ARTICLE

SETTLING THE STAGGERED BOARD DEBATE

YAKOV AMIHUD, MARKUS SCHMID & STEVEN DAVIDOFF SOLOMON†

We address the heated debate over the staggered board. One theory claims that a staggered board facilitates entrenchment of inefficient management and thus harms corporate value. Consequently, some institutional investors and shareholder-rights advocates have argued for the elimination of the staggered board. The opposite theory is that staggered boards are value-enhancing since they enable the board to focus on long-term goals. Both theories are supported by prior and conflicting studies and theoretical law review articles. We show that neither theory has empirical support and, on average, a staggered board has no significant effect on firm value. Prior studies did not include important explanatory variables in their analysis or account for the changing nature of the firm over time. When we control for variables affecting both value and the incidence of a staggered board in a sample of up to 2961 firms from 1990 to 2013 we find the effect of a staggered board on firm value becomes statistically insignificant. Notably, we find that the adoption of a staggered board, its retention, and its removal are not random and exogenous but rather endogenous, being related to firm characteristics and performance. The effect of a staggered board is idiosyncratic; for some firms it increases value, while for other firms it is value-destroying. Our results suggest caution about legal solutions that advocate wholesale adoption or repeal of the staggered board and instead point to an individualized firm approach.

† Yakov Amihud is the Ira Rennert Professor of Entrepreneurial Finance at the Stern School of Business, New York University; Markus Schmid is Professor of Corporate Finance at the University of St. Gallen; and Steven Davidoff Solomon is Professor of Law at the University of California Berkeley, School of Law. The authors thank Manuel Adelino, Robert Bartlett, Thomas Bates, Bernard Black, Martijn Cremers, Jill Fisch, Laurie Hodrick, Colleen Honigsberg, Robert Jackson, Jr., Marcel Kahan, and Joe Grundfest; participants at the 2017 GSU CEAR-Finance conference and the NYU/Penn Conference on Law and Finance; and the seminar audiences at WHU, NYU, and the Hebrew University of Jerusalem for their helpful comments. We also thank Samantha Vega for her research assistance.

> Professor Lucian Bebchuk has engaged in two rounds of law-review-article duels with Professor Martijn Cremers and Professor Simone Sepe over classified boards. The weapons were statistics (and common sense). Cremers and Sepe wore the classified-board-stakeholder colors; Bebchuk, the agency-model-shareholder-democracy colors. Cremers' and Sepe's riposte was decisive.
>
> —Martin Lipton & Daniel Bulaevsky[1]

INTRODUCTION

The staggered board debate has been both heated and confrontational. On the one side are those who argue, based in part on work by Professors Lucian Bebchuk and Alma Cohen, that the staggered board is value-decreasing and entrenches directors and management.[2] On the other side is the exact opposite argument—based in part on work by Professors Martijn Cremers, Lubomir Litov, and Simone Sepe—that the staggered board instead allows directors to bargain for higher takeover premiums and hence increases firm

1 *Wachtell Lipton Discusses the Classified Board Duels*, CLS BLUE SKY BLOG (July 6, 2017), http://clsbluesky.law.columbia.edu/2017/07/06/the-classified-board-duels/ [https://perma.cc/FW9G-7DPQ].

2 *See, e.g.*, Lucian Bebchuk & Alma Cohen, *The Costs of Entrenched Boards*, 78 J. FIN. ECON. 409, 410 (2005) (finding that "staggered boards are associated with an economically meaningful reduction in firm value"); *see also* Lucian Bebchuk et al., *What Matters in Corporate Governance?*, 22 REV. FIN. STUD. 783, 785 (2009) (finding that increases in an index of six corporate governance features are associated with economically significant reductions in firm value); James M. Mahoney & Joseph T. Mahoney, *An Empirical Investigation of the Effect of Corporate Charter Antitakeover Amendments on Stockholder Wealth*, 14 STRATEGIC MGMT. J. 17, 26-27 (1993) (finding that antitakeover amendments have a negative effect on shareprice).

value.[3] In recent years, this debate has devolved into polemical statements from both sides often (but not always) citing key empirical studies on the issue.[4] These studies and this debate have driven recent law review policy proposals calling for either banning the staggered board or making the staggered board mandatory for all companies.[5] Studies finding negative wealth effects of a staggered board have also undergirded a campaign by the Harvard Law School Shareholder Rights Project to push publicly traded companies in the S&P 500 to eliminate their staggered boards.[6]

This Article sorts through this debate, gives clarity to the policy arguments, and provides an assessment of these empirical studies. We do so by analyzing the empirical and theoretical issues with studies both supporting and disparaging the staggered board. We then conduct our own empirical analysis of prior studies to determine their validity. We show that contrary to the prior major studies, a staggered board has no significant effect on firm value.

We begin by theorizing that prior studies are not robust to different estimation models. Specifically, when a regression is performed, explanatory variables are included to identify their effect on the dependent variable. For example, consider a study to ascertain the effect of irrigation on plant growth. Plant growth would

3 *See* K. J. Martijn J. Cremers et al., *Staggered Boards and Long-Term Firm Value, Revisited*, 126 J. FIN. ECON. 422, 424 (2017) (suggesting "staggered boards could contribute to firm value by preventing inefficient takeovers and/or serving to bond a firm's commitment to the firm's long-term stakeholders"); *see also* Thomas Bates et al., *Board Classification and Managerial Entrenchment: Evidence from the Market for Corporate Control*, 87 J. FIN. ECON. 656, 658 (2008) (finding that a staggered board reduces the likelihood of receiving a takeover bid, though the economic effect is marginal); Martijn Cremers & Alan Ferrell, *Thirty Years of Shareholder Rights and Firm Value*, 69 J. FIN. 1167, 1168 (2014) (finding that a staggered board is associated with higher firm value); David F. Larcker et al., *The Market Reaction to Corporate Governance Regulation*, 101 J. FIN. ECON. 431, 448 (2011) (suggesting that "a staggered board is a value-maximizing governance choice").

4 For an overview of the controversy, see Brian Baxter, *Spat over Staggered Boards Pits Wachtell Against Harvard's Bebchuk*, AM. LAW DAILY (Mar. 21, 2012), http://amlawdaily.typepad.com/amlawdaily/2012/03/wachtell-harvard-shareholder.html [https://perma.cc/5HQ7-A9GY]. It has also led to allegations of illegality. *See* Daniel M. Gallagher & Joseph A. Grundfest, *Did Harvard Violate Federal Securities Law? The Campaign Against Classified Boards of Directors* 5-6 (Rock Ctr. for Corp. Governance at Stanford Univ., Working Paper No. 199, 2014), https://ssrn.com/abstract=2536586 [https://perma.cc/F467-PUT3]; *see also infra* note 36 and accompanying text.

5 *Compare, e.g.*, Lucian A. Bebchuk, *The Myth That Insulating Boards Serves Long-Term Value*, 113 COLUM. L. REV. 1637, 1686 (2013) (overviewing "the long-time persistence and robustness of the documented association between stronger board insulation and poorer firm performance"), *with, e.g.*, K.J. Martijn Cremers & Simone M. Sepe, *The Shareholder Value of Empowered Boards*, 68 STAN. L. REV. 67, 75 (2016) ("[W]e recommend legal reform that would transform staggered boards into a quasi-mandatory rule."). They have also lead to proposals outside this dichotomy. *See, e.g.*, Martin Lipton & Steven A. Rosenblum, *A New System of Corporate Governance: The Quinquennial Election of Directors*, 58 U. CHI. L. REV. 187 (1991) (advocating five-year terms for corporate directors).

6 To learn more about the Project, see SHAREHOLDER RIGHTS PROJECT, http://www.srp.law.harvard.edu/index.shtml [https://perma.cc/94G9-XUC5]. For an analysis of the Project's effects, see K. J. Martijn Cremers & Simone M. Sepe, Board Declassification Activism 5-6 (June 2017) (unpublished manuscript), https://ssrn.com/abstract=2962162 [https://perma.cc/ZXK6-JBAB].

be our dependent variable and irrigation an explanatory variable, along with other variables that affect plant growth such as fertilization, cultivation and weather conditions. The goal would be to isolate the effect of irrigation by considering all the relevant factors that make plants grow, because farmers who are careful about irrigation also diligently fertilize and cultivate the plants. Omitting these variables may incorrectly attribute their effects on plant growth to irrigation alone.

In the case of the staggered board, the dependent variable is the firm's market value (relative to its assets), and the main explanatory variable is the presence or absence of a staggered board, controlling for other firm characteristics that affect value. To obtain a good assessment of the relationship of firm value and the staggered board, it is important to include the main variables that effect the presence or absence of a staggered board to tease out the full relationship between the variables.

We show that prior studies, including the study by Professors Bebchuk and Cohen, do not include important explanatory variables that affect firm value and are correlated with the presence or absence of a staggered board.[7] The result is that these studies have inappropriately attributed a lower firm value to the presence of the staggered board instead of to these omitted variables. To illustrate with another example, while the birth of baby lambs is positively correlated with the arrival of storks, it is not that storks bring baby lambs. Rather, both are positively affected by the spring weather that causes the arrival of both. If we omit the spring weather from a model we may infer erroneously from the lambs–storks correlation that the former is affected by the latter. In the case of the staggered board, once we include our identified, omitted variables—firm characteristics—there is no longer a significant relation between a staggered board and firm value.

We make this finding by first estimating the effect of a staggered board on firm value across firms and over time, employing the explanatory variables used in prior studies. Using data compiled by Institutional Shareholder Services (ISS) and its predecessors, we examine the effect of a staggered board on up to 2961 firms over a timespan of twenty-three years for a total of up to 27,016 firm-years.[8] Our initial results show that firm value is negatively affected by a staggered board, which is consistent with the prominent study of Bebchuk and Cohen.[9] This is notable since the Bebchuk and Cohen study ended in 2002; we extend it through 2013 with a similar result. However, the effect of a staggered board

7 *See* discussion *infra* subsection II.B.1.

8 In some of our models, data limitations force us to use a dataset of 1959 firms over a time span of twenty-one years for a total of 15,921 firm-years. Additionally, and consistent with the findings of Professors Larcker, Reiss, and Xiao, we find that there are significant coding errors in this database. *See infra* notes 49–50 and accompanying text; *cf.* David F. Larcker et al., *Corporate Governance Data and Measures Revisited* 4-8 (Rock Ctr. for Corp. Governance at Stanford Univ., Working Paper No. 211, 2015), http://dx.doi.org/10.2139/ssrn.2694802 [https://perma.cc/A2MP-FQLX].

9 *See* Bebchuk & Cohen, *supra* note 2, at 410.

becomes insignificant once related explanatory variables are included in our analysis. Putting this result another way, Bebchuk and Cohen's analysis does not include important variables related to both firm value and the incidence of the firm having a staggered board. The inclusion of these variables renders the effect of a staggered board on firm value insignificant. In particular, we find that the negative firm value–staggered board relation becomes insignificant once we include in the model an entrenchment index developed by Bebchuk, Cohen, and Ferrell that quantifies other corporate governance measures.[10] This leads to the conclusion that the firm-value effects of a staggered board are driven by other variables and not by the staggered board itself.

We next turn to studies that have shown that the staggered board enhances value, examining the most prominent study in this area, that of Cremers, Litov, and Sepe.[11] Their empirical strategy was to add firm-fixed effects to the models of Bebchuk and Cohen. These effects control for unobserved individual firm characteristics that are time invariant and purportedly account for the idiosyncratic nature of the firm, thus attempting to address the omitted variable problem of the Bebchuk and Cohen study.

We replicate the Cremers, Litov, and Sepe methodology and find similar results. However, given that our sample spans twenty-three years (1991–2013) and firm-fixed effects are by definition constant over this period, it is unlikely that all firms have invariable characteristics over this long period of time. Rather, we know that some firms choose to stagger their boards and other firms decide to destagger their boards. It is likely that these decisions are undertaken because for some firms there are changes in unobserved characteristics and conditions over time. We therefore split the sample into two subperiods and estimate the model for each subperiod. When we make this adjustment to account for the varying effect of firm-fixed effects, we find that a staggered board has no significant effect on firm value in any of the two subperiods.

Our results thus find shortcomings in both sides of the debate. They also highlight the sensitivity of any analysis of the staggered board and firm value to the choice of variables and models. To the extent that variable selection produces such different results, it highlights the unreliability of prior studies concerning the wealth effects of staggered boards.

We also address the fact that having a staggered board—its adoption, retention, or removal—is a result of a decision made by the firm. In other words, the estimated effect of a staggered board may reflect the consequences of the

10 This index was first proposed in Bebchuk et al., *supra* note 2. The provisions included in the index are limits to shareholder bylaw amendments, poison pills, golden parachutes, and supermajority requirements for mergers and charter amendments. The original index also includes the staggered board, which we of course omit from the index and include as a separate variable. *Cf. id.* at 784-85.

11 *See* Cremers et al., *supra* note 3.

factors that led to the decision rather than resulting from the presence or absence of a staggered board. We correct for this problem by employing an instrumental variable estimation method, which is detailed in subsection II.B.4. In this analysis, we find the value effect of a staggered board becomes insignificant.

We conclude by examining the policy implications of our findings. Our analysis means no definitive conclusion can be made at this time as to the positive or negative wealth effects of a staggered board. In terms of wholesale policy efforts to adopt or repeal staggered boards, our results suggest caution. We find that staggered boards appear to be affected by firm characteristics that account for decisions on adoption, retention, and removal of the staggered board provision, which are partially unobserved or cannot be quantified for the purpose of research. Our findings ultimately highlight the theoretical proposition that the staggered board is endogenous, and that the decision to adopt (or not) the staggered board is unique to each firm and its characteristics.[12] In some firms the staggered board may be value-enhancing, in others value-destroying. Therefore, the battle over the staggered board must be waged at the individual firm level.

More generally, our results provide evidence for measured skepticism of prior corporate governance studies and their implications for the structure of the board of directors generally. We conclude by analyzing various legal proposals related to the staggered board, and find that our results suggest caution about each of them. The rhetoric unfortunately does not match reality and the staggered board is neither value-decreasing nor value-enhancing overall. Instead, it appears a firm-specific approach should be adopted for the staggered board.

I. BACKGROUND

A. *The Theoretical Effect of the Staggered Board*

The staggered board, sometimes called a classified board, is a mechanism which allows a board of directors to be elected to staggered terms, typically over three years, rather than annually.[13] In a staggered board, one-third of directors are elected in any given year, meaning it takes two years to replace a majority of the directors. The staggered board can thus make a hostile takeover significantly more difficult due to the existence of a shareholder-rights plan, colloquially known as a poison pill. A poison pill prevents a hostile bid from succeeding unless the hostile bidder replaces a majority of a target's directors in order to have the new directors remove the poison pill and allow the hostile bid to

12 In subsection II.B.4 we explore the problem of endogeneity in our model and describe how we resolve it.

13 For a statutory explanation, see, for example, DEL. CODE ANN. tit. 8 § 141(d) (2016).

proceed.[14] But a staggered board requires that a hostile bidder run proxy contests over two annual stockholder meetings to replace a majority of the board. The time and cost of such an uncertain endeavor can deter a hostile bidder.[15]

Over 50 years ago Henry Manne theorized that the market for corporate control served as a disciplining force for managers.[16] Thus an unconstrained takeover market would ensure that companies are run more efficiently. This theoretical idea has served as the premise for the studies which have found the staggered board to be value-decreasing. By protecting management from removal, the staggered board entrenches poorly performing management and firm inefficiencies.[17] Thus, opponents of the staggered board rely on Manne's theory and studies of staggered boards to oppose antitakeover defenses generally. In this regard, the staggered board together with the poison pill is considered one of the most powerful takeover defenses a U.S. company can have.[18]

While those who favor a free market for corporate control oppose the staggered board, the opposite view has been taken by those who believe that firms should be allowed to defend themselves against hostile takeovers and that the decision to sell the company should remain with the board of directors. These arguments have been put forth most vigorously by Marty Lipton, the inventor of the poison pill.[19] He and other proponents claim that a staggered board helps firms maintain stability and continuity within the board and enables management to pursue long-term strategic plans.[20] Absent a staggered board such plans could be frustrated by a hostile offer or could make management forgo value-increasing long-term projects that appear unprofitable in the short-term.[21]

---

14 *See* Steven M. Davidoff, *A Case Study:* Air Products v. Airgas *and the Value of Strategic Judicial Decision-Making*, 2012 COLUM. BUS. L. REV. 502, 508.

15 *See* Bates et al., *supra* note 3, at 657; *see also* Lucian Arye Bebchuk et al., *The Powerful Antitakeover Force of Staggered Boards: Theory, Evidence, and Policy*, 54 STAN. L. REV. 887, 925-39 (2002) (finding "strong empirical support" that "staggered boards are the most powerful antitakeover device in the current arsenal of takeover defense weapons").

16 *See* Henry G. Manne, *Mergers and the Market for the Corporate Control*, 73 J. POL. ECON. 110, 112 (1965).

17 *See, e.g.*, Bebchuk, *supra* note 5, at 1638-39; *see also* Andrei Shleifer & Robert W. Vishny, *A Survey of Corporate Governance*, 52 J. FIN. 737, 746-48 (1997) (outlining the fundamental issues in corporate governance stemming from the agency problem caused by the separation of ownership from control).

18 *See also supra* note 15 and accompanying text.

19 *See* Martin Lipton, *Pills, Polls, and Professors Redux*, 69 U. CHI. L. REV. 1037, 1039 (2002) ("I have sought to preserve the ability of the board of directors of a target of a hostile takeover bid to control the target's destiny and, on a properly informed basis, to conclude that the corporation remain independent.").

20 *See, e.g.*, Mark Gordon, *Takeover Defenses Work. Is That Such a Bad Thing?*, 55 STAN. L. REV. 819, 837 (2002) (arguing that staggered boards "ensure that the balance of bargaining power between acquirors and targets does not ebb and flow based solely on the timing of the target's annual meeting").

21 Proponents of this theory often claim that these issues will arise because of misinformed or misguided shareholders who, without the restraints offered by the staggered board, would push management to undertake action which is not value-maximizing. This problem has been highlighted by Professors Goshen and Squire who describe it as a "principal-cost problem." *See* Zohar Goshen & Richard Squire, *Principal Costs: A New Theory for Corporate Law and Governance*, 117 COLUM. L. REV. 767, 770 (2017) ("When investors exercise control, they make mistakes due to a lack of expertise, information, or talent . . . .").

A staggered board thus provides more latitude to a board of directors to manage the firm towards long-term goals. A staggered board can also strengthen managers' bargaining power against hostile bidders, enabling the extraction of better terms for the target firm, and also potentially benefiting stockholders by enabling the target firm to better evaluate competing bids.[22] Finally, board members who serve for a longer period of time have more power to oversee the firm and discipline the firm's chief executive officer, another factor that potentially increases firm value. Consistent with this contrasting theory, the adoption of a staggered board should be found to increase value.

The theoretical underpinnings of the staggered board are subject to empirical testing. More specifically, if the staggered board is entrenching poorly performing management or otherwise deleterious to the firm, its adoption should decrease firm value. Conversely, if a staggered board is beneficial to a firm by permitting management to undertake more long-term value-enhancing projects or other beneficial measures, the adoption of a staggered board should be found to increase value.

The primary set of studies on the effect of the staggered board have examined staggered board adoptions or rejections over time.[23] The most prominent and important study in this group is by Professors Bebchuk and Cohen. The authors found that a staggered board decreased firm value by

22 *See* Richard H. Koppes et al., *Corporate Governance Out of Focus: The Debate Over Classified Boards*, 54 BUS. LAW. 1023, 1051 (1999) (noting the "increased negotiating power in takeover situations that results from a [staggered] board"); Martin Lipton & Theodore Mirvis, *Harvard's Shareholder Rights Project is Wrong*, HARV. L. SCH. F. ON CORP. GOVERNANCE & FIN. REG. (Mar. 23, 2012), https://corpgov.law.harvard.edu/2012/03/23/harvards-shareholder-rights-project-is-wrong/ [https://perma.cc/QS2N-HWV9]("[I]t is our experience that the absence of a staggered board makes it significantly harder for a public company to fend off an inadequate, opportunistic takeover bid, and is harmful to companies that focus on long-term value creation."). *See generally* 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 (2014) (offering a critique of Professor Bebchuk's belief that corporations should be direct democracies responsive to shareholder preferences as opposed to the board being insulated and thus possibly better at focusing on the long-term).

23 The first set of studies exploring the wealth effects of staggered boards analyzed stockprice movements around the time of the staggered board adoption or rejection. These studies attempted to measure the wealth effects of the staggered board through stockprice reactions by examining the excess returns on company stock surrounding the time of adoption or rejection of a staggered board. The results in these studies were mixed. *See, e.g.*, Re-Jin Guo et al., *Undoing the Powerful Anti-Takeover Force of Staggered Boards*, 14 J. CORP. FIN. 274, 283 (2008) (finding "clear evidence that dismantling staggered boards is beneficial to shareholders"); George A. Jarrell & Annette B. Poulsen, *Shark Repellents and Stock Prices: The Effects of Antitakeover Amendments Since 1980*, 19 J. FIN. ECON. 127, 141-44 (1987) (finding the effect of a staggered board is statistically weak and that abnormal returns around the time of staggered board announcements are insignificant); Mahoney & Mahoney, *supra* note 2, at 26 (finding "more recent staggered board amendments (since 1980) have had significantly negative impacts on shareholder wealth").

roughly 17%, as measured by the ratio of the firm's market value to its book value of assets, a measure of firm value known as Tobin's Q.[24]

Professors Bates, Becher, and Lemmon cast doubt on Bebchuk and Cohen's finding of such a large value effect of a staggered board associated with the ease of takeover. They find that the effects of hostile bids on target firm value are similar for firms with and without classified boards.[25] They also find that a bidder's stockprice reaction at the time of bid announcement is 2.7% lower if the target firm has a staggered board.[26] And, as they put it, "These results are not consistent with the notion that classification, on average, facilitates self-dealing by incumbent managers at the expense of target shareholders. Instead, the findings indicate that, consistent with the shareholder interest hypothesis, bidders fare worse when negotiating takeover bids with targets with a classified board structure."[27]

However, the same study did find that "eliminating the deterrence effect associated with board classification increases the implied value of firms by only 1.1%."[28] Though smaller than Bebchuk and Cohen's estimate of a staggered board's effect on firm value, it is hard to translate this increase to the effects on value ceteris paribus since Bebchuk and Cohen do not report the means and medians of the firms' market to book values in their analysis, a necessary predicate to such calculation. However, assuming for simplicity that the median Tobin's Q for the economy is 1, it means that the negative effect of staggered board on firm value as estimated by Bebchuk and Cohen is between six and sixteen times greater than that estimated by Bates, Becher, and Lemmon. One conclusion from this analysis is that the large negative effect of a staggered board on firm value documented by Bebchuk and Cohen can hardly be accounted for by the fact that a staggered board impedes the replacement of inefficient management.

---

24 *See* Bebchuk & Cohen, *supra* note 2, at 427 tbl.4. The Tobin's Q figures in the analysis were adjusted for the industry median. *Id.* And notably, the authors present evidence that a staggered board placed in the corporate charter is determinative of value while a bylaws-based staggered board does not have a statistically significant value. In the latter case, the authors find that there is no lower value effect, a circumstance likely attributable to the fact that shareholders can unilaterally amend a bylaw to remove a staggered board. *Id.* at 428-30.

For other studies echoing Bebchuk and Cohen's conclusions, see, for example, Olubunmi Faleye, *Classified Boards, Firm Value, and Managerial Entrenchment*, 83 J. FIN. ECON. 501, 507 (2007), which found "classified boards are associated with an 18.15 percentage point reduction in firm value as measured by Tobin's q."

For a critique of the use of Tobin's Q as a measure of firm value, and a proposal for alternate operating efficiency measurements, see generally Robert Batlett & Frank Partnoy, The Misuse of Tobin's *Q* (Feb. 4, 2018) (unpublished manuscript), https://ssrn.com/abstract=3118020 [https://perma.cc/5NQB-QT5E], and Philip H. Dybvig & Mitch Warachka, Tobin's q Does Not Measure Firm Performance (March 5, 2015) (unpublished manuscript), https://ssrn.com/abstract=1562444 [https://perma.cc/Y7Z5-X6YZ].

25 Bates et al., *supra* note 3, at 669.

26 *Id.*

27 *Id.*

28 *Id.* at 674.

A prominent recent study by Cremers, Litov, and Sepe attempts to reexamine the value effect of a staggered board. The authors highlight the omitted variable problem of the Bebchuk–Cohen study and attempt to address it by including firm-fixed effects in their regressions, thus identifying the effects of staggering and destaggering on firm values over time, holding the firms' unobserved characteristics constant.[29] In a matched sample study of 3076 firms from 1978–2015, the authors found staggering increases Tobin's Q while destaggering decreases it.[30] They find that there is a positive (negative) relation between the adoption (deletion) of a staggered board and firm value.

In sum, the evidence on the value of staggered boards is mixed. Bebchuk, Cohen, and others have found a staggered board has a wealth-decreasing effect; Cremers, Litov, Sepe, and others have found a staggered board has a wealth-increasing effect. The differences between the studies is attributable to the different methods they employ to account for omitted variables, a topic we take up below.

B. *The Policy Dispute*

The contrasting empirical research on staggered boards has produced differing policy prescriptions, markedly affecting the governance of corporate America. Based on the theoretical and empirical findings against staggered boards, a number of academics have proposed policies to disfavor staggered board adoption by public companies. Among the most prominent in this camp is Professor Lucian Bebchuk,[31] who started the Shareholder Rights Project at Harvard Law School to put this position into reality by representing institutional shareholders in asking firms to repeal their

---

29 Cremers et al., *supra* note 3, at 424.

30 *Id.* at 434. These results naturally depend on the quality of the match between firms subject to the change in staggered board and those serving as control firms. But these results have been echoed by other studies. *See, e.g.*, Cremers & Ferrell, *supra* note 3, at 1187-88 (finding a staggered board is associated with higher firm value); Cremers & Sepe, *supra* note 5, at 72 ("Adopting a staggered board . . . is associated with a statistically and economically significant increase in firm value, while decisions to destagger a board . . . are associated with a corresponding reduction in firm value."); Weili Ge et al., What Are The Consequences of Board Destaggering? 24 (Mar. 29, 2016) (unpublished manuscript), https://ssrn.com/abstract=2312565 [https://perma.cc/W5Wv-JRQX] (finding "that destaggering does not result in improved firm value . . . our evidence is more consistent with the view that the destaggering of boards eventually leads to reduced firm financial performance"); *see also* Robert Daines & Michael Klausner, *Do IPO Charters Maximize Firm Value? Antitakeover Protection in IPOs*, 17 J.L. ECON. & ORG. 83, 111 (2001) (analyzing 310 firms at the IPO stage and concluding a staggered board is not correlated with value-maximizing principles); Larcker et al., *supra* note 3, at 443-45 (finding firms with staggered boards experience negative excess returns when legislation is proposed to prevent using staggered boards).

31 *See* Bebchuk, *supra* note 5, at 1687 ("Policymakers and institutional investors should, going forward, reject the arguments for limiting the rights and involvement of shareholders that are regularly made in the name of long-term value.").

staggered board. The Project was very successful: it targeted 129 companies in the S&P 500; 121 subsequently destaggered and eliminated their staggered board.[32]

Not surprisingly, proponents of the staggered board have vigorously objected to the Harvard Shareholder Rights Project. The law firm Wachtell, Lipton, Rosen & Katz has opposed this project in the belief that it "exacerbate[s] the short-term pressures under which American companies are forced to operate."[33] In a memo to clients outlining its opposition, the firm stated that "it is our experience that the absence of a staggered board . . . is harmful to companies that focus on long-term value creation."[34] For his part, Bebchuk has argued that the firm's premise is faulty since "[c]ontrary to what insulation advocates commonly presume, the existence of inefficient capital markets and short investor horizons does not imply that the long-term effects of board insulation are positive overall."[35] But separately, Professor Joe Grundfest and then–SEC commissioner Daniel Gallagher wrote an article titled *Did Harvard Violate Federal Securities Law? The Campaign Against Classified Boards of Directors* arguing that the Harvard Rights Project violated federal securities laws since the Project failed to cite the countervailing empirical evidence in its shareholder proposals to repeal the staggered board.[36]

The research on the beneficial effect of staggered boards has also produced law review proposals encouraging staggered board adoptions. In this vein, Cremers and Sepe—who find that the staggered board is value-enhancing—propose the adoption of a "quasi-mandatory" rule for staggered boards.[37] A public company board would have exclusive authority to opt out of this rule by proposing a staggered board waiver, but contrary to current law, the shareholders of the company could not do so.[38] Cremers and Sepe concomitantly propose that Rule 14a-8 under the Securities Exchange Act of 1934 be amended to preclude shareholder-initiated staggered board proposals.[39] Even if the board endorsed a staggered board opt-out, it would require approval of a supermajority of two-thirds of the company's shares.[40] The authors state that this is a quasi-mandatory rule that:

---

32 For an overview of the Project's accomplishments, see generally Lucian Bebchuk et al., *Towards the Declassification of S&P 500 Boards*, 3 HARV. BUS. L. REV. 157 (2013).

33 Memorandum from Martin Lipton et al. 1 (Mar. 21, 2012), http://wlrk.com/webdocs/wlrknew/WLRKMemos/WLRK/WLRK.21664.12.pdf [https://perma.cc/B7AG-VX9T].

34 *Id.*

35 Bebchuk, *supra* note 5, at 1642.

36 *See* Gallagher & Grundfest, *supra* note 4, at 64 (arguing the Project's proposal violated Rule 14a-9 of the Securities Exchange Act of 1934, which prohibits materially false and misleading shareholder proposals).

37 Cremers & Sepe, *supra* note 5, at 138. Cremers and Sepe base this proposal on research by Professors Ian Ayres and Robert Gertner on the effect of penalty default rules and their role in personal choice. *Id.* at 138-39.

38 *Id.*

39 *Id.* at 139.

40 *Id.*

> [w]ould substantially reduce the leverage that activist shareholders currently have against boards and, in turn, the risk of coerced board approval to destagger. In its strongest version, this proposal would also involve rolling back majority voting standards by mandating the adoption of plurality voting standards. This additional reform would eliminate the ability of shareholders to use withhold campaigns to induce a corporation's directors to dismantle a staggered board.[41]

Cremers and Sepe argue that their value effects are caused by shareholders who are short-termist in nature and thus do not support long-term efforts by the board to create shareholder value in firms without a staggered board. The two state "that the promotion of long-term specific investments and the related need to ensure optimal stakeholder investments are the primary channels through which a staggered board increases firm value."[42] In this vein the authors do not adopt a per se mandatory rule because of the appearance of socially beneficial bargaining. They state that "it is still possible that there will be a subset of companies for which destaggering could pass a social cost–benefit threshold. For example, liquidity needs could persuade directors to accept the requests of prospective investors to destagger the board in exchange for the injection of much-needed capital."[43]

The staggered board debate reached a boil when Professors Cremers and Sepe posted *Board Declassification Activism: The Financial Value of the Shareholder Rights Project*, a draft article analyzing the effect on firm value of board destaggering because of the Harvard Rights Project between 2012–2014 and comparing the results to cases of board destaggering without the Project. The authors argue that based on their findings "board declassification in [Project] targets is associated with a statistically significant reduction in firm value."[44] Professors Bebchuk and Cohen quickly replied, arguing that

> on a close reading, the results of [Cremers and Sepe] fail to provide support for opposing declassifications. When these results are appropriately interpreted, they provide some significant evidence that declassifications are beneficial and no evidence that declassifications are value-reducing. Furthermore, the results presented in the authors' prior published work relating to preceding years do not hold, and indeed are substantially reversed, for the period considered by their current study. On the whole, the results of the current study undermine the authors' prior recommendations in support of staggered boards.[45]

---

41 *Id.*

42 *Id.* at 140.

43 *Id.*

44 Cremers & Sepe, *supra* note 6, at 5.

45 Lucian A. Bebchuk & Alma Cohen, Recent Board Declassifications 1 (May 22, 2017) (unpublished manuscript), https://ssrn.com/abstract=2970629 [https://perma.cc/NQL7-BTZG].

The net result is that diametrically opposed policy proposals are being put forth which are based on diametrically opposed empirical research. The debate over the staggered board has thus become one of conflicting views in different studies. We aim to sort through this evidence.

C. *Our Empirical Strategy*

We posit that prior studies on the long-term value effect of staggered boards suffer from the omitted variable problem we highlighted above. In order to address this issue, we replicate the Bebchuk and Cohen study but add in additional variables which might be associated with the adoption or deletion of the staggered board and at the same time directly affect firm value.

Our goal is to determine if it is the staggered board that is affecting firm value in the analysis or other variables which might engender a firm to adopt or retain a staggered board that are affecting the outcome. For example, it may be that a firm with poor return on assets is more likely to adopt a staggered board to prevent a takeover of the firm at a low price and thus enable it to improve its poor performance. In such a case it is not the staggered board which is value-reducing but the fact that the firm has suffered a poor return on assets. The staggered board in this scenario is only a symptom. By adding additional variables we can better determine the attributes driving a staggered board adoption.

Second, we analyze the effect of a staggered board on firm value when the estimation employs firm-fixed effects. Cremers, Litov, and Sepe adopt this approach to address the omitted variable problem.[46] By using fixed effects the authors account for the unobserved features of the firm that remain constant over time (or that change very slowly) whose effect also remains constant over time. By doing so they allow the effect of the staggered board to be isolated. However, it is possible that fixed effects change over time. In order to address this issue we replicate the Cremers, Litov, and Sepe study but divide the analysis into two periods. This allows us to measure the effect of firm-fixed effects over a more discrete period of time to see if changing characteristics of the firm are responsible for the value changes Cremers, Litov, and Sepe find.

II. EMPIRICAL FINDINGS

A. *Dataset*

Our dataset is the same as the one used by Bebchuk and Cohen, expanded to include later years. We use the data compiled by the Investor Responsibility Research Center (IRRC) during the period 1995 to 2006. The

46 *See* Cremers et al., *supra* note 3.

IRRC data were available for 1990, 1993, 1995, 1998, 2000, 2002, 2004, and 2006. After 2005, the database changed its name to RiskMetrics, and then ISS, and in 2007 began publishing annual data. From 1990–2006, we follow Professors Bebchuk, Cohen, Ferrell, Gompers, Ishii, Metrick, and others by assuming a firm's governance provisions as reported in a given IRRC volume remained in place during the period following the publication of the volume until the publication of the subsequent volume.[47]

The dataset we utilize includes up to 2961 firms over a timespan of between twenty-one and twenty-three years that ends in 2013 for a total of up to 27,016 firm-years, depending on the model employed.[48] As observed by Professors Larcker, Reiss, and Xiao, we too find coding errors in the ISS database.[49] We correct by hand any errors we find regarding the staggered board status of firms. Our corrections constitute approximately 0.5% of staggered board observations.[50] Our analysis is conducted with the corrected dataset. In unreported results, we also run each analysis on the uncorrected dataset and find no significant difference in our results. For stockprices we use the Center for Research in Security Prices database; for accounting information we use the COMPUSTAT database; for acquisition data we use Thomson SDC. For institutional holdings we use the Thomson 13F database and for insider holdings we use S&P's ExecuComp database.

We exclude from our dataset real estate investment trusts and firms with dual-class shares.[51] In addition, we trim the sample in each year by deleting firms that have the highest and lowest 1% of the distribution of lagged size (market capitalization). Microsize firms are nonconsequential, and very large firms are less likely to become takeover targets. We delete an entire industry if all firms in that industry either have a staggered board or do not have a staggered board.[52] We also code all firms incorporated in the state of Massachusetts as having a staggered board given that this state adopted a staggered board statute in 1990 and even in firms that opted out of the

47 *Cf., e.g.*, Bebchuk et al., *supra* note 2, at 796; Paul Gompers et al., *Corporate Governance and Equity Prices*, 118 Q.J. ECON. 107, 113 (2003).

48 We begin with a larger dataset. The remaining data are after we employ filters which are detailed in the text.

49 *See* Larcker et al., *supra* note 8, at 4-8.

50 More specifically, our strategy to doublecheck the IRCC database is to recode by hand any company who has switched the staggered board at least three times (e.g., adopting a staggered board, dropping it, and adopting it again, or the other way around). But since we do not recreate the entire database by hand, we cannot be certain that our corrections are comprehensive.

51 This is consistent with Bebchuk & Cohen, *supra* note 2, at 418.

52 This is done because we use industry-fixed effects in our models so these observations do not contribute towards the identification of the coefficient of the staggered board variable.

requirement, management can readopt it at will, meaning every Massachusetts company has a latent staggered board.[53]

B. *Examining the Effect of a Staggered Board on Firm Value*

1. The Staggered Board and Omitted Variables

We begin by examining the characteristics of our sample.[54] Among the firm-years in the sample, nearly 60% have a staggered board. We also find that the median firm age in our sample is twenty-two years, meaning that there is a significant number of companies which have survived over an extended period of time. Consistent with other studies, approximately 59% of the firms in our sample are Delaware firms.

In Table 1 we turn to estimation of the determinants of the firms' Tobin's Q, the measurement we use for firm value. The first set of estimations is pooled ordinary least squares regressions.[55] Columns 1 and 2 include only the variables used by Bebchuk and Cohen.[56] We refer to these columns as the Bebchuk–Cohen Model. Columns 3 and 4 include additional variables which theoretically may affect firm value but are absent in the Bebchuk–Cohen model.[57] We refer to these columns as the Additional Variables model.[58] The dependent variable is *logQ*, the logarithmic value of Tobin's Q, which enables us to determine the effect of various firm characteristics—including the presence or absence of a staggered board—on firm value.[59]

---

53 *See* MASS. GEN. LAWS ch. 156D, § 8.06 (2017).

54 Table 5 (in the Appendix) presents descriptive statistics for the variables we employ.

55 All estimated models include year- and industry-fixed effects, using two-digit SIC codes. Thus the estimation reflects differences between firms with different characteristics within a given industry. The tests of statistical significance employ standard errors that are clustered by firms. This is because the same firms appear multiple times in the regression and thus the unexplained residuals for each firm over some years may not be independent. For example, if a firm has an unobserved characteristic that makes its value deviate from that which is predicted by the model, the residual values for the firm over the years will not be independent. The clustering procedure accounts for this and, consequently, affects the statistical significance of the results. The estimated standard errors that we use are also robust to heteroskedasticity and serial correlation using the robust Huber–White sandwich estimator.

56 Column 1 excludes the variable stockholding by insiders (*Insider Ownership*) since the inclusion of this variable greatly reduces the number of firm-years with available data. Because data on insider ownership began only in 1992 whereas the sample begins in 1990, including *Insider Ownership* moves the starting year of our sample from 1991 to 1993 since we lag all explanatory variables by one year.

57 Column 4 includes stockholding by both insiders (*Insider Ownership*) and institutions (*Institutional Holdings*), which reduces the sample size compared to column 3.

58 The Additional Variables model includes more variables than the Bebchuk–Cohen Model and has fewer firm-years (11% fewer observations in column 3 compared to column 1 and 24% fewer observations in column 4 versus column 2).

59 The regression model fits the data much better with *logQ* compared to *Q*, which was the dependent variable in Bebchuk and Cohen's analysis. This means that the effect of the explanatory variables on *Q* is nonlinear. Using *logQ* is consistent with the approach of other researchers who study firm value. *See, e.g.*,

Table 1: The Effect on Firm Value of a Staggered Board, Controlling for Other Variables[60]

	(1)	(2)	(3)	(4)
Staggered Board	-0.023**	-0.025**	-0.015	-0.015
	(-2.110)	(-2.292)	(-1.457)	(-1.302)
Log(Total Assets)	-0.021***	-0.018***	-0.085***	-0.106***
	(-4.697)	(-3.655)	(-9.595)	(-10.197)
Log(Age)	-0.012	-0.010	-0.021***	-0.017**
	(-1.490)	(-1.117)	(-2.760)	(-2.017)
Delaware	0.023*	0.022*	0.027**	0.029**
	(1.908)	(1.797)	(2.278)	(2.236)
Return on Assets	1.899***	2.044***	1.602***	1.689***
	(20.674)	(20.049)	(15.085)	(13.065)
Capital Expenditures	-0.131	-0.267**	0.014	-0.239**
	(-1.280)	(-2.287)	(0.156)	(-2.119)
R&D	0.311***	0.440***	0.311***	0.409***
	(7.262)	(8.637)	(7.987)	(7.913)
R&D Missing	-0.116***	-0.108***	-0.071***	-0.061***
	(-7.705)	(-6.654)	(-5.112)	(-4.046)
Insider Ownership		0.135		0.131
		(1.315)		(1.087)
Asset Growth			-0.126***	-0.135***
			(-7.618)	(-7.161)
Sales Growth			0.103***	0.077***
			(4.441)	(2.638)
S&P500			0.205***	0.202***
			(13.534)	(11.235)
Leverage			-0.022	0.002
			(-0.608)	(0.045)
Profit Margin			0.283***	0.304***
			(6.978)	(6.437)
Stock Illiquidity			-0.371***	-1.304***
			(-4.177)	(-9.174)
Liquid Assets			0.143***	0.129**

Zvi Griliches, *Market Value,* R&D*, and Patents*, 7 ECON. LETTERS 183, 184 (1981); Philipp G. Sandner & Joern Block, *The Market Value of R&D, Patents, and Trademarks*, 40 RES. POL'Y 969, 972 (2011).

60 The dependent variable is *logQ*, where *Q* is the ratio of the firm's market value to book value of assets. The standard errors are clustered by firm. The symbols *, **, and *** indicate significance at the 10%, 5%, and 1% level. All variables are defined in the Appendix.

			(3.083)	(2.494)
Number of Deals			0.000	0.000
			(0.885)	(0.130)
No Deals			-0.034**	-0.029*
			(-2.535)	(-1.873)
Industry Sales Share			0.497***	0.552***
			(4.232)	(4.282)
Institutional Holdings				-0.183***
				(-5.138)
N	27,016	21,806	23,962	16,599
Firms	2961	2456	2593	2006
R^2	0.408	0.442	0.435	0.479

The result across all four columns is that a staggered board has a negative effect on firm value, consistent with the findings of Bebchuk and Cohen.[61] However, the effect of a staggered board is statistically insignificant in the Additional Variables model. The effect of a staggered board is statistically significant only in columns 1 and 2, which employ Bebchuk and Cohen's variables. In columns 3 and 4, which include our additional explanatory variables, the coefficients of *Staggered Board* are less negative and are not statistically significant. The test statistics imply that even if there is no relationship between a staggered board and *logQ*, there is a chance of between 1/7 and 1/5 (for columns 3 and 4, respectively) that we erroneously find such a relationship because of randomness in the data. Another way to illustrate this is that under these findings if we say that a staggered board affects firm value, there is a probability of nearly 20% that this statement is wrong and in reality there is no such effect. Formally, this probability is much higher than the standard 5% benchmark, or a chance of 1/20. We thus conclude that there is no significant negative linear relationship between *logQ* and a staggered board.[62]

The estimated coefficients of the variables that we add to the model (columns 3 and 4) are mostly significant, implying that they should not be absent from a model determining the effect of a staggered board on firm value. Importantly, in Table 3 below we show that some of these added variables are significantly related to a staggered board, and thus their absence from the regression model in columns 1 and 2 may bias the estimation of the effect of a staggered board on *logQ*. A test of whether the ten additional

61 *Cf.* Bebchuk & Cohen, *supra* note 2, at 427-28. It is a tribute to Professors Bebchuk and Cohen's work that the results of their model remain significant even as we greatly extend the sample period.

62 We find the same result when we replicate the analysis using *Q* as the dependent variable, as do Bebchuk and Cohen, instead of *logQ*. The fit of this model to the data is inferior to that when using *logQ*, which we use in our analysis. When using *Q* as the dependent variable, the effect of a staggered board is negative and significant in the Bebchuk–Cohen model. *Cf.* Bebchuk & Cohen, *supra* note 2, at 428. However, it becomes insignificant in the Additional Variables model.

variables increase the explanatory power of the model finds that their joint contribution is highly statistically significant.[63]

In Table 2 we add to the model the variable *Modified E-Index*, the entrenchment index of Bebchuk, Cohen, and Ferrell net of the staggered board provision which appears separately in the model.[64] *Modified E-Index*, which includes a count of five governance-related provisions (but excludes the staggered board provision, which appears separately in the model), controls for the existence of governance or agency problems in the firm.[65] Across firms, there is a strong positive correlation between *Staggered Board* and *Modified E-Index*. That is, firms that have a staggered board are more likely to have other governance-related provisions. Bebchuk and Cohen also account for this issue in their regressions by using a related governance index, the G-Index devised by Gompers, Ishii, and Metrick.[66] The goal of including measures of corporate governance is to account for how those measures affect firm value directly rather than indirectly through their influence on, or relationship with, staggered board adoption.

Table 2: The Effect on Firm Value of *Staggered Board* and *Modified E-Index*[67]

	(1)	(2)	(3)	(4)
Staggered Board	-0.009	-0.013	-0.000	-0.005
	(-0.844)	(-1.183)	(-0.029)	(-0.403)
Modified E-Index	-0.024***	-0.025***	-0.028***	-0.023***
	(-4.842)	(-4.889)	(-5.524)	(-4.114)
N	27,016	21,806	23,962	16,599
Firms	2961	2456	2593	2006
R^2	0.410	0.444	0.438	0.480

63 For instance, a test of the contribution of the additional variables in column 3 as compared to those in column 1 yields a value of F = 51.0 with a p-value < 0.001, which implies a very high significance.

64 *See supra* note 10 and accompanying text.

65 *See also* Bebchuk et al., *supra* note 2, at 784-85 (discussing how the factors included in the E-Index affect corporate governance by "limit[ing] the extent to which a majority of shareholders can impose their will on management").

66 *See* Gompers et al., *supra* note 47, at 109 (describing the G-Index "as a proxy for the balance of power between shareholders and managers").

67 The dependent variable is *logQ*, where *Q* is the ratio of the firm's market value to book value of assets. *Modified E-Index* is Bebchuk, Cohen, and Ferrell's entrenchment index excluding staggered board (whose effect is estimated separately). The regressions also include all control variables that appear in Table 1, but their coefficients are not reported to save space. All variables are defined in the Appendix.

The estimation results in Table 2 show that in the presence of *Modified E-Index*, the coefficient of *Staggered Board* is not statistically significant while the coefficient of *Modified E-Index* is negative and highly significant.[68] Notably, the insignificance of the value effect of a staggered board is not only statistical but also economical, meaning that the magnitude of the effect of *Staggered Board*, measured by its coefficient, is practically zero in columns 3 and 4. We conclude that firms with more governance-related measures that are included in *Modified E-Index* have lower value, as proposed by Bebchuk, Cohen, and Ferrell.[69] But after accounting for the effect of governance problems, the value effect of a staggered board is insignificant.

The negative value effect of *Modified E-Index* is puzzling given that the components of *Modified E-Index* hardly affect the likelihood of a firm being acquired. *Modified E-Index* includes five corporate governance measures: the poison pill, golden parachute, supermajority voting requirement for mergers, limits to amend bylaws, and limits to amend the charter.[70] In theory, none of these should have a significant effect in terms of entrenching the board and consequently on firm value. Golden parachutes may make a takeover more costly, but typically have no potency in stopping hostile acquisitions. The effect of a poison pill should be already incorporated in the firm's value whether or not the firm has explicitly adopted one, since every firm potentially has a shadow poison pill that can be adopted by the board of directors at any time, and research has shown that its presence does not significantly affect firm value.[71] The other provisions in *Modified E-Index* are also not considered to be potent in stopping hostile takeover bids or significant determinants of firm value. Indeed, Bebchuk, Cohen, and Ferrell point out that the documented negative relation between the E-Index and firm value "does not establish that the entrenching provisions . . . cause lower firm valuation."[72]

A possible explanation for the negative value effect of *Modified E-Index* is that the provisions included in it are symptoms of the firm having an agency problem, which cannot be directly observed. Firms with a high modified E-Index may have poorly performing boards, which is reflected both in a higher propensity

---

68 One reason that the value effect of a staggered board is insignificant when *Modified E-Index* is included in the model is the positive correlation of 0.23 between these variables, which is highly significant ($p < 0.001$) in the sample that includes all variables (columns 3 and 4). When *Modified E-Index* is excluded, its effect is partially assumed by *Staggered Board*, but when *Modified E-Index* is included, its effect on *logQ* is estimated directly while that of *Staggered Board* is considerably weakened (to the extent of becoming indistinguishable from zero).

69 *See* Bebchuk et al., *supra* note 2, at 785.

70 *See supra* note 10.

71 *See, e.g.*, John C. Coates IV, *Takeover Defenses in the Shadow of the Pill: A Critique of the Scientific Evidence*, 79 TEX. L. REV. 271, 277 (2000) ("[E]very firm has a 'shadow pill'—that is, bidders know targets can adopt a pill after a bid, so that adoption of an actual pill has no effect on a target's legal takeover vulnerability." (footnote omitted)).

72 Bebchuk et al., *supra* note 2, at 785.

of managers to adopt (or retain) the governance provisions measured by *Modified E-Index* and in lower firm value.[73] As a result there is a negative correlation between *logQ* and *Modified E-Index* even if the provisions in *Modified E-Index* are not potent deterrents of hostile takeover bids and are not the cause of the lower firm value.[74] Similarly, the staggered board provision may indicate the existence of a value-reducing agency problem in the firm rather than a cause for the value reduction. When a better indicator of agency problems—*Modified E-Index*—is included in the model, the effect of a staggered board becomes insignificant.[75]

We further test whether the value effect of a staggered board depends on the magnitude of *Modified E-Index*. If a higher modified E-Index indicates a more severe agency problem in the firm, a staggered board provision would have a more negative value effect if it enables the problem to persist. We test this hypothesis by adding the interaction term *Staggered Board*Modified E-Index* to the model. The coefficient of this variable should be negative if a staggered board exacerbates the value loss due to the modified E-Index. We find that the coefficients of both *Staggered Board* and *Staggered Board*Modified E-Index* are insignificantly different from zero, while the coefficient of *Modified E-Index* remains negative and highly significant. We conclude that the effect of a staggered board on firm value is insignificant even in conjunction with the modified E-Index.[76]

In conclusion, we observe that the previously documented negative effect of a staggered board on firm value is not robust to what we term model specification. Specifically, its effect becomes statistically insignificant when we account for the omitted variables problem we have previously highlighted.

---

73 An alternative explanation is that more provisions in the modified E-Index are adopted (or retained) when management perceives a problem in the firm that needs to be rectified. Then causality does not run from the modified E-Index to firm value but rather in the opposite direction. That is, it is the lower firm value—perhaps a temporary problem in management's view, which can be remedied—that leads to the higher modified E-Index.

74 A question that arises here is if the provisions that are the components of *Modified E-Index* are not potent, why do some managers adopt or keep them? It could be that some managers believe that these provisions help or at least will not hurt. It could also be that a firm in trouble offers a generous golden parachute (one of the provisions in *Modified E-Index*) in order to attract a good manager who otherwise would not want to work there. Then again, the negative relation between *Modified E-Index* and firm value does not mean that the former causes the latter but that it could be the other way around.

75 Testing the robustness of the results, we split the sample period into two subperiods and estimate the effect of a staggered board on *logQ* for each subperiod. We find that the coefficient of *Staggered Board* is not significant in any of the subperiods. Even when the model does not include *Modified E-Index*, we find that the coefficients of *Staggered Board* in columns 3 and 4 in the two subperiods are not significantly different from zero, especially for the second subperiod. This finding is grist for further study, but one explanation may be that the market has learned over time that a staggered board is harmless on average, or it developed governance mechanisms that rendered a staggered board inconsequential.

76 In unreported results we perform robustness tests, replicating our analysis using industry-fixed effects that employ the Fama–French industrial classification, as do Bebchuk and Cohen. *Cf.* Bebchuk & Cohen, *supra* note 2, at 420. Our results with this industrial classification are similar to those reported in Table 1, though the effect of a staggered board here is less significant than in Table 1. The coefficient on *Staggered Board* becomes insignificant even in a model similar to column 1.

2. The Determinants of a Staggered Board

Our analyses in Tables 1 and 2 include variables that have been historically omitted from empirical analyses of the staggered board's value effect. If these variables were not related to *Staggered Board*, their omission from the models in Tables 1 and 2, which estimate the effect of a staggered board on firm value, would not have biased the estimated effect of *Staggered Board*. In Table 3 we address this issue by analyzing the determinants of the staggered board to detect whether the results in Tables 1 and 2 are attributable to omitted variables.

Table 3 presents estimates of the effects on *Staggered Board* of the variables that are included in columns 3 and 4 of Table 1. The dependent variable is *Staggered Board*, which equals 1 if the firm has a staggered board. The models also include the variable *Past 3yr Return*, the average annual stock return over the preceding three years.[77] We theorize that *Past 3yr Return* negatively affects the likelihood of the firm having a staggered board. Following negative past performance, management may feel that the firm is vulnerable to acquisition "on the cheap" by a hostile raider.[78] It may then want to implement a strategic plan to improve its performance but because outside stockholders may not be fully informed about the benefits of this plan, its effect will not be immediately reflected in the stockprice.[79] On the other hand, managers in fairly priced or overvalued firms will not have such a concern and will not mind if their firm is acquired. Such managers may remove or not want to adopt a staggered board provision.[80]

77 The model also includes industry-fixed effects based on two-digit SIC classification. The results are qualitatively similar when using the forty-nine Fama–French industries.

78 *See* Emiliano M. Catan, *The Insignificance of Clear-Day Poison Pills* 32 (N.Y. Univ. Sch. of Law, Law & Econ. Research Paper Series, Working Paper No. 16-33, Sept. 2016), https://ssrn.com/abstract=2836223 [https://perma.cc/R8WW-MV5M] (finding similar results in the context of poison pill adoption). We do not take a stand here on whether a staggered board is a potent deterrent to hostile acquisitions; it suffices that some managers believe so and adopt or retain a staggered board as a means of protection against a hostile acquisition.

79 Alternatively, management could be biased in believing that its plan will succeed (otherwise they would not have implemented it) and thus it will attempt to adopt or retain a staggered board provision hoping that it would buy the firm time to improve its value.

80 The variable *Past 3yr Return* is not included in Table 1 because we find that it does not affect firm value (as measured by *logQ*) given that the model includes other performance variables which affect firm value, and since the variable *Past 3yr Return* is measured with a gap of one year before the current year.

Table 3: The Determinants of *Staggered Board*[81]

	(1)	(2)
Log(Total Assets)	-0.030***	-0.036***
	(-6.835)	(-6.526)
Log(Age)	-0.033***	-0.037***
	(-6.148)	(-5.796)
Delaware	-0.018***	-0.033***
	(-2.614)	(-3.915)
Past 3yr Return	-0.019***	-0.018**
	(-3.214)	(-2.160)
Return on Assets	-0.031	-0.032
	(-0.816)	(-0.686)
Capital Expenditures	0.024	-0.142*
	(0.356)	(-1.776)
R&D	-0.065***	-0.117***
	(-5.474)	(-6.623)
R&D Missing	-0.009	-0.007
	(-0.946)	(-0.589)
Insider Ownership		-0.112*
		(-1.754)
Asset Growth	0.026*	0.035*
	(1.719)	(1.888)
Sales Growth	-0.039**	-0.044**
	(-2.383)	(-2.222)
S&P500	-0.037***	-0.050***
	(-3.593)	(-4.062)
Leverage	-0.040*	-0.037
	(-1.779)	(-1.340)
Profit Margin	-0.084***	-0.070***
	(-4.087)	(-2.799)
Stock Illiquidity	-0.190***	-0.324***
	(-7.317)	(-5.077)
Liquid Assets	-0.184***	-0.226***
	(-7.184)	(-7.460)

81 The explanatory variables are those that appear in columns 3 and 4 of Table 1, with the addition of *Past 3yr Return*. The model also includes industry-fixed effects using two-digit SIC code and year-fixed effects. The standard errors are clustered by firm. The symbols *, **, and *** indicate significance at the 10%, 5%, and 1% level. All variables are defined in the Appendix.

Number of Deals	-0.000***	-0.000***
	(-3.018)	(-4.670)
No Deals	0.071***	0.059***
	(8.215)	(5.828)
Industry Sales Share	0.463***	0.472***
	(5.672)	(4.960)
Institutional Holdings		-0.099***
		(-4.085)
N	22,353	16,173
Firms	2493	1953
R^2	0.068	0.082

We find that the incidence of a firm having a staggered board is not random; rather, it has an economic explanation. In particular, past performance variables have a negative effect on whether the firm has a staggered board. Firms that do well—those with faster sales growth, higher profit margins, and past stockprice appreciation—are less likely to adopt and retain a staggered board. We also observe that size, firm age, and the dummy variable for whether the firm is included in the S&P 500 index have a significant negative coefficient, suggesting that larger, more mature, and more established firms are less likely to have a staggered board. Firms with higher R&D spending, higher leverage, and higher asset liquidity are also less likely to have a staggered board. Additionally, firms with higher institutional ownership and with higher stock illiquidity are less likely to have a staggered board. Finally, and perhaps surprisingly, more takeover activity in a firm's industry is negatively related to the likelihood of a firm having a staggered board. This finding requires further study.

The importance of having a broad set of variables to explain *logQ* in Tables 1 and 2 is evident from our findings in Table 3 that some of these variables have *conflicting* effects on *logQ* and on *Staggered Board*. We find in Table 3 that the very firm characteristics that positively affect value are those that make *Staggered Board* unnecessary and hence enter with a negative coefficient in Table 3 (or vice versa).[82] This may explain why the negative and significant

82 To illustrate, consider the variable for the firm's asset liquidity, *Liquid Assets*. It positively affects *logQ* (columns 3 and 4 in Table 1) and is negatively related to *Staggered Board* (Table 3). If *Liquid Assets* is omitted from the determinants of *logQ*, its negative association with *Staggered Board* and its positive relation to *logQ* will be expressed as a negative relation between *Staggered Board* and *logQ*. When *Liquid Assets* is included in the model in Table 1, its positive effect on *logQ* is estimated directly and not through *Staggered Board*. Accordingly, the negative effect of *Staggered Board* becomes weaker and insignificant. The same analysis applies to *R&D* which has a strong positive effect on *logQ* and a strong negative effect on *Staggered Board*. Other variables have conflicting effects on *logQ* and *Staggered Board—Sales Growth*, *S&P500*, *Profit Margin*, and *No Deals*—and thus their omission from the models in Table 1 would bias the coefficient of *Staggered Board* there, showing it to have a negative effect on *Q*.

effect of a staggered board on *logQ* in columns 1 and 2 in Table 1 becomes insignificant in columns 3 and 4 when we add control variables to the model. The omission of these variables from models 1 and 2 in Table 1 biases the effect of a staggered board on *logQ* and makes us believe that a staggered board affects firm value while in fact the estimated negative effect of a staggered board on *Q* is due to the effect of a missing variable on both *Staggered Board* and *Q*.[83]

3. The Effect of a Staggered Board on Firm Value Using Firm-Fixed Effects

The scope of the staggered board debate has changed due to the recent research of Cremers, Litov, and Sepe, which has led to dueling accusations about the true effect of a staggered board. These authors present evidence of a *positive* effect of a staggered board on firm value when estimating the model with firm-fixed effects.[84] As we discussed above, firm-fixed effects control for unobserved time-invariant firm characteristics (or characteristics that change very slowly) which pertain to the effect of a firm's staggered board on its value. Since we cannot always observe all the firm characteristics that affect value and the incidence of having a staggered board, the use of firm-fixed effects is a catchall way to control for these characteristics. However, some firm characteristics change over time, or the effects of these characteristics may change, and these changes may induce firms to adopt a staggered board or to destagger their board, while at the same time affecting firm value. The reason for the earlier results may be related to unobserved changing characteristics (or the changing effects of these characteristics) which caused the relationship between a staggered board and firm value. It may have been these changing characteristics themselves rather than related changes in staggered board status that affected value. By splitting the sample, we allow for the unobserved firm characteristics to vary over time and have their own effect on value, and then we observe that the effect on value attributed to a staggered board becomes insignificant. Not recognizing such changes may bias the estimated effect of a staggered board on firm value.[85]

In testing the findings of Cremers, Litov, and Sepe, we first estimate the effect of a staggered board on firm value for the entire sample, assuming that the unobserved firm characteristics remain constant over this entire period. Next, we estimate the same model over two subperiods of (approximately)

---

83 The variable *Modified E-Index* has a conflicting relation with *logQ* and *Staggered Board*. It is negatively correlated with the former variable and positively correlated with the latter. Its inclusion in the model explaining firm value renders the effect of *Staggered Board* insignificant.

84 *See* Cremers et al., *supra* note 3, at 427-29. This result is consistent with earlier findings. *See* Cremers & Ferrell, *supra* note 3, at 1188.

85 Naturally, not all firms in the sample stay in it for the entire twenty-three-year period. In our sample, the average number of years a firm stays in the sample is 15.2; the median is 16 years.

the same length of time, assuming that the unobserved firm characteristics remain invariant within each subperiod. Notably, the second subperiod is characterized by a wave of destaggering, principally driven by the efforts of the Harvard Rights Project. The dependent variable is again *logQ*, in order to examine the effect of our variables on firm value, and the main explanatory variables are *Staggered Board* and *Modified E-Index*. We also use the Additional Variables model, the comprehensive set of control variables that we use in columns 3 and 4 of Tables 1 and 2. In Panel A of Table 4, columns 1 through 3, we report results for the Additional Variables model. Panel B reports results for the Additional Variables model, with the addition of two ownership variables, *Insider Ownership* and *Institutional Holdings*. We add these variables in order to better assess the effect of shareholdings on the presence or absence of a staggered board. In both panels, columns 4 through 6 replicate columns 1 to 3 with the addition of *Modified E-Index*.[86]

86 We use year- and firm-fixed effects to replace the use of year- and industry-fixed effects from Table 1.

Table 4: The Effect of a Staggered Board on Firm Value Using Firm-Fixed Effects[87]

Panel A: Without Ownership Variables

	(1)	(2)	(3)	(4)	(5)	(6)
Sample Period	1991–2013 [I & II]	1991–2002 [I]	2003–2013 [II]	1991–2013 [I & II]	1991–2002 [I]	2003–2013 [II]
Staggered Board	0.025	-0.023	0.017	0.031**	-0.021	0.019
	(1.596)	(-0.798)	(1.047)	(1.964)	(-0.703)	(1.149)
Modified E-Index				-0.014***	-0.005	-0.009
				(-2.867)	(-0.601)	(-1.605)
N	24,295	11,753	12,471	24,295	11,753	12,471
R^2 (within)	0.249	0.170	0.268	0.250	0.170	0.268

Panel B: Including Ownership Variables

	(1)	(2)	(3)	(4)	(5)	(6)
Sample Period	1993–2013 [I & II]	1993–2003 [I]	2004–2013 [II]	1993–2013 [I & II]	1993–2003 [I]	2004–2013 [II]
Staggered Board	0.036**	-0.002	0.018	0.040**	0.001	0.019
	(2.047)	(-0.062)	(1.152)	(2.284)	(0.034)	(1.210)
Modified E-Index				-0.013**	-0.006	-0.005
				(-2.269)	(-0.608)	(-0.858)
N	16,650	7096	9482	16,650	7096	9482
R^2 (within)	0.273	0.195	0.298	0.274	0.195	0.298

For the entire sample period we observe that the coefficient of *Staggered Board* is positive and mostly significant, consistent with the results of Cremers, Litov, and Sepe. This applies to both Panels A and B. The weaker significance of the coefficient of *Staggered Board* here may be attributed to the fact that our model includes additional explanatory variables. The coefficient of *Staggered Board* remains positive and its statistical significance rises in Panel A when *Modified E-Index* is added to the model. The coefficient of *Modified E-Index* is negative and significant, consistent with the results reported earlier in Table 2.

However, the coefficient of *Staggered Board* becomes statistically insignificant in both panels once the sample is split into two subperiods of

87 The dependent variable is *logQ*, where *Q* is the ratio of the firm's market value to book value of assets. The table presents the results from firm-fixed effects regressions. To save space, we report only the coefficients of *Staggered Board* and *Modified E-Index*, sample size, and the R^2 of the model. All regressions include firm- and year-fixed effects. The standard errors are clustered by firm. The symbols ** and *** indicate significance at the 5% and 1% level. All variables are defined in the Appendix.

approximately equal length. Importantly, the coefficient of *Staggered Board* is not consistent across the subperiods. Instead, the coefficient flips between being negative in the first and positive in the second. The takeaway from this analysis is consistent with our conclusion following the analysis in Tables 1 and 2: a staggered board has no significant effect on firm value.

The result that a staggered board does not significantly affect firm value is consistent with recent evidence presented by Cremers and Sepe on the value effect of board destaggering related to the Harvard Rights Project. They note that firm value generally declined after board declassification, but "only board declassification in [Project] targets is associated with a statistically significant reduction in firm value . . . *declassifications at firms not targeted by the [Project] have a statistically and economically insignificant association with firm value*."[88]

The conclusion of Cremers and Sepe that destaggering has no significant effect on the value of firms not targeted by the Harvard Rights Project is consistent with ours because the firms targeted by the Project are a very small number of the staggering and destaggering cases in our sample. Our analysis in Table 4, which extends from 1991 through 2013, includes 61 cases of staggering and 297 cases of destaggering, a total of 358 instances of a change in staggered board status. On this basis, we estimate that destaggerings in firms targeted by the Harvard Rights Project constitute about 14% of the destaggering cases in our sample.[89] In addition, Cremers and Sepe point out that even among the Harvard Rights Project–targeted firms, the negative effect of a destaggering on firm value was confined to firms with high research and development expenditures.[90] It follows that for about 90% of our sample, our results that a staggered board has no significant effect on firm value are consistent with the results of Cremers and Sepe for firms that were not targeted by the Harvard Rights Project.

4. A Note on Endogeneity

Our results on the insignificant effect of a staggered board on firm value are supported by further analysis that we perform in our paper *Do Staggered Boards Affect Firm Value?*[91] There we address an issue recurrent in prior studies regarding staggered boards and firm value: that the implementation of a staggered board defense—its adoption, retention, or deletion—is a choice

88 Cremers & Sepe, *supra* note 6, at 5 (emphasis added).

89 We calculate this by noting that Cremers and Sepe find that half of board destaggering cases from 2012 to 2014 were in firms targeted by the Harvard Rights Project. Of these cases, eighty-three occurred in 2012 and 2013, a time that is included in our sample period. Accordingly, about forty-two destaggering cases in our sample are expected to have been a result of the actions of the Harvard Shareholder Rights Project, which is about 14% of the destaggering cases in our sample.

90 *Id.* at 22-24.

91 Yakov Amihud et al., Do Staggered Boards Affect Firm Value? (June 29, 2017) (unpublished manuscript), https://ssrn.com/abstract=2948141 [https://perma.cc/K3TS-5L7A].

made by the firms themselves.[92] The decision to implement a staggered board is affected by unique firm characteristics and by the views and objectives of its decisionmakers.[93] This raises a problem of selection and endogeneity, a major empirical issue also acknowledged by Bebchuk and Cohen.[94] The key question that stems from the issue of selection and endogeneity is whether the presence of a staggered board affects firm value, or whether the firm's low value causes a staggered board to be adopted. Underperforming firms may decide to adopt a staggered board in order to stall a potential underpriced takeover attempt and to enable the implementation of performance-enhancing policies. In such a scenario, the staggered board does not cause the low valuation of a firm but instead is a symptom or a consequence of it; that is, it will be implemented by such a firm in order to enable it to remedy its low valuation. The question, then, is whether the negative relation between a staggered board and firm value is caused by the latter or the former.

This endogeneity problem raises the need for an empirical analysis using an *exogenous* event associated with a staggered board adoption (or rejection). An exogenous event is independent of the firm's characteristics and therefore can help isolate the effect of the staggered board on firm value. An example of such an event is the mandatory legislation of staggered boards by Massachusetts in 1990. In response to a hostile bid by BTR, an English firm, against Norton, a Massachusetts company, the Massachusetts state legislature passed a statute requiring that all public companies in Massachusetts have a staggered board.[95] Company boards could opt out of the statutory

92 More specifically, the implementation of a staggered board requires the approval of the firm's board, followed by the approval of the firm's shareholders, if placed in the certificate of incorporation. The clause implementing a staggered board can also be placed in the firm's bylaws without shareholder approval, but this is known as an ineffective staggered board since shareholders can unilaterally remove the staggered board by amending the bylaws. *See generally* Bebchuk et al., *supra* note 15, at 894.

93 A notable exception to these determining factors can be found in Massachusetts legislation mandating a three-year staggered term for directors in every Massachusetts firm. *See* MASS. GEN. LAWS ch. 156D, § 8.06 (2017).

94 *See* Bebchuk & Cohen, *supra* note 2, at 410-11, 426 ("Do staggered boards bring about a lower firm value? Or, is the correlation produced by the selection of staggered boards by firms with lower firm values—either because boards of low-value firms feel more vulnerable to a takeover or because low-quality management tends to both produce low value and seek antitakeover protection?"); *see also* Alma Cohen & Charles C.Y. Wang, *How Do Staggered Boards Affect Shareholder Value? Evidence from a Natural Experiment*, 110 J. FIN. ECON. 627, 627-28 (2013) ("Governance provisions that weaken shareholder rights and insulate directors from removal are now well known to be negatively correlated with firm value . . . . Such correlation, however, might not imply causation but could reflect the greater propensity of low-value firms to maintain such provisions.").

95 § 8.06. For an account of the law's history and passage, see generally L. Mick Swartz, *The Massachusetts Classified Board Law*, 22 J. ECON. & FIN. 29 (1998).

requirement, but they could opt back in at any time. Maryland has passed a similar statute, though it has received much less attention.[96]

Professor L. Mick Swartz, who studies the value consequences of the Massachusetts legislation mandating staggered boards, found the law had no significant effect on the stock values of firms which had no staggered board, neither on the introduction day nor on the passage day of the law.[97] Examining the differential value effect of the law on firms with and without a staggered board, he found that there was no significant difference in the value effect of the law between the two groups.[98] There was, however, a difference in price reaction between firms with and without already existent antitakeover amendments in their corporate charters.[99] The value of those firms without antitakeover provisions declined by sixteen percent.[100] In a recent study of this event by Robert Daines, Shelley Xin Li, and Charles Wang, the authors find that the imposition of a staggered board on firms led to an increase in Tobin's Q for younger, innovative firms and evidence that this is attributable to increased R&D and capital expenditure.[101] The authors note that their findings cover a dataset different than typically used in other studies, which tend to include more mature firms.[102]

Additional exogenous events that have been analyzed for their impact on firm value are two 2010 Delaware court rulings in *Air Products & Chemicals Inc. v. Airgas*, which have arguably affected the potency of the staggered board provision.[103] Cohen and Wang indicate in a new study that these rulings affected the value of Delaware-incorporated firms in a way that suggests staggered boards are value-decreasing; that is, increasing the potency of staggered boards reduces firm value while weakening it raises firm value.[104] However, in reassessing these claims, Yakov Amihud and Stoyan Stoyanov found that after making adjustments in the estimation procedure and in the data, changes in the potency of a staggered board had no significant effect on

96 MD. CODE ANN., CORPS. & ASS'NS § 3-803 (LexisNexis 2018). For a critical evaluation of the Maryland statute, see Memorandum from Jim Hanks et al. 1-2 (Apr. 9, 2014), https://www.venable.com/files/Publication/3034aa4a-28b2-433d-ad23-7b0e894bf2f6/Presentation/PublicationAttachment/3bfe9eaa-5f0b-49be-8ccb-94992ec7deec/Venable_Maryland_Law_Memo_Board_Classification_in_Maryland_Evaluating_Section_3-803_of.pdf [https://perma.cc/ET3L-SKES].

97 Swartz, *supra* note 95, at 32.

98 *Id.* at 33.

99 *Id.* For the purposes of his study, Swartz defines antitakeover amendments as provisions in a firm's corporate charter—other than the implementation of a staggered board—that are designed to limit takeovers.

100 *Id.*

101 Robert Daines et al., *Can Staggered Boards Improve Value? Evidence from the Massachusetts Natural Experiment* 23-24 (Sept. 2016) (European Corp. Governance Inst., Fin. Working Paper No. 499/2017, 2017), https://ssrn.com/abstract=2836463 [https://perma.cc/GQ6P-MAWN].

102 *Id.* at 3-4.

103 For an explanation of these rulings, see generally Davidoff, *supra* note 14.

104 Alma Cohen & Charles C.Y. Wang, *Reexamining Staggered Boards and Shareholder Value*, 125 J. FIN. ECON. 637, 638 (2017).

firm value.[105] These results are consistent with both the findings of Swartz on the Massachusetts staggered board law and our own findings that a staggered board has no significant effect on firm value.

Bebchuk and Cohen address the endogeneity issue by estimating a firm's value (i.e., its Tobin's Q) as a function of the firm's staggered board as of 1990, when the ISS database began to document the phenomenon.[106] They suggest that in firms with staggered boards in 1990, shareholders had no power to remove it, while "shareholders were generally unwilling to permit existing firms to adopt charter-based staggered boards during the 1990s."[107] The two authors thus theorize that subsequent effects of the staggered board are not related to firm characteristics but rather the "exogenous" event of a staggered board being present in 1990.[108] In this estimation of firms' value as a function of staggered board provisions in 1990 they find again that the effect of staggered board on firm value is negative and significant.[109]

In our paper, *Do Staggered Boards Affect Firm Value?*, we address the endogeneity problem by employing the common method of instrumental variables.[110] This method recognizes that staggering or destaggering of corporate boards is a matter for firm choice, and it identifies instrumental variables that explain these governance changes.[111] The requirement is that the selected instrumental variables affect only the incidence of the firm having a staggered board without directly affecting its value. We have already seen from Table 3 that the incidence of a staggered board is not random but instead is a function of firm characteristics. In this earlier paper, we augment the set of explanatory variables with a set of instrumental variables.

---

105 *See* Yakov Amihud & Stoyan Stoyanov, *Do Staggered Boards Harm Shareholders?*, 123 J. FIN. ECON. 432, 438 (2017). For Cohen and Wang's response, see Alma Cohen & Charles C.Y. Wang, *Staggered Boards and Shareholder Value: A Reply to Amihud and Stoyanov* (Harvard Bus. Sch., Working Paper No. 16-097, 2016), https://dash.harvard.edu/bitstream/handle/1/25680333/16-097.pdf?sequence=1 [https://perma.cc/XH7B-ZYD9].

106 Bebchuk & Cohen, *supra* note 2, at 426-27.

107 *Id.* at 426.

108 *Id.* at 428.

109 *Id.*

110 *See* Amihud et al., *supra* note 91, at 5-6. We also address the selection issue in this second paper. More specifically, firms with a staggered board may have characteristics which lend itself to a staggered board, such as a low stockprice relative to firm value as measured by Tobin's Q. We do so by recognizing that the destaggering of corporate boards is now common. Since the Bebchuk–Cohen study, which ended in 2002, many firms destaggered their boards (350 in the ISS sample, 291 in our sample), and between 1990 and 2013, 101 firms adopted staggered boards (69 are included in our sample). This enables us to address the selection problem by studying the determinants of the choice of firms adopting, having, or removing staggered boards.

111 *See also id.* at 16 (recognizing the likelihood of a firm having a staggered board is not random and is thus affected by firm characteristics).

We found that the (instrumented) staggered board has no significant effect on firm value.[112] This result is obtained under both methods, that of Bebchuk and Cohen and that of Cremers, Litov, and Sepe. In both models, the coefficient of *Staggered Board* is insignificantly different from zero.[113] This result—sharing the insignificant value effect of a staggered board after having accounted for endogeneity—is consistent with the results presented in this Article.

III. POLICY IMPLICATIONS

Our finding that a staggered board has no significant effect on firm value does not discredit earlier studies which found significant negative or positive effects of a staggered board. Instead, our findings suggest caution in proposing that the staggered board in and of itself creates wealth effects. A staggered board may be beneficial in some firms while being detrimental or inconsequential in others, depending on their characteristics and on the reasons for having the staggered board. On average, a staggered board cannot be said to have an effect in one way or another. Therefore, a policy dictum that equally applies to all firms is, in our view, inappropriate.

Our findings also do not mean that in the heat of a takeover battle, the staggered board has no real effect in either frustrating a bid or causing a higher premium to be paid. Prior studies have addressed these issues,[114] and this Article takes no position on them. But what our results do show is that on average—and looking forward at the firm's operations as a whole—the staggered board does not produce a wealth effect for companies. This implies that the staggered board in general does not serve as an entrenching device that facilitates managerial waste.

The existence of a staggered board or its lack thereof is not random. It is more likely to be observed among firms with poor past performance that are incorporated in some states, and it is ubiquitous in certain industries and less common in others. The dependence of having a staggered board on firm characteristics reflects a conscious, systematic choice by some firms to have or not to have a staggered board, although it does not exclude the possibility that in some cases the staggered board

112 *Id.* at 5-6. The instrumental variables that we include in our analysis are the following: four dummy variables for four states of incorporation (Massachusetts, New York, California, and Pennsylvania), as well as *Past 3yr Return*, which we use as a variable that determines the incidence of a staggered board. *Id.* at 15-16. While these variables are strong determinants of the incidence of the firm having a staggered board, they do not predict firm value. In some tests, we use two additional instruments which make use of peer firms' characteristics and were identified by Professors Karpoff, Schonlau, and Wehrly. *See* Jonathan M. Karpoff et al., *Do Takeover Defense Indices Measure Takeover Deterrence?* 30 REV. FIN. STUD. 2359, 2362 (2017).

113 Amihud et al., *supra* note 91, at 6. The insignificant value effect of a staggered board is obtained without including *Modified E-Index* in the model, and it remains insignificant when we include *Modified E-Index*.

114 *See, e.g.*, Bebchuk et al., *supra* note 15, at 890-91 (finding that a staggered board makes a hostile bid more difficult and reduces aggregate returns to shareholders).

is unnecessarily adopted or mistakenly removed (or absent in the first place). For example, better performing firms, or firms with stronger market power, are less likely to adopt and retain a staggered board, or they are more likely to destagger their board. This evidence supports the theoretical notion that companies adopt a staggered board to prevent an undervaluing takeover, and that for firms in competition, takeover-impeding measures are nonconsequential. Ultimately, this is a basis to analyze a staggered board on an individualized basis. In all, our analysis highlights the likely idiosyncrasy of the staggered board.

Our results set a path for future research on the staggered board. Bebchuk and Cohen as well as Cremers, Litov, and Sepe have set an admirable standard for initial research on this matter. Future research may further examine the problems of omitted variables by testing more thoroughly the reasons for the adoption, maintenance, and deletion of a staggered board provision. It may also examine whether market monitors can function independently of the staggered board to substitute for this governance function, ameliorating its idiosyncratic effects. Further work can more finely examine under what conditions and in which industries the staggered board serves an appropriate corporate governance function. Finally, it is important to note that the analysis done on this issue is based mainly on companies included in the ISS database, which covers the S&P 1500 firms. There has been a paucity of research on the staggered board and its wealth effects in smaller companies due to a lack of available data. It is uncertain whether the results found in larger, more closely observed companies will hold for smaller companies. Yet, in terms of market value and the effect on the economy, the companies in the S&P 1500 list are the most important.

More generally, our findings have implications for other corporate governance studies which could also be plagued by the omitted variables that are correlated with governance provisions. This can inform the debate over whether "one size fits all" governance is appropriate for companies with different characteristics. Our results are thus in line with the study of Professors Cain, McKeon, and Davidoff Solomon examining seventeen takeover laws and finding that previous studies which had attributed negative wealth effects to the adoption of business combination laws were instead observing effects from other variables.[115] Similarly, Professors Catan and Kahan show that earlier studies on the effects of business combination laws do not withstand further scrutiny,[116] and that—in the poison pill context—there is a need to control for the variables that brought about the adoption of the poison pill.[117] The collective findings thus

115 *See* Matthew D. Cain et al., *Do Takeover Laws Matter? Evidence from Five Decades of Hostile Takeovers*, 124 J. FIN. ECON. 464, 466 (2017).

116 Emiliano M. Catan & Marcel Kahan, *The Law and Finance of Antitakeover Statutes*, 68 STAN. L. REV. 629, 634 (2016).

117 *Id.* at 647.

highlight that in examining other studies, accounting for econometric estimation issues is likely important. Like our results on staggered boards, this also suggests a measure of caution in wholesale acceptance or rejection of corporate governance provisions which apply uniformly to firms without clear empirical support.[118]

The staggered board debate highlights that, in the first instance, the parties are resorting to the empirical evidence and their interpretation of the findings to justify policy prescriptions for the treatment of a staggered board, as well as for the proper contractual arrangement of the board among shareholders and the company. We applaud this resort to empirical evidence to justify these policy prescriptions. Yet as we show, when proper controls for omitted variable bias are included, there does not appear to be a value effect of the staggered board as a whole—it neither reduces nor increases value. At a minimum our findings are contrary to the call by Cremers and Sepe for a quasi-mandatory staggered board. In addition, our findings also mitigate against a per se ban of a staggered board. Instead, our findings point to the staggered board being idiosyncratic and endogenous, good for some—but not all—companies, and perhaps bad for others.

These findings also inform views of attempts to eliminate the staggered board in the S&P 500. The Harvard Rights Project claims that it successfully was able to reduce the presence of a staggered board from 60% to 25% of these companies.[119] Our findings do not support state intervention either to ban or require the staggered board. Instead, our findings support each firm making an individualized choice. In today's complex capital markets, large capitalized companies likely face forces and pressures that counteract a staggered board's force and pull, pressuring otherwise entrenched boards to act in ways that are aligned with stockholders' interests regardless of whether a staggered board is present or not. In such a circumstance, a staggered board may not be necessary or harmful, and company responsiveness to the Harvard Rights Project supports this idea.

CONCLUSION

We revisit the question of whether a staggered board affects firm value, given conflicting results in prior studies. Bebchuk and Cohen found that a

118 For other articles making this point, see Matthew D. Cain et al., *How Corporate Governance is Made: The Case of the Golden Leash*, 164 U. PA. L. REV. 649, 654 (2016), and Randall S. Thomas, *The Increasing Role of Empirical Research in Corporate Law Scholarship*, 92 GEO. L.J. 981, 983 (2004) (reviewing MARK ROE, POLITICAL DETERMINANTS OF CORPORATE GOVERNANCE (2003)). The need for caution we suggest is consistent with the findings of Professors Black, de Carvalho, Khanna, Kim, and Yurtoglu. The authors examine prior studies of corporate governance indices like the E-Index and find that these indices are often constructed based upon vague governance measures or unobserved governance characteristics. *See* Bernard Black et al., *Corporate Governance Indices and Construct Validity*, 25 CORP. GOVERNANCE 397, 398 (2017). This too can be said about studies of the effects of the staggered board provision. Our results show that previous beliefs of its effect—whether it is "good" or "bad"—does not hold on closer econometric scrutiny.

119 *See* Bebchuk et al., *supra* note 32, at 165-66.

staggered board has negative effect on firm value, a result supported by subsequent studies, while a recent study by Cremers, Litov, and Sepe found that the effect of a staggered board on firm value is positive. These conflicting results are supported by differing theoretical arguments: opponents of the staggered board claim that it induces and perpetuates underperformance by firms, while proponents claim that it helps create long-term value.

We contend that previous studies on the effect of a staggered board on firm value did not include firm characteristics and performance measures that affect firm value and at the same time are correlated with the incidence of a firm having a staggered board. Therefore, the effects of these omitted variables have been mistakenly attributed to a staggered board. We analyze the Bebchuk and Cohen study, include more explanatory variables, and find that in our more comprehensive model, the estimated negative effect of a staggered board becomes insignificant. That is, the negative value effect that has been attributed to the staggered board is in fact due to variables that were omitted in earlier analysis. We also find that the results in the study of Cremers, Litov, and Sepe, which finds positive firm value in the staggered board, are not robust. We split the sample period of years into two subperiods and find that the effect of a staggered board on firm value is not significant in either subperiod.

Our results highlight that the value effect of the staggered board provision appears to be firm specific. There is no evidence that it is harmful or helpful for all firms on average. Our results indicate caution in any wholesale advocacy for the adoption or removal of the staggered board. They also suggest that policy proposals for mandatory staggered boards or a per se ban on these boards appear to be lacking in definitive empirical support. The staggered board debate is thus not about per se rules but whether the staggered board is right for individual firms.

APPENDIX

The sample includes all firm-years between 1991 and 2013 for all firms on the ISS database (which includes governance provisions) for which data are available on COMPUSTAT. *Q* is the ratio of the firm's book value to its market value. All variables that follow have their values for the previous year. *Staggered Board* equals 1 for firms with a staggered board; *Modified E-Index* is Bebchuk, Cohen, and Ferrell's entrenchment index of six governance-related provisions, which excludes staggered board (hence its value ranges from 0 to 5);[120] *log(Total Assets)* is the logarithm of the firm's total assets (Table 5 reports total assets in million USD); *log(Age)*, the logarithm of the firm's age (Table 6 reports firm age in years); *Delaware* is a dummy variable that equals 1 if the firm is incorporated in Delaware; *Return on Assets* is return on assets, defined as EBITDA divided by

120 *See supra* notes 64–65 and accompanying text.

lagged total assets; *Capital Expenditures* is capital expenditures relative to assets; *R&D* is the ratio of research and development expenditures to sales; *R&D Missing* is a dummy variable that equals 1 if the form does not report R&D; *Insider Ownership* is the share of the company's stock held by the top five officers in the company; *Asset Growth* is the one-year growth rate of total assets (which may reflect recent acquisitions); *Sales Growth* is the one-year growth rate of sales; *S&P500* equals 1 if the firm is in the Standard and Poor's 500 index; *Leverage* is the ratio of total debt (long-term and short-term) to the firm's total assets; *Profit Margin* is the ratio of the difference between sales and cost of goods sold to total sales; *Stock Illiquidity* is the average daily ratio of absolute stock return to dollar volume over the year (we exclude the top 1% of daily observations within each year and require at least 150 daily observations to compute the annual variable); *Liquid Assets* is the asset liquidity, defined as current assets minus the difference between current liabilities and debt in current liabilities, all divided by total assets. *Number of Deals* is the number of acquisitions in the industry and *No Deals* is a dummy variable that equals one if *Number of Deals* equals zero. Both of these deal variables are based on four-digit SIC codes. *Industry Sales Share* is the firm's sales share in the total industry share, using two-digit SIC codes. In the calculation of *Industry Sales Share* we use all COMPUSTAT firms. *Institutional Holdings* is the share of the company's stock held by institutional investors; *Past 3yr Return* is the average annual stock return over the last three years. All ratios are winsorized at the 1% and 99% level to avoid outliers. The sample excludes REITs, dual-class share firms, and firms in the lowest and highest 1% of market capitalization in the respective year. We also delete an entire industry if all firms in that industry either have a staggered board or do not have a staggered board.

Table 5: Descriptive Statistics for the Variables Used in Our Analysis

	Mean	Median	Std. Dev.
Q	1.795	1.422	1.157
Staggered Board	0.592	1.000	0.491
Modified E-Index	1.620	2.000	1.061
Log(Total Assets)	9521	1577	57,228
Log(Age)	26.485	22.000	18.742
Delaware	0.589	1.000	0.492
Return on Assets	0.145	0.136	0.115
Capital Expenditures	0.061	0.043	0.064
R&D	0.055	0.000	0.316
R&D Missing	0.474	0.000	0.499
Insider Ownership	0.031	0.007	0.066
Asset Growth	1.105	1.060	0.262
Sales Growth	1.098	1.070	0.240
S&P500	0.319	0.000	0.466
Leverage	0.236	0.224	0.183
Profit Margin	0.366	0.334	0.225
Stock Illiquidity	0.086	0.043	0.158
Liquid Assets	0.237	0.212	0.189
Number of Deals	47.664	13.000	111.666
No Deals	0.287	0.000	0.452
Industry Sales Share	0.032	0.008	0.061
Institutional Holdings	0.675	0.708	0.232
Past 3yr Return	0.114	0.059	0.536