE OF EXECUTIVE COMPENSATION 26 (2004) ("CEOs have had considerable and sometimes decisive influence over the nomination process.").

[96]*See* Loewenstein, *supra* note 92, at 23-24.

[97]*See id.* at 27 (noting shareholder participation as low as 9.2% in votes on proposals restricting or requiring approval of executive compensation, indicating a lack of concern or interest).

[98]*See, e.g.*, Minor Myers, *The Perils of Shareholder Voting on Executive Compensation*, 36 DEL. J. CORP. L. 417, 425 (2011) ("In the view of [some] observers, the system of setting executive compensation is fundamentally broken.").

[99]*See* Hallock, *supra* note 46, at 331-32; Eliezer M. Fich & Lawrence J. White, *CEO Compensation and Turnover: The Effects of Mutually Interlocked Boards*, 38 WAKE FOREST L. REV. 935, 936 (2003).

[100]*See* John E. Core et al., *Corporate Governance, Chief Executive Officer Compensation, and Firm Performance*, 51 J. FIN. ECON. 371, 403–04 (1999) (finding an increase in executive compensation where, among other factors, a board includes more CEO

reciprocal interlocks are associated with less efficient compensation and with worse performance.[101] Furthermore, reciprocal interlocks are not created randomly, but rather their incidence is positively correlated with measurements of CEO power.[102] Reciprocal interlocks leading to higher compensation is a rather straightforward example of interlocks as a negative feature of corporate governance and has been directly addressed by the exchange regulations discussed above.[103]

Another example of a negative effect of interlocks comes from stock option backdating. In 2005, Erik Lie, a finance professor, uncovered the widespread backdating of options, which is the practice of changing the exercise price of an option retroactively.[104] Looking at the exercise price, Lie found that stock options were awarded right after the market went down and right before it went up.[105] The coincidence could not be explained as the result of the random award of options.[106] Lie suggested it was possible firms changed the timing of their option awards retroactively.[107] Because most options were given "at the money," that is, with an exercise price equal to the market price of the share on the day of the award, managers reduced the exercise price to the lowest price possible by changing the award date.[108]

Backdating is not *per se* illegal if it meets several important conditions, and most importantly, is disclosed properly.[109] Yet, firms had reasons to hide this practice.[110] To begin with, in many companies,

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appointed outside directors or "gray outside directors"); Hallock, *supra* note 46, at 332 (positing that in the event of reciprocal interlocks, directors may have incentive to raise each other's pay).

[101] *See* Hallock, *supra* note 46, at 338 ("[F]irms that are current-CEO interlocked pay their CEOs substantially higher pay."); Erik Devos et al., *Are Interlocked Directors Effective Monitors?* 38 FIN. MGMT. 861, 862 (2009) ("A more recent stream in this line of research suggests that the presence of interlocked directors and connected boards may compromise the effectiveness of board monitoring, especially with respect to the setting of compensation of CEOs.").

[102] *See* Fich & White, *supra* note 7, at 193 (finding an association between interlocks and CEO tenure and influence in the director nomination process).

[103] *See supra* Part II.B.

[104] *See* Erik Lie, *On the Timing of CEO Stock Option Awards*, 51 MGMT. SCI. 802, 811 (2005) ("Unless executives have an informational advantage that allows them to develop superior forecasts regarding the future market movements that drive these predicted returns, the results suggest that the official grant date must have been set retroactively."). *See generally* Bizjak et al., *supra* note 2, at 4824-25 (discussing the backdating of option grants).

[105] *See* Lie, *supra* note 104, at 805.

[106] *See id.* at 809 (finding statistically significant results).

[107] *See id.* at 807.

[108] *See id.*

[109] *See* Bizjak et al., *supra* note 2, at 4825 ("[T]he practice must be revealed in proxy statements and any intrinsic value must be expensed.").

[110] *See* Jesse M. Fried, *Option Backdating and Its Implications*, 65 WASH. & LEE L.

backdating violated shareholder-approved compensation plans that prohibited in-the-money options.[111] Furthermore, even if the practice was not prohibited, backdating did not serve the best interests of shareholders.[112] Indeed, backdating was never reported in firms' filings and in general was highly secretive.[113]

Nevertheless, many firms engaged in backdating over a relatively short period of time.[114] Given its secrecy, Bizjak et al. hypothesized that backdating could have spread via directors' interlocks rather than independently originating in each firm.[115] To track the propagation of backdating options, Bizjak et al. used a multi-period logit regression model with a variable for an interlock with a firm that previously backdated its options.[116] They found that having a director who sat on another board that previously backdated options made up one third of the unconditional probability that a firm would begin backdating.[117] Combining this result with another finding, that a firm is more likely to backdate options if the directors themselves received stock options as part of their compensation, Bizjak and his colleagues concluded "directors were an important conduit contributing to the spread of this practice."[118]

In addition to conventional interlocking board seats, other types of connectivity appear to play a role in setting compensation. Executives could consult with their social peers to get information regarding their own compensation.[119] A recent study using the randomized class section assignment at the Harvard Business School found a significant peer effect.[120] Section-peers received similar compensation packages

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REV. 853, 871 (2008) ("[G]rant backdating disguised potentially outrage-triggering in-the-money options as more acceptable at-the-money options, hid the total amount of executives pay, appears to have supplemented rather than substituted for other types of pay, and is associated with managerial power."). Accounting concerns played a part as well, as the "use of at-the-money options, rather than in-the-money options, . . . allowed firms to report higher earnings." *Id.* at 859.

[111] *See id.* at 868 ("[M]any firms, in order to secure shareholder approval of option plans, promised not to issue executives in-the-money options.").

[112] *See id.* at 866 (concluding a company's decision to hide backdating from shareholders is evidence the practice is not in their best interest).

[113] *See* Bizjak et al., *supra* note 2, at 4825 ("[A]lmost no public information existed about this practice prior to 2004.").

[114] *See id.*

[115] *Id.* at 4826.

[116] *See id.* at 4836.

[117] *See* Bizjak et al., *supra* note 2, at 4838.

[118] *Id.* at 4822-23.

[119] *See* Shue, *supra* note 67, at 1402 ("[P]eer interactions may induce executives to 'keep up with the Joneses' in terms of their compensation and acquisitions.").

[120] *See id.* at 1402-03 (finding the strongest effect with respect to compensation and

compared to their class-peers.[121] Variation in compensation among section-peers is ten percent lower than variation in compensation among class-peers,[122] and the effects more than double following alumni reunions.[123] Finally, peer effects regarding compensation could also relate to geographical location.[124] A study by Davis and Greve found the incidence of golden parachutes correlated with their adoption by other firms in close geographical proximity.[125]

2. Interlocks and the Propagation of Other Governance Practices

Diffusion of governance terms and practices via interlocks is not limited to secretive practices, such as backdating, discussed above.[126] Other governance practices, including very public ones, as described below, have also been shown to spread through interlocks. The policy consequences of propagation of specific governance practices are ultimately a function of one's opinion of the underlying governance practices, and so the effect of interlocks in this context is ambiguous.[127]

A study by Davis found the poison pill was propagated via board interlocks.[128] At the beginning of the 1980s, Marty Lipton developed what may be the most important corporate law innovation ever—the poison pill—making it infeasible, or unprofitable at the very least, for a hostile bidder to take over a company without managerial consent.[129] While in the years after its inception some uncertainty surrounded the legality of the pill, in 1985 a Delaware court approved its adoption.[130]

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acquisitions).

[121] *See id.* at 1403.

[122] *See id.* at 1433.

[123] Shue, *supra* note 67, at 1433.

[124] *See* Davis & Greve, *supra* note 45, at 28-29 (observing a relationship between golden parachute incidence and geographical location). Interestingly, the authors also found golden parachutes did not diffuse through interlocks. *See id.* at 29.

[125] *Id.* at 29.

[126] *See* Davis, *supra* note 6, at 586 (discussing in the context of interlocks the adoption of shark repellents and other publicly disclosed anti-takeover devices).

[127] *Cf.* Davis & Greve, *supra* note 45, at 12-13 (characterizing AT&T's and IBM's respective hostile takeover bids of NCR and Lotus as morally ambiguous, considering the interlocked nature of their boards with the boards of many other companies and the likelihood that their justifications would spread).

[128] Davis, *supra* note 6, at 610 ("[D]irect contact through interlocks . . . was the mechanism responsible for the spread of the poison pill . . . .").

[129] *See id.* at 587; Lynn A. Stout, *Takeovers in the Ivory Tower: How Academics Are Learning Martin Lipton May Be Right*, 60 BUS. LAW. 1435, 1435 (2005) ("[Lipton] is the inventor of the renowned 'poison pill.'").

[130] Moran v. Household Int'l, Inc., 500 A.2d 1346, 1348 (Del. 1985) (affirming the

Immediately after *Moran*, many firms adopted the pill.[131] Looking at Fortune 500 companies between 1984 and 1989, Davis found director interlocks contributed to the spread of the pill significantly—having an interlock with an adopting company increased the likelihood of adoption by more than 50%, while having two interlocked directors doubled the likelihood of adoption.[132]

Because information about the pill was publicly available, and companies disclosed their individual adoption publicly,[133] the spread of the pill suggests that interlocks played a role beyond the diffusion of information. For example, interlocks may have affected directors' judgment and confidence in pursuing a course of action already followed at an interlocking firm.[134]

More recent evidence on other corporate governance changes supports a significant role for interlocks. Bouwman found evidence that firms tend to have similar governance to firms with which they share directors along several important dimensions, including: board size, board independence, whether the CEO is chairman, CEO compensation, and director pay.[135] Moreover, Bouwman found evidence that suggests this is due to influence spread through interlocks.[136] Companies tend to choose directors from the boards of firms that are similar along these dimensions,[137] but firms also tend to become more similar to the interlocking firms after the new directors join their boards, and after their existing directors join new boards.[138] The amount of change in governance practices is related to how different the governance is at the interlocking firm.[139] That is, an interlocking firm that differs markedly causes more change in governance than an interlocking firm that is relatively similar.

In a recent paper, we found that interlocks were associated with the propagation of firms' responses to a surprising Delaware court decision. In *Schoon v. Troy Corp.*, after having a dispute with a former

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Delaware Court of Chancery's decision upholding the adoption of a poison pill).

[131] *See* Davis, *supra* note 6, at 587.

[132] *See id.* at 585, 605.

[133] *See id.* at 595-96 (describing how firms had an incentive to disclose their poison pills as soon as they were adopted in order to have the intended deterrent effect).

[134] *See* Ranjay Gulati & James D. Westphal, *Cooperative or Controlling? The Effects of CEO-Board Relations and the Content of Interlocks on the Formation of Joint Ventures*, 44 ADMIN. SCI. Q. 473, 474-75 (1999) (discussing the social dynamics of board interlocks).

[135] *See* Bouwman, *supra* note 15, at 2359.

[136] *See id.* at 2361.

[137] *See id.* at 2360.

[138] *See id.* at 2360-61.

[139] *See* Bouwman, *supra* note 15, at 2360-61.

board member, the board of Troy Corporation changed its bylaws to eliminate rights for advancement of legal expenses for former board members, and then followed up by suing a former director for breach of his fiduciary duties.[140] The bylaw amendments were retroactive, even though the director had relied on those rights.[141] Conventional wisdom had been that this was not allowed,[142] but in a surprising March 2008 decision, the Delaware Court of Chancery validated the bylaw amendments.[143] As a result of this decision, current and former directors of Delaware firms suddenly had to worry about whether their advancement and indemnification rights would be retroactively rescinded by their fellow board members.[144] The decision "took the corporate world by surprise."[145] Practitioners warned that it would "shock many directors . . . that they could be stripped of [their indemnification] rights after they leave the board."[146] Delaware eventually amended the DGCL to restore protection,[147] but for more than a year, many directors of Delaware corporations were exposed to a significant risk that could only be mitigated through board action to adopt enhanced indemnification rights.[148]

Outside law firms distributed memoranda advising of the decision's possible consequences.[149] The general counsels of the firms in the study certainly saw those memoranda, and information was readily available online.[150] We found that, despite an abundance of information, the response seemed to spread through outside director interlocks.[151]

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[140]Schoon v. Troy Corp., 948 A.2d 1157, 1161-62 (Del. Ch. 2008).

[141]*See id.* at 1165.

[142]*See id.* at 1165-66:

> Relying on the principle that "the right to advancement and indemnification is a vested contract right which cannot be unilaterally terminated," the court held that Salaman's contract rights, embodied in the pre-amendment bylaws, vested when the defendant's obligations were triggered, or the date of the filing [sic] of the pleading against him.

[143]*See id.* at 1166-67.

[144]*See Developments in Indemnification & Advancement Rights in Delaware*, HUTCHINSON PLLC (October 20, 2009), *archived at* http://perma.cc/KWN9-EB2E (describing how companies rushed to appease nervous directors in the aftermath of *Schoon*).

[145]*Id.*

[146]Kevin LaCroix, *Former Directors, Advancement Rights, and D&O Insurance*, D&O DIARY (May 5, 2008), *archived at* http://perma.cc/J8SG-6KGK.

[147]*See* John W. Pauciulo & Jamie K. Maher, *Changes in Delaware Corporate Law*, WHITE AND WILLIAMS, LLP (Aug. 24, 2009), *archived at* http://perma.cc/YM9T-PNJ2.

[148]*See* HUTCHINSON PLLC, *supra* note 144.

[149]*See* Barzuza & Curtis, *supra* note 18, at 10.

[150]*Id.* at 10-11.

[151]*Id.* at 10, 21.

Having an outside board member sitting on a board of a firm that responded to *Schoon* significantly increased the likelihood of a firm responding to the change.[152] We also found that the likelihood of responding was higher when the proportion of outside members was high, the firm held more executive sessions, and had a lead independent director.[153]

Taken together, the evidence suggests that interlocks assisted outside directors in securing protection from *Schoon*.[154] While spreading information is one reason why interlocks could be helpful, given the wide availability of information regarding *Schoon*,[155] our findings suggest that interlocks provide more than mere information. For example, it is possible that interlocks increase outside members' political leverage in the board, conviction in what they think should be done, and persuasiveness *vis-à-vis* the other board members.[156]

3. Connectivity and Performance

Several studies attempted to test whether the overall value of board connectivity is positive or negative, given that it is associated with both positive and negative practices.[157] Using the four metrics discussed above from social network theory to measure connectivity, Larcker et al. found that firms with well-connected boards earn higher future returns than firms with poorly-connected boards.[158] The result also holds for changes in board connectedness,[159] even when the changes to board connectedness were a result of changes to other firms' boards.[160] The results were concentrated among firms with high growth opportunities and firms that had to cope with adverse circumstances.[161] Similarly, a study of board networks in U.K. firms found connectivity is associated with higher returns.[162] Interestingly, consistent with our view that the

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[152] *Id.* at 23.

[153] Barzuza & Curtis, *supra* note 18, at 4.

[154] *See id.* at 3-5.

[155] *Id.* at 10.

[156] *See id.* at 13.

[157] *See* Larcker et al., *supra* note 1, at 225-26.

[158] *See id.* at 248.

[159] *See id.* at 245 ("We find a positive and statistically significant (at the 1% level) association between changes in all five measures of board connectedness to one-year-ahead characteristic-adjusted returns.").

[160] *See id.* at 248.

[161] *See* Larcker et al., *supra* note 1, at 248.

[162] *See* Joanne Horton et al., *Resources or Power? Implications of Social Networks on*

role of interlocks is not sufficiently recognized, Larcker et al. found that analysts did not predict these higher returns.[163] Larcker et al. concluded that "director networks provide economic benefits that are not immediately reflected in stock prices."[164]

4. Connectivity and Financial Reporting

Recent results regarding the relationship of interlocks to the quality of financial reporting show that, even with respect to practices that are monitored closely by professionals, board interlocks have significant effects. Interestingly, in this context, interlocks have a role in spreading both good and bad practices.[165]

A recent study of earnings management found that a board link to a manipulator (non-manipulator) significantly increases (decreases) the likelihood of the firm being a manipulator.[166] Overall board connectivity is associated with higher reporting quality, at least as measured by restatements.[167] After controlling for firm and governance characteristics, Omer et al. found that firms with connected board members are significantly "less likely to misstate their annual financial statements."[168] The results are significant statistically and economically, as "high board connectivity reduces the odds of reporting an accounting irregularity by nearly [20%.]."[169]

Finally, a recent study found that audit-committees adopted conservative accounting practices from interlocked firms regarding tests for impairment of goodwill.[170] Audit committee interlocks with a firm that made a determination to write off goodwill increased the likelihood that the interlocked firm would make a similar decision.[171]

Compensation and Firm Performance, 39 J. BUS. FIN. & ACCT. 399, 401 (2012).

[163] *See* Larcker et al., *supra* note 1, at 248 ("The combination of these results suggests that the analysts fail to incorporate the economic implications of boardroom networks into their forecasts in a timely fashion.").

[164] *See id.* at 225.

[165] *See* Omer et al., *supra* note 10, at 7-8.

[166] *See* Chiu et al., *supra* note 5, at 917.

[167] *See* Omer et al., *supra* note 10, at 28.

[168] *See id.* at 20-22.

[169] *Id.* at 6.

[170] Marcy L. Shepardson, *Audit Committee Member Contextual Experiences and Financial Reporting Outcomes* 34 (Indiana University, Working Paper, 2013), *archived at* http://perma.cc/NX4C-UNSB.

[171] *See id.* at 4.

B. *How and Why Do Interlocks Matter for Governance?*

The above results suggest that interlocks play an important role in governance, with the potential to have both positive and negative effects.

Interlocks clearly have a role in the propagation of governance practices, and several important facts can be drawn from the literature. First, core governance practices, including ones that are closely monitored by professionals, such as reporting quality and compensation schemes, propagate via interlocks.[172] Second, both weak and strong governance practices spread via interlocks.[173] Thus, interlocks could potentially be responsible for observed variations in governance practices. Third, interlocks have a role in corporate governance changes in response to legal shocks like the introduction of the poison pill and the surprising *Schoon* decision.[174] These changes were initiated by lawyers, but propagated via interlocks. Fourth, interlocks have an impact even in an informationally rich environment and even with respect to legal changes that merely restored pre-existing legal rights.[175] Fifth, newly created interlocks trigger changes in the interlocking directors' new and existing firms.[176]

Why and how does board connectivity affect governance? What are the factors that influence this interaction? How do interlocks affect outside directors? How can we influence the diffusion of good practices and discourage the diffusion of negative ones? These are critical questions for corporate governance in light of the evidence that interlocks are important features of firms.

There are several plausible ways in which interlocks could affect governance. First and most obviously, information flows through interlocks.[177] Interlocked board members get information about different practices at other firms, including governance and risk-management practices, which they may consider adopting.[178] To the extent that oversight of corporate governance practices is a central concern of

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[172] *See supra* Part III.A.1, 4.

[173] *See supra* Part III.A.

[174] *See supra* Part III.A.2.

[175] *See supra* Part III.A.2.

[176] *See supra* Part III.A.2.

[177] *See* Bizjak et al., *supra* note 2, at 4826 ("One potentially important mechanism that could facilitate the flow of information about backdating is the overlap of corporate directors.").

[178] *See* REZAEE, *supra* note 83, at 111.

boards, information about governance may be particularly likely to diffuse through interlocks.

Furthermore, social interactions, in particular ones with peers, could affect directors' decision making.[179] The informational and social effects created by interlocks could contribute to the diffusion of negative governance practices. In case a board is doubtful about adopting some governance practice, it may find comfort in the fact that other boards have already adopted the practice. For example, a director who knows one firm is engaged in backdating options may be less likely to view it as problematic at another firm. Similarly, a director who sits on a board of a firm that has adopted a particular takeover defense may be less likely to resist using the same defense at another firm.[180]

Sitting on many boards could also result in directors who are so busy that they cannot give sufficient attention to any given firm.[181] At a certain point, board members might be too busy to conduct their monitoring role diligently and effectively.[182] Thus, the benefit of the richer experience associated with sitting on multiple boards is reduced by challenges that come with multiple board service.

Interlocks, however, can also contribute positively to corporate governance. The information that interlocks provide can assist outside directors, who would otherwise suffer from an informational disadvantage, in their monitoring role.[183] Studies have found that board independence is associated with more effective monitoring, discipline,[184]

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[179] *See, e.g.*, Shue, *supra* note 67, at 1435-36.

[180] *See* Davis, *supra* note 6, at 586-87, 610 (discussing the adoption of shark repellents and other anti-takeover devices in a study finding interlocks contributed to the spread of the poison pill).

[181] *See* Eliezer M. Fich & Anil Shivdasani, *Are Busy Boards Effective Monitors?*, 61 J. FIN. 689, 692 (2006); Falato et al., *supra* note 82, at 405.

[182] *See* Fich & Shivdasani, *supra* note 181, at 691-92 (discussing an unwillingness to remove poorly performing CEOs as well as the effects on stock prices when directors depart or become busy).

[183] *Cf.* Omer et al., *supra* note 10, at 11 (discussing things directors may learn through interlocks, suggesting they would not learn them otherwise).

[184] *See* Lixiong Guo & Ronald Masulis, *Board Structure and Monitoring: New Evidence from CEO Turnovers* 44 (ECGI-Finance Working Paper No. 351, 2013), *archived at* http://perma.cc/VM74-3BCR ("This evidence suggests that quality of board monitoring and CEO incentives are positively related to board independence and full nominating committee independence and the causation goes from board structure to the quality of board oversight."). *But see* Vidhi Chhaochharia & Yaniv Grinstein, *CEO Compensation and Board Structure*, 64 J. FIN. 231, 247 (2009) ("[F]irms without a majority of independent directors reduced their CEO compensation after the regulation went into effect more than did firms with a majority of independent directors.").

and performance.[185] Monitoring by outside directors, however, involves significant hurdles, as their access to information is limited.[186] Most sources of information are internal, and since the chairman of a board sets the agendas of meetings, independent directors may not even know what information they are missing.[187] Recent evidence suggests that directors are more effective in firms with less asymmetric information.[188] Experience on other boards may therefore be particularly important for outside directors.[189]

Interlocks can also lend independent directors confidence and leverage in the boardroom.[190] Observing and being able to refer to good practices in other firms may provide board members with confidence and conviction about what they believe is the best course of action.[191] Indeed, anecdotal evidence suggests better-connected board members ask more questions when reviewing financial statements.[192] By bringing up another board's practice, a board member could avoid or mitigate a potential negative signal *vis-à-vis* management or other board

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[185]Anzhela Knyazeva et al., *The Supply of Corporate Directors and Board Independence*, 26 R. FIN. STUD. 1561, 1563 (2013) ("[B]oard independence positively affects firm profitability and operating performance."); *see also* Bang Dang Nguyen & Kasper Meisner Nielsen, *The Value of Independent Directors: Evidence from Sudden Death*, 98 J. FIN. ECON. 550, 550-51 (2010).

[186]*See e.g.*, 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, 1541 (2007) (positing that as independent directors' information debilities decrease, their monitoring abilities improve); *see also* Huijing Fu & Xiaoyun Yu, *Is Board Structure One-Size-Fits-All? The Unintended Informational Consequence of the Sarbanes-Oxley Act* 7-8 (Aug. 8, 2010), *archived at* http://perma.cc/A2DW-9PSH (summarizing a study that found informational asymmetry between managers and directors).

[187]*See generally* Michael C. Jensen, *The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems*, 48 J. FIN. 831, 864 (1993) ("[T]he CEO almost always determines the agenda and the information given to the board. This limitation on information severely hinders the ability of even highly talented board members to contribute effectively . . . .").

[188]*See* Ran Duchin et al., *When Are Outside Directors Effective?*, 96 J. FIN. ECON. 195, 195 (2010) (finding that outside directors are more effective in firms where the cost of acquiring information is relatively low).

[189]*See* Fich & Shivdasani, *supra* note 181, at 706-07 (suggesting poorly performing firms may seek to recruit outside directors with experience on other boards); Omer et al., *supra* note 10, at 6 ("[F]irms experience a positive net benefit in terms of stronger monitoring from having a well-connected board of directors.").

[190]*See* Barzuza & Curtis, *supra* note 18, at 13 (positing interlocks could increase leverage since a firm's general counsel is likely to be less dismissive, and increase confidence for similar reasons).

[191]*See id.* (positing interlocks may make directors' requests more persuasive and empower them to act).

[192]Omer et al., *supra* note 10, at 4.

members.[193] For example, a board member may be concerned about the negative implications when asking for enhanced indemnification protection.[194] The same request, when expressed as a question about why the firm differs from the director's other board, may be much less likely to raise concerns.[195] Finally, a board member who wants to push for better monitoring, changes in compensation practices, or any other change will be more persuasive to his fellow board members if his proposal was adopted recently by another board.[196]

IV. EMPIRICAL CHALLENGES

The most significant challenge for studies of the effect of interlocks is the endogeneity of interlock creation.[197] It may be that firms that nominate connected directors also possess the attributes that predict other aspects of firm operation, such as higher value.[198] It is difficult to design empirical tests that identify the *causal* effects of interlocks.[199] Studies of interlocks use different methods to cope with endogeneity.[200] For example, Larcker et al. focused on boards whose connectivity score changed from one year to the next.[201] Since adding or losing a connected board member could also be correlated with changes in firm performance, Larker et al. took two more steps to tease out causality.

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[193] *See* Barzuza & Curtis, *supra* note 18, at 8 ("[T]he precedent of another board responding to *Schoon* might avoid any negative signal associated with a director seeking revised indemnification protection.").

[194] *See id.* at 8-9 (discussing the potential for enhanced liability after *Schoon* and the concerns of directors about sending negative signals).

[195] *See id.* at 13 (discussing using experience on other boards to secure changes to indemnification policies).

[196] *See id.*; *see also* Bizjak et al., *supra* note 2, at 4838 (finding it more likely a firm will begin backdating options when it has board members sitting on other boards that have already begun this practice).

[197] *See* Barzuza & Curtis, *supra* note 18, at 3 (characterizing the endogeneity problem as being that firms more likely to respond to *Schoon* are also more likely to appoint interlocked directors); *see also* David F. Larcker et al., *Corporate Governance, Accounting Outcomes, and Organizational Performance*, 82 ACCT. REV. 963, 1003 (2007) (discussing the need to address potential endogeneity concerns).

[198] *See* Larcker et al., *supra* note 197, at 989 (discussing possible endogenous associations).

[199] *See id.* at 1003 ("[I]t is very difficult to make causal inference[s] from cross-sectional studies of these endogenously chosen governance characteristics and any outcome variable.").

[200] *See, e.g.*, *id.* at 997-98 (using an alternative approach to address methodological issues).

[201] *See* Larcker et al., *supra* note 1, at 228.

First, they focused on firms whose board compositions remained unchanged, that is, their connectivity score changed due to changes in other boards, making the results less likely to be the result of endogenous choices by their respective firms.[202] This subset of data confirmed their results.[203] Second, to cope with the remaining concerns that the fact that the firms' board members left or joined other boards is associated with changes in the firm performance, they focused on a subset of firms whose board composition, as well as their outside board connections, did not change.[204] For these firms, the change in the connectivity score was not derived by their own board members' actions, but by changes in the connected boards.[205] Unfortunately, and indicative of the challenges of addressing endogeneity, this subset was too small to provide sufficient power to confirm or refute all results, but it did support some of them.[206]

Bouwman found that firms with interlocking directors tended to move in the direction of the governance terms at the company with which the new director interlocked.[207] In order to address the endogeneity problem that the director may have been selected as part of a prior strategy to adjust corporate governance terms, Bouwman decomposed the convergence in corporate governance practices to isolate the effect of existing directors taking new board seats at other companies—an action that is plausibly exogenous with respect to the observed firms' later changes in governance.[208] The results were robust to this decomposition.[209] Bouwman also found that when existing directors joined other firms with different governance structures, the magnitude of the subsequent change in governance correlated with the magnitude of the differences in governance structures between the interlocking companies.

The endogeneity problem is somewhat mitigated in the propagation studies, since they use a different methodology, which is designed to trace the diffusion of a practice or a governance term.[210] Typically, these studies use a Cox hazard or multinomial logit regression, which focuses on particular interlocks, those with firms that have

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[202] *See id.* at 247.
[203] *See id.*
[204] *See id.*
[205] *See* Larcker et al., *supra* note 1, at 247.
[206] *See id.* at 247-48.
[207] *See* Bouwman, *supra* note 15, at 2359.
[208] *See id.* at 2388-90.
[209] *See id.* at 2390-91.
[210] *See* Barzuza & Curtis, *supra* note 18, at 5.

adopted the practice.[211] The dependent variable is equal to one if in a certain period the firm backdates options, responds to the *Schoon* decision, or conducts any of the other observed practices.[212] Once a firm has acted, it is removed from the sample in the subsequent year.[213] Since the independent variable is an interlock with a responding firm, rather than with any firm, and general connectedness can be included as a control, it is not as sensitive to the endogeneity in nominating connected directors.[214]

Several endogeneity concerns remain, however. Most notably, the propagation could be related to the use of the same professionals (lawyers and auditors), or being part of the same social networks (belonging to social clubs and the like), which could in turn be related to the creation of interlocks.[215] For example, it is plausible that an outside lawyer advised a group or firm on the permissibility of backdating.[216] In that case, the adoption and interlocks may both be determined by the identity of the lawyer.[217] However, data on lawyers are mostly unavailable; thus, Bizjak et al., controlled for geographic location as a proxy for an outside law firm.[218] We used similar controls in our *Schoon* study.[219]

The gold standard to establish causation would be having interlocks created randomly.[220] While this is not possible, a recent study used a different random assignment to test peer group effects.[221] In

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[211] *See, e.g.*, *id.* at 18 (multi-period logit model); Davis, *supra* note 6, at 600 (Cox model).

[212] *See* Barzuza & Curtis, *supra* note 18, at 18 (assigning a value of one if a firm responded to the *Schoon* decision); Bizjak et al., *supra* note 2, at 4836 (assigning a value of one if a firm backdates option grants).

[213] Bizjak et al., *supra* note 2, at 4836.

[214] *See, e.g.*, *id.* at 4838 ("In all of the model specifications, the coefficient estimates on the independent variable measuring links to firms previously identified as backdaters are both statistically . . . and economically significant.").

[215] *See id.* at 4827 ("Nevertheless, it remains possible that the practice of backdating option awards could have spread through other social mechanisms.").

[216] *See id.* at 4842-43 ("[I]nformation about backdating might have been shared by outside corporate counsel and compensation consultants.").

[217] *See* Bizjak et al., *supra* note 2, at 4842-43 (discussing the role of outside legal counsel).

[218] *See id.* at 4843 (substituting geographic location for outside counsel as a control variable).

[219] *See* Barzuza & Curtis, *supra* note 18, at 22 (using geography as a proxy for shared lawyers).

[220] *See* Shue, *supra* note 67, at 1429-30 (characterizing randomly assigned variables as the "gold standard" for establishing causation).

[221] *See id.* at 1402.

particular, Shue looked at executive compensation and acquisition strategies among executives that were assigned to the same class sections at Harvard Business School.[222] Since section assignments are random, it can be used to study causal effect of peer groups on these practices.[223] Indeed, Shue found that those practices are significantly more similar among section-peers than among class-peers, and that the effects more than double following alumni reunions.[224]

Interlocks might also interact with other corporate governance practices.[225] If interlocks serve as conduits for information, other measures that assist the spread of information among directors could support and enhance the interlock effect.[226] Changes to protect outside directors could include executive sessions, sessions that include only independent directors, and the nomination of a lead independent director to run the sessions and set up the agenda. Consistent with these proposals, we found that the likelihood of firms to respond to *Schoon* increased with the number of executive sessions they held in the previous year and with having a lead independent director.[227]

A. *Research Agenda*

While the econometric techniques discussed above help build confidence in the individual findings of the literature,[228] and—as we will discuss below—the literature provides some useful guidance,[229] the literature is still incomplete in an important sense. While studies have pointed to both positive[230] and negative effects[231] of director interlocks,

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[222] *See id.* (finding a causal effect between "executive decision making" and random section assignments at Harvard Business School).

[223] *See id.* at 1403 (establishing causality through the use of random assignment).

[224] *See* Shue, *supra* note 67, at 1403 ("Relative to class peers, section peers receive significantly more similar compensation and are more likely to pursue similar acquisitions strategies.").

[225] *See generally* Sanjai Bhagat et al., *The Promise and Peril of Corporate Governance Indices*, 108 COLUM. L. REV. 1803, 1870-77 (2008) (including director interlocks in a summary of corporate governance indices).

[226] *See, e.g.*, Hallock, *supra* note 46, at 333 (discussing how contacts between non-CEO employees could also facilitate the spread of information between companies and affect compensation levels).

[227] *See* Barzuza & Curtis, *supra* note 18, at 4.

[228] *See supra* Part IV.

[229] *See infra* text accompanying notes 240-244.

[230] *See* Barzuza & Curtis, *supra* note 18, at 5-6.

[231] *See id.*; *see also* Bizjak et al., *supra* note 2, at 4822 (finding interlocks contributed to the spread of option backdating).

the literature has not, in our view, reached the point where a strong normative claim can be made about the desirability of interlocks or other kinds of board connectivity. Larcker et al. come closest, but focus on a particular type of board connectivity.[232] In order to furnish investors with actionable information about the desirability of interlocks, the critical question surrounds the *net* impact of well-connected boards on firm performance.[233] That is, do the potential benefits offset the potential costs of interlocks?

Thus, in some sense, a research agenda concerned with interlocks would treat them like other features of corporate governance that have been extensively studied in the literature.[234] The anti-takeover protections of the G-index[235] and E-index,[236] for example, as well as the presence of a staggered board, have all been the subjects of exhaustive econometric analysis aimed at the question of whether these differences in firm governance have a causal effect on firm value.[237] In a sense, this question is easier to answer with respect to firm interlocks: firms change directors far more often than they, for example, stagger or de-stagger their boards.[238] Director turnover creates a source of variation that empirical studies can potentially exploit.[239]

Board connectivity, however, presents challenges that are absent in other corporate governance contexts. The features of corporate governance that have been extensively studied are, for the most part, measures of managerial entrenchment.[240] They measure whether it is

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[232]*See* Larcker et al., *supra* note 1, at 226 (examining the "well-connectedness" of firms' boards).

[233]*See* Barzuza & Curtis, *supra* note 18, at 5-6 (reporting mixed results from the literature, which has thus far tended to focus on discrete segments of the director interlock problem).

[234]*See, e.g.*, Lucian Bebchuk et al., *What Matters in Corporate Governance?*, 22 REV. FIN. STUD. 783, 783-827 (2009) (evaluating the effects of the entrenchment index on firm value); Paul Gompers et al., *Corporate Governance and Equity Prices*, 118 Q.J. ECON. 107, 107-56 (2003) (evaluating the relationship of shareholder rights and firm value through the creation of a governance index).

[235]Gompers et al., *supra* note 234, at 114-15.

[236]Bebchuk et al., *supra* note 234, at 785.

[237]*See id.* at 783; Gompers et al., *supra* note 234, at 107.

[238]*See* Rivka Weill, *Declassifying the Classified*, 31 DEL. J. CORP. L. 891, 893-94 (2006).

[239]*See* Bizjak et al., *supra* note 2, at 4843-44 (discussing the role of director turnover in the context of interlocks).

[240]*See, e.g.*, Stephen M. Bainbridge, *UNOCAL at 20: Director Primacy in Corporate Takeovers*, 31 DEL. J. CORP. L. 769, 771-72 (2006) ("Over the last twenty years, academics and others have subjected *Unocal* to unrelenting criticism.").

possible for a hostile bidder to unseat the managers of a firm.[241] The impact of interlocks is more subtle. While the studies we discuss above point to important effects, the mechanisms of these effects seem to occur through changes in the actual function of the board, and not through the relatively blunt instrument of managerial entrenchment.[242] This means that subtle differences in the types of interlocks, the identity of the interlocking directors, and the firm at the other end of the interlock (to name but a few examples), could all matter regarding how board connectivity functions.[243] For instance, whether the interlock involves an outside or inside director is potentially important.[244] This sort of subtlety is not typical of the takeover defenses cataloged by index-based studies of corporate governance and firm value.[245] Thus, future research that takes into account these subtleties could advance our understanding of interlocks and governance.

B. *An Agenda for Firms, Investors, and Policy Makers*

How should investors and corporate governance experts approach board interlocks in light of the growing, but still incomplete, empirical literature? The incomplete empirical record suggests caution may be prudent, but the results reported so far suggest there is a risk in ignoring the effects of board connectivity as well.[246] As a threshold matter, in light of the evidence,[247] shareholders ought to give attention to the connectivity

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[241] *See, e.g.*, *id.* (discussing board entrenchment, the *Unocal* decision, and the subsequent academic discourse).

[242] *Cf.* Larcker et al., *supra* note 1, at 248-49 (increasing returns through economic benefits of interlocks); Barzuza & Curtis, *supra* note 18, at 23 (exploiting networks provided by outside directors); Bizjak et al., *supra* note 2, at 4844-45 (engaging in questionable option backdating practices as a function of position in social network).

[243] *See* Barzuza & Curtis, *supra* note 18, at 6 (discussing the importance of different types of interlocks).

[244] *See id.* at 21 ("Only outside interlocks with adopting firms show a significant relationship with the tendency to respond to *Schoon*.").

[245] *See id.* at 21; *see also* Bhagat et al., *supra* note 225, at 1809 ("[Indices reduce] multiple dimensions of governance to one number . . . .").

[246] *See, e.g.*, Omer et al., *supra* note 24, at 29-30 (citing research that boards with higher aggregate connectedness can suffer from information overload and high costs to acquire external information, but also that firms with investment opportunities can benefit by fast transmission of information).

[247] *See, e.g.*, *id.* at 30 ("[F]irms with higher aggregate connectedness, as proxied by our social network measures, are associated with lower firm performance on average, even when controlling for board busyness.").

of their boards. Having a board with no interlocks to other firms is unusual,[248] and in light of the findings of Larcker et al., may be costly.[249] On the other hand, boards with reciprocal CEO interlocks may be problematic, and investors should be aware that interlocks might spread both good and bad corporate practices.[250]

Notably, the finding that board centrality is associated with better stock returns[251] suggests that stock prices are not fully and accurately incorporating information about interlocks.[252] Typically, abnormal returns do not occur as the result of specific governance practices when the market fully anticipates the importance of those practices.[253] This, on its own, is evidence that interlocks receive insufficient attention. There are two possible reasons for this. First, it may be analysts give insufficient weight to the importance of interlocks and their impact on firm value.[254] Second, it may be that in light of the literature reviewed above,[255] analysts are attentive to interlocks, but are unduly skeptical of their benefits.[256] Analysts may be more acutely aware of the risks of interlocks, but disregard their potential positive impacts.[257] In such cases,

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[248]Larcker et al., *supra* note 1, at 229, (finding 24% of companies a year do not share any board members with other firms, although these tend to be small public and private firms).

[249]*Id.* at 248 ("We find that [firms] with relatively better-connected boards earn significantly higher future returns than those with less-connected boards."); *see also* Omer et al., *supra* note 24, at 5 ("[W]hen a firm has many decisions to consider . . . director connectedness is positively associated with firm performance.").

[250]*See* Fich & White, *supra* note 7, at 193 (discussing a possible negative market reaction to certain appointments involving interlocks, and finding that CEO reciprocal interlocks are not likely to further a firm's interests).

[251]Larcker et al., *supra* note 1, at 248-49 (explaining that in order to derive better stock returns from board centrality, a firm must establish more or higher-quality board links and rely on the well-connectedness of other boards).

[252]*See id.* at 240 ("Together, the results are consistent with boardroom connections providing information and resources and the net economic benefits that are not immediately reflected in stock prices.").

[253]*See* Lucian A. Bebchuk et al., *Learning and the Disappearing Association Between Governance and Returns*, 108 J. FIN. ECON. 323, 325 (2013) (discussing how the value governance practices become incorporated into the market price).

[254]*See* Luc Renneboog & Yang Zhao, *Director Networks and Takeover* 21 (ECGI Working Paper Series in Fin., Paper No. 382/2013, 2013), *archived at* http://perma.cc/NCW9-LBEN (claiming that analysts either do not recognize the connected boards or attach little value to them based on reactions to stock prices).

[255]*See supra* notes 246-253 and accompanying text.

[256]*See, e.g.*, Larcker, *supra* note 1, at 241 (agreeing that analyst forecasts have not accurately priced the profitability of well-connected firms).

[257]*See id.* at 227 ("These results are consistent with analysts and the market failing to fully appreciate the net economic benefits associated with a company's well-connectedness in the boardroom network . . . .").

companies with highly embedded boards may over-perform because the costs of interlocks are priced, but the full benefits are not.[258] As Bebchuk et al. have noted, even transparent governance practices can lead to abnormal returns if their importance is not fully understood by the market.[259]

Board connectivity has not gone completely unnoticed by industry analysts.[260] Governance-Metrics International (formerly The Corporate Library) has devoted significant attention to interlocks.[261] The proxy advisory firm ISS takes note of whether directors serve on the boards of each other's companies,[262] and takes special notice of interlocks involving compensation committees.[263] Glass Lewis, a proxy advisory service, generally advises a vote against a director if the director's election would create a reciprocal interlock that "poses conflicts that should be avoided to ensure the promotion of shareholder interests . . . ."[264] This captures the reciprocal interlocks associated with potentially higher compensation,[265] but does not address other types of connectivity that may also be important.[266]

Finally, the results regarding diffusion of governance practices may be informative for policy makers and regulators. The evidence suggests that interlocks are a channel through which both good and bad practices spread between firms. This means that firms that are at the center of director networks play a particularly important role in setting corporate governance practice for other firms. An intriguing possibility is that firms with high centrality might warrant closer scrutiny to guard against potentially contagious bad practices and might also be targeted in initiatives to promote the spread of best practices. In either case,

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[258] *See* Larcker et al., *supra* note 197, at 997 (discussing how information incorporated into prices can erroneously result in abnormal stock returns).

[259] *See* Bebchuk et al., *supra* note 253, at 324.

[260] *See* ROBERT A.G. MONKS & NELL MINOW, CORPORATE GOVERNANCE 259 (5th ed. 2011) (noting the consistent growth of interlocks starting in 2002 where at least one member of the board was connected to another board).

[261] *Id.* at 259-60.

[262] International Shareholder Services, Inc., *2013 U.S. Proxy Voting Summary Guidelines* 17 (Jan. 2013), *archived at* http://perma.cc/3TJ8-AL7Y.

[263] *See id.* at 13 (recommending that shareholders vote against a connected director that serves on the compensation committee).

[264] GLASS LEWIS, *supra* note 77, at 15.

[265] *See, e.g.*, Hodgson, *Why Should We Care*, *supra* note 78 (giving three negative effects of interlocks: egregious retirement and consultancy agreements for CEOs; excessive pay for failure; and option backdating).

[266] *See supra* Part III.

consideration a firm's influence via interlocks can help leverage limited regulatory resources to maximum effect.

V. CONCLUSION

In light of mounting empirical work, it is no longer possible to ignore board interconnectedness as an important feature of corporate governance. This article aims to bring the discussion of interlocks into the legal literature in the hope of sparking a discussion about board connectedness and its interaction with governance. Incorporating an institutional understanding of the subtleties of board interlocks could contribute to our understanding of the way they interact with corporate governance and point to desirable policy choices with respect to interlocks and to governance.