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journal homepage: www.elsevier.com/locate/jfecThe market reaction to corporate governance regulation [☆]David F. Larcker ^{a,*}, Gaizka Ormazabal ^a, Daniel J. Taylor ^b^a Graduate School of Business, Rock Center for Corporate Governance, Stanford University, 655 Knight Way, Stanford, CA 94305, USA^b The Wharton School, University of Pennsylvania, PA, USA

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ABSTRACT

This paper investigates the market reaction to recent legislative and regulatory actions pertaining to corporate governance. The managerial power view of governance suggests that executive pay, the existing process of proxy access, and various governance provisions [e.g., staggered boards and Chief Executive Officer (CEO)-chairman duality] are associated with managerial rent extraction. This perspective predicts that broad government actions that reduce executive pay, increase proxy access, and ban such governance provisions are value-enhancing. In contrast, another view of governance suggests that observed governance choices are the result of value-maximizing contracts between shareholders and management. This perspective predicts that broad government actions that regulate such governance choices are value destroying. Consistent with the latter view, we find that the abnormal returns to recent events relating to corporate governance regulations are, on average, decreasing in CEO pay, decreasing in the number of large blockholders, decreasing in the ease by which small institutional investors can access the proxy process, and decreasing in the presence of a staggered board.

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1. Introduction

The Securities and Exchange Commission (SEC), the state of Delaware, and various US senators and representatives have recently proposed substantial regulations that would limit executive pay, limit a firm's control of the proxy process (i.e., proxy access), and ban specific corporate governance provisions [e.g., staggered boards and chief executive officer (CEO)-chairman duality].

Given the nature of these proposed changes, it is not surprising that organizations such as the US Chamber of Commerce, the Business Roundtable, and other similar organizations have reacted in a negative manner, where as CalPERS, CalSTRS, and other activist shareholders have praised the proposals. Employing standard event study methodologies, this paper examines the stock market's reaction to the announcement of these and other recent actions pertaining to the regulation of corporate governance.¹

There is an ongoing debate in the literature about whether existing governance practices are characterized by rent extraction or shareholder wealth maximization. In an attempt to provide insight on this debate, a vast literature correlates measures of corporate governance

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¹ Throughout the paper, we refer to executive pay, proxy access, and specific governance provisions as "governance choices" or "governance practices" and regulation relating to these practices as "governance regulation."

with various measures of shareholder value.² However, given the endogenous nature of corporate governance, it is not surprising that many of the results linking governance and shareholder value are mixed.³ Because governance choices are endogenous decisions made by managers and shareholders, the value-maximizing governance choices for one firm could be very different from the value-maximizing governance choices of another firm. As a result, in equilibrium, the relation between governance choices and shareholder value is ambiguous.

Recent corporate governance regulations represent an exogenous shock to equilibrium governance practices. Thus, the market's reaction to recent corporate governance regulation provides a novel setting to examine the relation between governance and shareholder value that is less subject to the endogeneity, or "within equilibrium" critique, of existing research.⁴ If existing governance practices are, on average, characterized by rent extraction, we expect regulation of these practices to increase shareholder value. In contrast, if existing governance practices are, on average, value-maximizing, we expect regulation of these practices to decrease shareholder value.⁵

Schwert (1981), Binder (1985), and many others note that the stock market's reaction to a proposed regulation is a function of the change in the probability that the regulation will be adopted and the dollar value of the expected impact of the regulation on shareholder wealth. Accordingly, we expect that the reaction to corporate governance regulations is most pronounced for those firms affected by the regulation. In particular, we expect those firms whose existing governance practices are inconsistent with the regulation (e.g., firms with highly paid executives and firms with staggered boards) to have

a more pronounced reaction than those firms whose governance practices are consistent with regulation.

In conducting our tests, we take a broad sampling of legislative and regulatory events related to governance regulation, rather than focusing on any single event or only those events that are associated with significant abnormal returns. We examine the market reaction to 18 key events related to economy-wide corporate governance regulation from March 2007 to June 2009.⁶ We group each of the 18 events into two non-mutually exclusive categories: *Executive Pay Events* and *Proxy Access Events*. Eight of these events are *Executive Pay Events* and relate to regulation that would explicitly limit executive pay or require annual "say on pay" votes or both. Interestingly, all eight of these events are related to legislative actions and none of these events is related to the actions of regulators (e.g., the SEC). Thirteen events are *Proxy Access Events* and relate to regulation that would give increased power to shareholders with ownership stakes of 1% or more (or shareholder coalitions holding 1% or more) to nominate directors in contested elections and influence the proxy process. Five of these 13 events are related to decreases in the likelihood of proxy access regulation. In addition, three events are related to both executive pay and proxy access regulation, and these events relate to legislation that bans specific governance practices such as staggered boards and CEO-chairman duality. If any event is unassociated with a change in the probability of regulation or that regulation is expected to have a trivial impact on value, we expect to observe both an insignificant market reaction and that the reaction is unrelated to the firm's existing governance choices. Because we examine multiple events related to corporate governance regulation, trivial changes in the probability that a regulation will be adopted or trivial effects on shareholder wealth decrease the power of our tests and bias against finding both significant changes in shareholder value for a given event and significant changes in shareholder value on average across all events.

Our results are as follows:

Executive Pay Events. We find an insignificant reaction to events relating to the regulation of executive pay. However, examining cross-sectional variation in the market's reaction, on average, we find a negative relation between abnormal returns on the days of these events and CEO compensation. The higher the CEO's compensation relative to industry and size peers, the more negative the reaction. These results are consistent with a value-maximizing view of current pay practices even for firms with extreme levels of compensation. The results are consistent with critics' arguments that capping or regulating executive pay results in less efficient contracts and negatively affects shareholder wealth in these firms.

Proxy Access Events. On average, we find a weak negative reaction to proxy access regulation. Examining cross-sectional variation in the market's reaction, we find

² See, among others, Morck, Shleifer, and Vishny (1988), La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998), Gompers, Ishii, and Metrick (2003), Fich and Shivdasani (2006), Coles, Naveen, and Naveen (2008), and Bebchuk, Cohen, and Ferrell (2009).

³ See, among others, Bhagat and Jefferis (2005), Core, Guay, and Rusticus (2006), Larcker, Richardson, and Tuna (2007), Bhagat, Bolton, and Romano (2008), and Johnson, Moorman, and Sorescu (2009).

⁴ So long as the regulatory shift is not the result of actions on the part of every individual firm, the regulatory shift can be treated as largely exogenous. For example, many argue that the Enron scandal was the impetus for new regulation. While the resulting regulation might be considered endogenous to Enron, the Enron scandal and ensuing regulations were beyond the control of most firms. Thus, the resulting regulation is largely exogenous. This type of design has been used to study the valuation consequences associated with the Sarbanes Oxley Act (Zhang, 2007), the impact of board member choices on firm performance (Duchin, Matsusaka, and Ozbas, 2010), the Williams Act (Schipper, Thompson, and Weil, 1987), the 1934 establishment of the SEC (Benston, 1973), and other similar regulatory or legislative actions.

⁵ An alternative interpretation of a negative reaction to the proposed regulation is that the market expected the regulation to be more restrictive and was surprised in the laxness of the regulation. While this is a plausible alternative explanation for a decrease in the shareholder wealth of affected firms on days when the likelihood of regulation increased, it cannot explain why an increase in the shareholder wealth of affected firms is evident on days in which the likelihood of regulation decreased. The fact that consistent cross-sectional variation exists in the market's response to the events that both increase and decrease the likelihood of corporate governance regulation suggests that many features of the governance regulations we examine were not completely expected.

⁶ We exclude events and regulations specific to financial firms, related to the Troubled Asset Relief Program (TARP), and related to federal bailout monies. See Section 3 for more details.

strong evidence that abnormal returns are increasingly negative for firms with a greater number of large institutional blockholders (i.e., those holding at least 1% of shares outstanding). In addition, we find strong evidence that abnormal returns are decreasing in the ease by which small institutional investors can access the proxy process. This is consistent with critics' claims that proxy access regulations that give shareholders (or shareholder coalitions) who hold 1% or more the ability to nominate their own slate of directors or list proxy proposals increases the power of blockholders who might not act in the interest of other shareholders (e.g., certain activists, bidders with toeholds, or corporate raiders).

Specific Governance Practices. Prior literature argues that staggered boards and CEO-chairman duality allow managers to extract rents from shareholders (e.g., [Bebchuk and Cohen, 2005](#)). If this is the case, we expect firms with staggered boards and firms in which the CEO is also chairman of the board to respond positively to regulation that would either ban such practices or give shareholders a greater say in the proxy process (i.e., decrease the cost of changing such practices). Examining cross-sectional variation in the market's reaction, on average, we find a significant negative relation between abnormal returns to these events and the presence of a staggered board, as well as no evidence of a relation between abnormal returns to these events and CEO-chairman duality. This is inconsistent with the market viewing the elimination of staggered boards as value increasing. If anything, the results suggest the opposite. The elimination of the option to have a staggered board is value decreasing. One explanation for the lack of cross-sectional variation with respect to CEO-chairman duality is that the market correctly anticipated the portion of the regulation relating to CEO-chairman duality, but not the portion relating to CEO pay and proxy access. An alternative explanation is that regulations relating to CEO-chairman duality were not fully anticipated, but that CEO-chairman duality does not affect shareholder value incremental to the provisions of the regulation related to CEO pay and proxy access. This is consistent with the notion that the firm can use similar, but unregulated, governance provisions to achieve a similar effect as those provisions being banned.

In addition to standard event study methodologies, we employ a Monte Carlo simulation to benchmark our test results against test results obtained on randomly selected non-event days (i.e., test results under the null hypothesis). Comparing the results between non-event and event days enables us to rule out the possibility that the statistical relations we document are a general phenomenon not specific to the market's reaction to governance regulation. The results of this analysis suggest that the relations we find between governance variables and event returns are unique to the governance regulatory events that we examine.

Collectively, we find robust evidence of a negative stock price reaction for firms whose governance practices would be most altered by the proposed regulations. The results support the notion that the proposed governance regulations harm shareholders of affected firms. However,

the results do not rule out the possibility that there exists some alternative form of corporate governance regulation that is value increasing for shareholders.

The remainder of the paper proceeds as follows. Section 2 discusses the related prior literature and develops our hypotheses. Section 3 identifies and describes the regulatory and legislative events examined in this study. Section 4 discusses the sample and measurement of key variables. Section 5 describes the research design. Section 6 presents results. Section 7 discusses our sensitivity tests, and Section 8 concludes.

2. Literature review and hypothesis development

In this section we develop our hypotheses in the context of prior research relating to executive compensation, proxy access, and staggered boards and CEO-chairman duality.

2.1. Executive pay

A considerable empirical literature examines the determinants of CEO compensation and the impact on CEO compensation on shareholder value [see [Murphy \(1999\)](#) for a review]. Some of these studies suggest that existing compensation practices amount to rent extraction. For example, [Core, Holthausen, and Larcker \(1999\)](#) find that the portion of CEO pay unrelated to economic determinants is related to weak corporate governance and inferior future operating and stock performance. Congress, activist investors, and the general public take a similar view and have expressed considerable outrage regarding CEO compensation packages. One possible reason for this outrage is that, in the US, shareholders do not have a direct vote on executive pay, and although a few companies have voluntarily adopted non-binding "say on pay" measures, the vast majority has not.⁷

[Ertimur, Ferri, and Muslu \(2009\)](#) examine the impact of non-binding "say on pay" votes on CEO pay. They find the voluntary adoption of the non-binding "say on pay" proposals by the firm is very low unless the proposals received the majority of shareholder votes. More importantly, they find non-binding "say on pay" proposals are associated with a \$2.3 million reduction in CEO pay, but only when proxy proposals are initiated by institutional investors. [Cai and Walkling \(2009\)](#) examine shareholder returns to the passage of the Say on Pay Bill of 2007 by the US House of Representatives (April 20, 2007). They find some evidence that share prices for firms with high excess compensation reacted in a positive manner to the regulatory announcement. If shareholders view existing pay practices as costly, we expect the market reaction to regulation limiting executive pay and requiring mandatory

⁷ This contrasts with the UK which passed legislation in 2002 that mandated annual nonbinding votes on executive compensation. US companies that voluntarily adopt non-binding "say on pay" votes include: Aflac, H&R Block, Jackson Hewitt, Littlefield, RiskMetrics Group, and Zales in 2008 and Blockbuster, Hewlett-Packard, Ingersoll Rand, Intel, MBIA, Motorola, Par Pharmaceutical, Tech Data, and Verizon in 2009.

“say on pay” votes (i.e., *Executive Pay Events*) will be positive and increasing in the level of CEO pay. Moreover, under this scenario, we expect the market reaction to regulation giving shareholders increased access to the proxy process (i.e., *Proxy Access Events*) will also be increasing in the level of CEO pay.

Another view of existing pay practices is that they are value-maximizing for shareholders [see Core, Guay, and Larcker (2003) for a review]. It is possible that the board of directors is effectively monitoring and compensating managers in a way that maximizes shareholder wealth. In this case, regulating executive compensation will lead to an efficiency loss. Similarly, increasing shareholder control of the proxy process will either not affect compensation, because investors recognize that existing contractual arrangements are value-maximizing, or result in less efficient compensation contracts, because self-interested large blockholders could use their increased proxy power to influence firm policies in a manner inconsistent with long-term value maximization. Thus, if shareholders view existing pay practices as value-maximizing, we expect the market reaction to executive pay regulation (i.e., *Executive Pay Events*) will be decreasing in the level of CEO pay and the market reaction to regulation giving shareholders increased control over the proxy process (i.e., *Proxy Access Events*) will be unrelated or decreasing in the level of CEO pay.

2.2. Proxy access

The term “proxy access” (popularly labeled as “shareholder democracy”) in the recent regulatory debate is related to the idea that shareholders could require the corporation to include in the proxy statement a director (or slate of directors) nominated by shareholders to run against incumbent board members. There are very few examples of firms voluntarily adopting this type of proxy access.⁸

Bebchuk (2005) argues that proxy proposals are an important mechanism for disciplining managers. The key assumption for this notion to be reasonable is that shareholders are knowledgeable about the correct governance choices and that the agenda of the large shareholders is consistent with long-term value maximization. Under this scenario, giving shareholders greater proxy access should produce an increase in shareholder value because governance choices made by self-interested managers are removed. If existing governance practices are characterized by rent extraction and if large blockholders are expected to act in the interests of shareholder

wealth-maximization, regulation that gives increased proxy access to shareholders (shareholder coalitions) with ownership stakes of 1% or more (i.e., *Proxy Access Events*) should result in the removal of any existing governance practices that are harmful to shareholders. Under this view of proxy access regulation, we expect the market’s reaction to proxy access regulation to be positive, increasing in the number of institutional investors (institutional investor coalitions) with ownership stakes of 1% or more, increasing in CEO compensation, and increasing in governance provisions commonly thought to be costly to shareholders (e.g., staggered boards and CEO-chairman duality).

However, there is considerable debate about the merits of increasing proxy access and the validity of the above assumptions. For example, SEC commissioner Troy A. Paredes notes that “as a practical matter, public company shareholders are not well-positioned to run the enterprises in which they invest” (Paredes, 2009).⁹ If this notion is correct, shareholders may have the right intention, but not the knowledge about the firm that is critical for selecting appropriate board members or governance choices. Proxy access also creates the risk that shareholders will use the process to promote private agendas that impose costs on the corporation and other shareholders. Thus, if shareholders perceive that proxy access will create problems that cause the board to become ineffective, will transfer wealth from shareholders to special interests, or will give undue influence to blockholders or shareholder coalitions that might not act in the interest of value creation, we expect the market’s reaction to proxy access regulation to be negative and decreasing in the number of shareholders (shareholder coalitions) with ownership stakes of 1% or more.

2.3. Specific governance provisions

Prior research has examined several individual governance provisions. Two of the most actively researched provisions are staggered boards and CEO-chairman duality. Additionally, two of the proposed regulations that we study (the Shareholder Bill of Rights Act and Shareholder Empowerment Act) contain provisions that would ban, among others, staggered boards and CEO-chairman duality.

The important feature of a staggered board is that this board structure makes hostile takeover attempts more difficult. Bebchuk, Coates, and Subramanian (2002) examine merger activity between 1996 and 2000 and find no instances of a corporate raider gaining control of a staggered board through a proxy contest. Although most of the discussion regarding staggered boards focuses on managerial entrenchment, it is conceivable that staggered boards enable executives to improve shareholder value.¹⁰ For example, a firm may have developed a valuable product, but cannot credibly reveal this information to

⁸ In 2007, North Dakota passed a law that grants proxy access for shareholders of at least 5% of the company’s stock for at least two years. One example of a voluntary adopter of proxy access is RiskMetrics Group, Inc. This company has bylaws that, in addition to having certain procedural requirements, limit the proxy access to: one candidate per nominator per meeting and nominators who have owned 4% or more of the company’s stock for at least two years. In addition, any nominator whose candidate did not receive at least 25% of the votes cast in the corresponding shareholders meeting could not nominate further candidates for four years from the date of the shareholders meeting in question.

⁹ See <http://www.sec.gov/news/speech/2009/spch062309tap.htm>.

¹⁰ Jarrell and Poulsen (1987) find that institutional investors are less hostile to staggered boards relative to other takeover defenses.

the market because of proprietary costs (i.e., competitors can quickly mimic the product before gaining patent protection). If this firm happens to be the object of a takeover proposal, it will be in shareholder interests to provide managers with a device to defeat the change in control.

Daines and Klausner (2001) find that anti-takeover provisions (e.g., including staggered board) are common in the charters for initial public offerings, and conclude that these choices are most consistent with managerial entrenchment. Mayers and Smith (2005) find that mutual insurance company charters also frequently have provisions for a staggered board, even though it is virtually impossible for these firms to be acquired in a hostile takeover. They argue that staggered boards help to motivate directors to invest their human capital in the firm. Bebchuk and Cohen (2005) and Faleye (2007) correlate staggered boards with Tobin's Q and find a negative relation. Faleye (2007) also finds that the shareholder approval of a staggered board (de-staggering) produces an excess return of about -0.70% (1.00%) in the period surrounding the announcement and concludes that staggered boards "insulate top management from market discipline" (p. 528).¹¹ Thus, if shareholders view staggered boards as value decreasing, then we expect the market's reaction to regulation that bans staggered boards or provides shareholders with greater proxy access will be more positive for firms with staggered boards.

The second individual governance provision is CEO-chairman duality. The chairman of the board presides over board meetings, sets the agenda for each session, and significantly influences the content of the meetings. The chairman is also responsible for determining which individuals serve on committees and for ensuring that all resolutions and policies adopted by the board are implemented. In contrast, the CEO is responsible for making investment, financing, and operating decisions for the corporation. When the chairman and CEO roles are held by the same person (CEO-chairman duality), a significant amount of oversight and influence is consolidated in the hands of senior management. This outcome can occur either as a result of entrenchment (i.e., rent seeking behavior) or it could reflect the fact that duality results in more efficient decision making and enables the firm to execute strategic decisions in a timelier manner.

Consistent with the rent-seeking motivation, corporate governance rating agencies use duality as an input in their ratings models, and several activist shareholders blame duality as a factor contributing to long-term underperformance at target companies (e.g., Daines, Gow, and Larcker, 2010).¹² Rechner and Dalton (1991) find that operating performance of duality firms is significantly

lower than that of non-duality firms, while Brickley, Coles, and Jarrell (1997) find no evidence that duality is associated with lower firm performance, and argue that duality is efficient and consistent with shareholder interests.¹³ If shareholders view CEO-chairman duality as value decreasing, then we expect the market's reaction to regulation that either bans CEO-chairman duality or provides shareholders with greater proxy access will be more positive for firms in which the CEO is also chairman.

3. Legislative and regulatory changes focused on corporate governance

We compile an initial list of recent events related to corporate governance regulation by searching the Library of Congress and the SEC for all files with various permutations of the terms "executive compensation," "executive pay," and "corporate governance" over the time period from 2007 to 2009. Results were then supplemented with similar searches on LexisNexis and Factiva and complemented with reports from the CCH Financial Crisis News Center. We narrow the list of potential events by eliminating all events relating specifically to the financial industry (e.g., Cap Executive Pay Act of 2009), all events related to the Troubled Asset Relief Program (TARP) or other federal bailout monies (e.g., TARP Reform and Accountability Act of 2009), all regulations dealing exclusively with taxability of compensation (e.g., Ending Corporate Favors for Stock Options Act of 2007), and all events not directly related to specific legislative bills or potential regulatory action (e.g., eliminating commentary in the popular press).

For each regulation considered, we include both the date it is formally introduced and the day on which it first appears in the news.¹⁴ In all but one case, the Shareholder Right's Bill of 2009 sponsored by senator Charles Schumer, these events are the same day. In addition, for SEC deliberations, we include the day on which it first appears in the news that the SEC is considering new regulations, the day in which the proposed amendments are formalized, and the day in which the final ruling is made. This results in a series of 18 key regulatory events that relate to a combination of legislative bills and SEC regulations on the topic of economy-wide regulation of executive pay (eight events), proxy access (13 events), and specific governance provisions (three events). The events are detailed in Table 1.

¹¹ Based on Rule 14a-8, shareholders can use non-binding resolutions to motivate the board of directors to de-stagger. However, Bebchuk (2005) finds that few of the non-binding resolutions that were passed were put into place by the company.

¹² One of the key recommendations of the influential Cadbury Committee was the separation of the chairman and chief executive officer titles (non-duality) (see Cadbury, 1992). The majority of companies listed on the London Stock Exchange complied with this standard.

¹³ Grinstein and Valles Arellano (2008) examine the decision to move from a duality to a non-duality board structure. They find that, for the majority of cases, the split of the chairman and CEO roles was driven by succession issues (i.e., the outgoing chairman-CEO retained the title of chairman while his or her successor as CEO gained sufficient experience before assuming the chairmanship as well). For the rest, the outgoing chairman-CEO stepped down from both roles simultaneously, and the chairmanship was assumed by an independent director. At these companies, the appointment of an independent director was more likely to follow a period of poor operating performance.

¹⁴ If an event occurs on a non-trading day (e.g., a Saturday *Wall Street Journal* article on forthcoming legislation), we use returns for the next trading day.

Table 1

Description of regulatory and legislative events.

This table presents a description of the events examined in this study. Panel A presents events related to executive pay regulation and Panel B presents events related to proxy access regulation. Instances in which events relate to both executive pay and proxy access are noted as such and appear in Panel A. We compile an initial list of recent events related to corporate governance regulation by searching the Library of Congress and the Securities and Exchange Commission (SEC) for all files with various permutations of the terms “executive compensation,” “executive pay,” and “corporate governance.” Results were then supplemented with similar searches on LexisNexis and Factiva and complemented with reports from the CCH Financial Crisis News Center. We narrow the list of events by eliminating all events relating specifically to the financial industry, all events related to the Troubled Asset Relief Program (TARP) or other federal bailout monies, all regulations dealing exclusively with taxability of compensation, and all events not directly related to specific legislative bills or potential regulatory action. For each regulation considered, we include both the date it is formally introduced and the day on which it first appears in the news. For SEC deliberations, we include the day on which it first appears in the news that the SEC is considering new regulations, the day on which the proposed amendments are formalized, and the day on which the final ruling is made.

Event	Legislative or regulatory event (sponsor)	Description	Date	Effect on Pr(Regulation)	Pay regulation	Proxy access regulation
<i>Panel A: Executive pay related events</i>						
#1	Shareholder Vote on Executive Compensation Act (Rep. Barney Frank)	Introduced and first appears in news	3/1/2007	Increase	X	
#2	Shareholder Vote on Executive Compensation Act (Rep. Barney Frank)	Passes House	4/20/2007	Increase	X	
#3	Committee on Oversight and Governance Reform (Rep. Henry Waxman)	Hearing	3/7/2008	Increase	X	
#4	Corporate Executive Compensation Accountability and Transparency Act (Senate majority leader Henry Reid and Sen. Hillary Clinton)	Introduced and first appears in news	4/15/2008	Increase	X	
#5	Excessive Pay Capped Deduction Act and Shareholder Approval Act (Sen. Richard Durbin)	Introduced and first appears in news	5/7/2009	Increase	X	
#6	Shareholder Bill of Rights Act (Sen. Charles Schumer)	Article in WSJ	4/25/2009	Increase	X	X
#7	Shareholder Bill of Rights Act (Sen. Charles Schumer)	Introduced	5/19/2009	Increase	X	X
#8	Shareholder Empowerment Act (Rep. Gary Peters)	Introduced and first appears in news	6/12/2009	Increase	X	X
<i>Panel B: Proxy access related events</i>						
#9	SEC announces roundtable on proxy access	SEC action	4/24/2007	Increase		X
#10	SEC proposes amendments to Rule 14a8 and 14a8(i)(8)	SEC action	7/27/2007	Increase		X
#11	SEC issues final ruling on amendments to Rule 14a8	SEC action	11/28/2007	Decrease		X
#12	SEC issues final ruling on amendments to Rule 14a8(i)(8)	SEC action	12/6/2007	Decrease		X
#13	Delaware law amendment on voluntary proxy access	Introduced	3/10/2009	Decrease		X
#14	Delaware law amendment on voluntary proxy access	Passes House	3/18/2009	Decrease		X
#15	Delaware law amendment on voluntary proxy access	Passes Senate	4/8/2009	Decrease		X
#16	SEC considering amendments to Rule 14a-11	News wire	4/6/2009	Increase		X
#17	SEC votes on proposed amendments to Rule 14a-11	SEC action	5/20/2009	Increase		X
#18	SEC publishes draft of proposed amendments to Rule 14a-11	SEC action	6/10/2009	Increase		X

3.1. Executive pay

Beginning in early 2007, a variety of legislative events concerning executive pay began to appear. On March 1, 2007, HR 1257 (the Shareholder Vote on Executive Compensation Act) was introduced into the House of

Representatives by representative Barney Frank (Event #1). This bill required an annual non-binding shareholder vote on compensation paid to executives.¹⁵ It was ultimately passed

¹⁵ See <http://thomas.loc.gov/cgi-bin/query/z?c110:H.R.1257.RFS>.

by the House on April 20, 2007 and introduced into the Senate by then senator Barack Obama on the same day (Event #2).¹⁶ The committee on Oversight and Governmental Reform, chaired by representative Henry Waxman, held hearings on executive compensation on March 7, 2007 (Event #3). The focus of these hearings was on the “dramatically rising” level of CEO compensation and claim that CEO pay has “all upside and no downside.”¹⁷ Because Representative Waxman is a powerful and vocal critical of CEO compensation, this event strongly suggested potential congressional actions on executive pay and foreshadowed the passing of the Shareholder Vote on Executive Compensation Act in the House shortly thereafter. On April 15, 2008, Senate majority leader Harry Reid, on behalf of then senator Hillary Clinton introduced the Corporate Executive Compensation Accountability and Transparency Act (Event #4).¹⁸ This bill required an annual non-binding shareholder vote on compensation paid to executives as well as increased compensation disclosure and independence of compensation consultants. On May 7, 2009, senator Richard Durbin introduced both the Excessive Pay Capped Deduction Act of 2009 and the Excessive Pay Shareholder Approval Act of 2009 (Event #5).¹⁹ The former denies a tax deduction for total compensation to any employee that exceeds one hundred times the average compensation paid to all other employees, and the latter limits total compensation to one hundred times the average compensation for all employees unless at least 60% of the shareholders have voted to approve such compensation.

Each of these five events is primarily focused on executive compensation and is associated with an increase in the probability of executive compensation regulation. Three additional events contain provisions regarding regulation of executive pay, but as part of larger legislative initiatives to regulate governance. On April 25, 2009 the *Wall Street Journal* provided details (*Wall Street Journal*, 2009a, 2009b) on a forthcoming bill that Senator Schumer intended to introduce in the Senate (Event #6). Schumer subsequently introduced the Shareholder Bill of Rights Act of 2009 on May 19, 2009 (Event #7).²⁰ This bill required that all public companies hold an annual advisory vote on executive compensation, provide shareholders with an opportunity to vote on director candidates nominated by shareholders holding 1% or more, have a board chairman who is independent (i.e., ban CEO-chairman duality), elect all board members annually (i.e., ban staggered boards), require a majority (plurality) vote for directors in uncontested (contested) elections, and establish a “risk committee” composed entirely of independent directors. Finally, representative Gary Peters introduced the Shareholder Empowerment Act of 2009 into the House on June 12, 2009 (Event #8). This bill mandated that firms hold an annual advisory vote on executive compensation, provide

shareholders with an opportunity to vote on director candidates nominated by shareholders holding 1% or more, have a board chairman who is independent (i.e., bans CEO-chairman duality), require a majority (plurality) vote for directors in uncontested (contested) elections, use independent compensation consultants, develop and disclose clawback provisions, and improve disclosure of performance targets.²¹

3.2. Proxy access

Four primary events in 2007 involved proxy access or amendments to Rule 14a-8(i)(8), which relates to the nomination and election of members to the board of directors. The SEC officially announced it was considering amendments to Rule 14a8 and announced a roundtable discussion regarding proxy access on April 24, 2007 (Event #9).²² SEC chairman Christopher Cox indicated that “This roundtable will explore the relationship between the federal proxy rules and state corporation law, and pose questions to the participants about whether this relationship can be improved.”²³ On July 27, 2007, the commission published for comment the proposed amendment to Rule 14a-8(i)(8) (Event #10).²⁴ This document favored revisions to existing laws that would provide shareholders with an opportunity to place a proposal in a company’s proxy materials for a vote at an annual or special meeting of shareholders. These three events increased the probability of proxy access. However, on November 28, 2007 (Event #11) and December 6, 2007 (Events #12), the SEC published final rulings on Rule 14a-8 and Rule 14a-8(i)(8) that effectively provided a clearer interpretation of existing rules that codified but did not alter the status quo of proxy access regulation.²⁵ As the final ruling reinforced the status quo, these latter two events decreased the probability of proxy access regulations.²⁶

After Democratic victories at the polls for both the legislative and executive branches of government, proxy access (and other governance issues) became a central topic for regulatory and legislative reform. On March 10, 2009 (Event #13), in what is widely regarded as an attempt to preempt federal law, a bill was introduced into the Delaware House of Representatives to amend Title 8 of the Delaware code to allow corporations to voluntarily adopt bylaws permitting shareholder proxy access.²⁷ This bill was passed by the state House of Representatives on March 18, 2009 (Event #14) and the state Senate on April 8, 2009 (Event #15). Proxy access

¹⁶ See <http://thomas.loc.gov/cgi-bin/query/z?c110:S.1181.IS>.

¹⁷ See <http://oversight.house.gov/story.asp?ID=1762>.

¹⁸ See <http://thomas.loc.gov/cgi-bin/query/z?c110:S.2866.IS>.

¹⁹ See <http://thomas.loc.gov/cgi-bin/query/z?c111:S.1007.RCS>, and <http://thomas.loc.gov/cgi-bin/query/z?c111:S.1006.IS>.

²⁰ See http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111_cong_bills&docid=f:s1074is.txt.pdf.

²¹ See <http://www.opencongress.org/bill/111-h2861/text>.

²² See <http://www.sec.gov/news/press/2007/2007-71.htm>.

²³ See <http://www.sec.gov/news/press/2007/2007-71.htm>.

²⁴ See <http://www.sec.gov/rules/proposed/2007/34-56161.pdf>.

²⁵ See <http://www.sec.gov/rules/final/2007/34-56914.pdf>.

²⁶ It may be appropriate to slightly qualify this statement because SEC Chairman Christopher Cox stated “... I believe we can move forward and re-open this discussion in 2008 to consider how to strengthen the proxy rules to better vindicate the fundamental state law rights of shareholders to elect directors.” See <http://www.sec.gov/news/press/2007/2007-246.htm>.

²⁷ See <http://legis.delaware.gov/LIS/lis145.nsf/vwLegislation/HB+19?Opendocument>.

was already voluntarily prior to the Delaware law. In this regard, the Delaware amendment merely codified existing case law. This action by Delaware appears to be an attempt to shape proxy access regulation at the federal level (e.g., Brauer and Nathan, 2009). For example, in a 2009 comment letter to the SEC regarding federal proxy access regulation, the Delaware State Bar Association explicitly references “recent changes” to Delaware law as a reason that federal regulation of proxy access should not move forward.²⁸ Historically, the federal government has allowed the states to develop statutes controlling corporate governance. If a state such as Delaware (where a majority of publicly traded companies are incorporated) develops reasonable corporate governance statutes, the cost to the federal government of developing similar or stronger statutes (i.e., laws that would supersede state law) is higher. Thus, action taken by Delaware on a previously ambiguous statute could pre-empt or halt federal action on the same statute.²⁹ In this case, Delaware’s action to codify the status quo appears to have been an attempt to pre-empt forthcoming federal laws that would make proxy access mandatory. Thus, we consider the three Delaware events as decreasing the probability of proxy access regulation.

On April 6, 2009, in a speech at the Council of Institutional Investors, SEC chairwoman Mary Schapiro stated that the SEC intended to reconsider proxy access in the coming months (Event #16; see Wall Street Journal, 2009a, 2009b). Shortly thereafter, on May 20, 2009 the SEC voted to propose a comprehensive series of amendments to allow shareholders to nominate directors for election provided the shareholder(s) hold, at minimum, 1% ownership (Event #17).³⁰ On June 10, 2009, the SEC published a detailed draft of the proposed change (Event #18).³¹ The SEC proposals on proxy access are similar to the legislative proposals of Schumer and Peters and would make proxy access mandatory, superseding Delaware’s “voluntary law.”

4. Sample and variable measurement

4.1. Sample construction

Our tests require data on board structure, executive compensation, institutional ownership, daily stock returns, firm size, book-to-market ratio, and past returns. Our sample is constructed as the intersection of three different data files and consists of 46,683 firm-days pooled over 18 different events covering 3,451 individual firms.³²

²⁸ See <http://www.sec.gov/comments/s7-10-09/s71009-65.pdf>.

²⁹ Roe (2003) provides a detailed discussion of the complicated dynamics between Delaware statutes and the response of the federal government.

³⁰ See <http://www.sec.gov/news/press/2009/2009-116.htm>.

³¹ See <http://www.sec.gov/rules/proposed/2009/33-9046.pdf>.

³² An alternative to collecting board structure and executive compensation from Equilar is to collect such data from the Independent Regulatory Review Commission (IRRC) and ExecuComp. If we do not require coverage on Equilar, but instead require data on staggered boards from IRRC and data on CEO-chair duality and total compensation

Equilar. We collect data on CEO-chairman duality, the presence of a staggered board, CEO compensation, and the date of each proxy statement from Equilar Inc. The Equilar file contains detailed (non-missing) information about board structure, CEO compensation, and the date of the proxy filing for 4,856 firms from 2006 through 2008.

Thomson. We collect data on institutional ownership from the Thomson-Reuters database of 13-F filings, otherwise known as CDA/Spectrum. The Spectrum data file contains information on quarterly institutional holdings for all institutional investors with \$100 million or more under management.

CRSP/Compustat. We collect data on daily stock returns between January 2007 and June 2009 from the Center for Research in Security Prices (CRSP) Quarterly Updated daily stock file. We exclude financial firms, [Standard Industrial Classification (SIC) codes 6000 through 6999] because these firms are subject to additional executive pay and governance regulations related to the Troubled Asset Relief Program (TARP), and these bank-specific regulations often subsume the economy-wide regulations proposed in the events we study (e.g., limits to executive pay). We require market value and book value of equity as of the date of the proxy filing each year and return over the past six months.

4.2. Variable measurement and descriptive statistics

Testing our predictions requires daily measures of “excess” CEO pay, institutional ownership, and board structure. So as not to induce any look-ahead bias, we measure all variables as of the date their values first become publicly available. For example, we are careful to obtain our compensation data from the proxy statement that is dated immediately prior to the event of interest. This ensures that compensation data used in our tests are available to the market participants when the regulatory discussions occur.

Excess pay. Several of the bills that we examine define “excess” CEO pay as the difference between the CEO’s pay and one hundred times the average pay of all employees at the firm (e.g., Excessive Pay Shareholder Approval Act of 2009). While data on the average pay of all employees at the firm are not readily available, the average pay of the firm’s employees likely varies by industry (e.g., salaries in consumer sales versus research intensive industries) and year (e.g., bonuses in boom years versus recessions). In addition, prior work suggests the primary determinant of CEO pay is the pay of the firm’s size and industry peers (e.g., Albuquerque, 2009; Albuquerque, De Franco, and Verdi, 2009) and that the popular press uses size and industry benchmarks when judging excess pay (e.g., Core, Guay, and Larcker, 2008). Thus, we compute “excess” CEO pay, *ExcessPay*, as the natural logarithm of total annual pay for the CEO measured in millions, less the natural logarithm of median pay in that year for all firms in the

(footnote continued)

from ExecuComp, the sample is reduced to 1,396 firms. Thus, our sample is considerably larger than samples constructed from more traditional data sources thus mitigating concerns about sample selection bias.

same Fama-French industry group and size quintile.³³ Because CEO compensation data are only available annually, on day t , *ExcessPay* is measured as of the latest proxy statement prior to day t .

Institutional ownership. Many of the regulations that we examine specify a minimum fractional ownership at which shareholders can nominate directors and have such directors included in proxy elections. For example, the amendments to Rule 14a-11 voted on by the SEC on May 20, 2009 specify a 1% minimum ownership for shareholders to nominate directors and have such directors included in the proxy elections. In addition, the amendment allows shareholders to form a coalition and pool their ownership interests to meet the 1% threshold. Accordingly, we compute two measures of ownership. The first measure, *NLargeBlock*, is the number of institutions with 1% or more ownership. Under Rule 14a-11, each of these blockholders would have the right to nominate directors to run against the existing board in the proxy elections. The second measure, *NSmallCoalitions*, is the number of possible small institutional investor coalitions that would collectively control 1% or more of shares outstanding.³⁴ To control for skewness in their distributions, *NLargeBlock* and *NSmallCoalitions* are transformed by adding one to the observed values and taking the natural logarithm.³⁵ Because 13-F ownership data are updated quarterly, on day t , *NLargeBlock* and *NSmallCoalitions* are measured as of the end of the prior quarter.

Board structure. Several of the regulations that we examine ban specific board structures. For example, the Shareholder Bill of Rights Act and the Shareholder Empowerment Act ban staggered boards and CEO-chairman duality. We measure CEO-chairman duality using an indicator variable, *IsChair* that takes the value one if the CEO or any corporate insider (including former CEOs) are chairman of the board and zero otherwise.³⁶ We measure staggered board using an indicator variable, *Staggered*, that takes the value one if the firm has a staggered board and zero otherwise. Because data on these governance provisions are available only annually, on day t , *IsChair*

and *Staggered* are measured as of the latest proxy statement prior to day t .

Table 2 presents descriptive statistics for our sample. Table 2 shows that our sample has 3,451 firms and 46,683 firm-days compared with 4,894 non-financial firms and 73,870 firm-days with comparable non-governance data on CRSP/Compustat over our 18 events. Panel A reports the industry distribution of firms in our sample relative to the industry distribution of non-financial firms on CRSP/Compustat. Panel A shows that our sample spans many sectors of the economy and has an industry distribution that is very similar to CRSP/Compustat. Panel B reports descriptive statistics for various firm characteristics across all firm-days in our sample. Panel B shows that mean (median) market capitalization for our sample is \$4.18 (\$0.60) billion, compared with the \$2.97 (\$0.33) billion for the CRSP/Compustat sample.³⁷

Panel C reports descriptive statistics for the various governance variables for our sample.

Panel C shows that mean (median) total pay is \$3.99 (\$2.03) million and mean (median) pay of the firm's size and industry peers is \$2.78 (\$1.79) million.³⁸ The mean (median) value of *NLargeBlock* is 2.64 (2.83), and the mean (median) value of *NSmallCoalitions* is 4.51 (5.03). This suggests institutional ownership is not concentrated among large blockholders, but that on average there are a large number of small institutional investors. Additionally, Panel C reports that 49% of observations in our sample pertain to firms with staggered boards and 64% pertain to firms with a corporate insider as chairman of the board.

5. Research design

5.1. Cross-sectional analysis

We first examine how investors respond to each of the regulatory and legislative events by examining abnormal returns on the day of the event. For each firm-day we compute abnormal returns (*AbRet*) relative to the CRSP value-weighted market index.³⁹ As with all event studies, these abnormal return tests are joint tests that the market revised its priors about the probability of regulation (i.e., event was not fully anticipated) and the regulation in question, on average, affects shareholder wealth.

We next test our predictions regarding cross-sectional variation in the market's reaction to the legislative and

³³ Within each of the Fama-French 12 industry groups firms are ranked into size quintiles each year, for a total of 60 (5×12) groups each year. Total annual pay is computed as the sum of salary, annual bonus, Black-Scholes value of stock options (using FAS 123 R parameters), expected value of long-term performance plans (as disclosed in the proxy statement), and expected value of restricted stock grants.

³⁴ We define small institutional investors as those holding less than 1% of shares outstanding. For simplicity, we tabulate the number of possible coalitions formed by two small institutional investors. Results are qualitatively unchanged if we consider the number of possible coalitions of size three, four, or five. For computational simplicity, we do not consider the number of possible coalition sizes above five.

³⁵ We use a natural logarithm transformation because we conjecture that the marginal effect of one additional blockholder is declining in the number of blockholders, and the distribution of the number of possible coalitions is highly right-skewed (e.g., mean of 234, 25th percentile of 34, median of 152, and 75th percentile of 357).

³⁶ Strictly speaking, as discussed in Section 3, the Shareholder Bill of Rights Act of 2009 prohibits all insiders, including the CEO, from serving as chairman.

³⁷ Our sample captures about 99% of the market capitalization of all non-financial firms on the CRSP/Compustat file with data over the sample period.

³⁸ The standard deviation of *TotalPay* is \$6.1 million, suggesting the presence of large outliers. However, *ExcessPay*, our variable of interest, is much better behaved. The 25th and 75th percentiles are approximately symmetric around the median, and the median of the distribution is approximately the mean.

³⁹ Throughout our analysis, abnormal returns are computed using market-adjusted returns from CRSP that exclude dividends and distributions (i.e., *RET* less *VWRET*). This is done to ensure that our results are attributable to the events in question instead of to other corporate events occurring at the firm. All inferences are unchanged if we include dividends and distributions.

Table 2

Descriptive statistics.

This table presents descriptive statistics for firms in our sample. Our sample is constructed from the intersection of Equilar [compensation, Chief Executive Officer (CEO) duality, and staggered board data], Thompson-Reuters (institutional holdings data), and Center for Research in Security Prices (CRSP)/Compustat (accounting and stock price data) for the time period January 2007 to June 2009 excluding financial firms [standard industrial classification (SIC) codes 6000 through 6999]. Panel A reports the industry distribution of sample observations, classified by Fama-French 12 industry groups, and Panel B reports descriptive statistics for selected firm characteristics across all events in our sample. For comparison, Panels A and B also report the industry distribution of firms and descriptive statistics across all events for non-financial firms on the merged CRSP/Compustat file with comparable data on returns, market values, and book values. Panel C reports the distribution of the governance variables used in our analysis. *MV* is market value measured in millions, *BV* is book value of equity measured in millions, *Size* is the natural log of market value, *BM* is the ratio of book value to market value, *Momentum* is the market-adjusted return over the prior six months, *Staggered* is an indicator variable equal to one if the firm has a staggered board and zero otherwise, *IsChair* is an indicator variable equal to one if the CEO or any other insider is chairman of the board and zero otherwise, *TotalPay* is total annual pay for the CEO (in thousands) measured as the sum of salary, annual bonus, Black-Scholes value of stock options (using SFAS 123R parameters), expected value of long-term performance plans (as disclosed in the proxy statement), and expected value of restricted stock grants. *PeerGroupPay* is the median total annual pay for all CEOs in firm's size and industry peer group (in thousands). *ExcessPay* is the natural logarithm of *TotalPay* less the natural logarithm of *PeerGroupPay*. *NLargeBlock* is the log of one plus the number of institutions holding at least 1% of shares outstanding, and *NSmallCoalitions* is the natural log of one plus number of small institutional investor coalitions of size two that hold combined ownership of at least 1%.

Panel A: Industry classification <i>Fama and French Industry Groups</i>			Percent of Sample 3,451 firms	Percent of CRSP/Compustat 4,894 firms
1. Consumer Non-Durables			6.00	5.67
2. Consumer Durables			2.61	2.62
3. Manufacturing			10.87	10.03
4. Energy			5.59	5.80
5. Chemicals and Allied Products			2.67	2.39
6. Computers & Business Equipment			20.86	21.29
7. Telephone and Television Transmission			3.91	4.39
8. Utilities			3.56	3.35
9. Wholesale, Retail, Laundries, Repair Shops			12.32	10.46
10. Healthcare, Medical Equipment, and Drugs			14.26	13.83
11. Finance			0.00	0.00
12. Other			17.36	20.17

Panel B: Firm characteristics						
Variable	Sample (46,683 firm days)			CRSP/Compustat (73,870 firm days)		
	Mean	Median	Standard deviation	Mean	Median	Standard deviation
MV (millions of dollars)	4,180.90	603.44	17,548.90	2,977.50	330.06	14,203.69
BV (millions of dollars)	1,594.03	268.91	6,271.62	1,738.42	181.00	7,373.14
Size	6.47	6.40	1.84	5.80	5.80	2.08
BM	0.62	0.47	0.69	1.74	0.56	11.50
Momentum	1.58	-2.36	36.35	3.18	-2.04	50.22

Panel C: Distribution of governance variables					
Variable	Mean	Standard Deviation	25th percentile	Median	75th percentile
Staggered	0.49	0.50	0.00	0.00	1.00
IsChair	0.64	0.48	0.00	1.00	1.00
TotalPay	3,998.61	6,170.13	924.70	2,031.17	4,744.71
PeerGroupPay	2,779.75	2,238.99	1,094.67	1,788.88	4,725.55
ExcessPay	0.04	0.83	-0.44	0.05	0.54
NLargeBlock	2.64	0.62	2.40	2.83	3.09
NSmallCoalitions	4.51	1.81	3.56	5.03	5.88

regulatory events. In particular, we examine whether the market's reaction to each event is associated with the firm's existing pay practices, institutional ownership, and board structure. We test our predictions by estimating the following regression for each event:

$$\begin{aligned}
 AbRet_i = & \delta_0 + \delta_1 Staggered_i + \delta_2 IsChair_i + \delta_3 ExcessPay_i \\
 & + \delta_4 NLargeBlock_i + \delta_5 NSmallCoalitions_i \\
 & + \theta Controls + \varepsilon_i
 \end{aligned} \quad (1)$$

where *AbRet* is the abnormal return for the firm *i* on the day of the event, *Staggered*, *IsChair*, *ExcessPay*, *NLargeBlock*, and *NSmallCoalitions* are as previously defined; and

Controls is a vector of control variables including *Size*, *BM*, and *Momentum*.⁴⁰ *Size* is the natural logarithm of market value (in millions) measured as of the latest proxy filing prior to day *t*, *BM* is the ratio of book value to market value as of the latest proxy filing prior to day *t*, and *Momentum* is the market-adjusted return over the prior six months.

⁴⁰ To control for outliers, in estimating our regressions we eliminate observations with studentized residuals greater than three in absolute value.

5.2. Pooled multi-event analysis

Our initial tests examine the market reaction to each event and whether the reaction to each event varies cross-sectionally with the firm's existing governance practices. While these tests provide insight on the shareholder wealth effects of individual legislative or regulatory events, we next examine the average effect of legislative and regulatory action pooling across the various events. Such analysis is potentially insightful, because slight variations in the markets reaction that are otherwise undetected by our event-specific analysis could occur with sufficient consistency across multiple events so as to be detected by our pooled multi-event analysis. Accordingly, we draw our inferences primarily from the results of our pooled analysis.

We examine the average effect of events relating to executive pay (*Executive Pay Events*, events #1 through #8), events relating to proxy access (*Proxy Access Events*, events #6 through #18), events pertaining to actions taken only by the legislature (*Legislative Events*, events #1 through #8 and #13 through #15), and events pertaining to actions taken only by regulators (*Regulatory Events*, events #9 through #12 and #16 through #18). Because actions taken by regulatory bodies such as the SEC are not subject to direct legislative or executive vote, they are implementable in a more timely fashion and are likely to be taken more seriously by the market (i.e., increased probability of action). Thus, testing the market's reaction separately for legislative and regulatory actions allows us to examine which actions the market views as being more credible with regard to regulatory shifts.

Pooling across multiple events we re-estimate Eq. (1):

$$\begin{aligned} AbRet_{i,t} = & \delta_0 + \delta_1 Staggered_{i,t} + \delta_2 IsChair_{i,t} + \delta_3 ExcessPay_{i,t} \\ & + \delta_4 NLargeBlock_{i,t} + \delta_5 NSmallCoalitions_{i,t} \\ & + \theta Controls + \varepsilon_{i,t}. \end{aligned} \quad (2)$$

In this pooled specification, observations vary by firm (i) and event (t), such that we have repeat observations on the same date (t) and the same firm (i).⁴¹ The former poses a problem for statistical inference, because it is well known that returns are cross-sectionally correlated. To correct for cross-sectional dependence in our pooled regressions, standard errors are clustered by date (e.g., Petersen, 2009). Clustering standard errors in this manner allows for correlation among observations within a given day, but assumes independence across days (i.e., serial independence). The latter is generally not problematic for statistical inference in this setting, as returns are serially uncorrelated in an efficient market, and we have included past returns directly in the regression model.⁴²

⁴¹ Because we are pooling across multiple events, we multiply abnormal returns by negative one for those events associated with a decrease in the probability of regulation (e.g., events #11 through #15). A caveat to our pooled tests is that the broad selection of events is likely to include some days with trivial market reactions. Averaging material events with what are essentially immaterial events reduces the power of our pooled tests.

⁴² Results are unaffected if standard errors are clustered by both firm and date.

5.3. Monte Carlo simulation

Our tests are premised on the notion that, absent legislative and regulatory actions, daily stock returns are unrelated to our governance variables. That is, we are operating under the null hypothesis that, absent legislative or regulatory action, the coefficient on the governance variables is zero. However, an important alternative consideration is that the relations we document between governance variables and daily returns are the result of test misspecification or some omitted determinant of the cross-section of returns that is correlated with governance (e.g., Gompers, Ishii, and Metrick, 2003; Core, Guay, and Rusticus, 2006; Bebchuk, Cohen, and Ferrell, 2009; and Johnson, Moorman, and Sorescu, 2009). If this is the case, we would expect governance variables to be related to daily returns even in the absence of legislative or regulatory actions and that the sign of the relation between the governance variables and daily returns is the same across all of the events.

To address this concern, we simulate what our results would be under the null hypothesis that the events we examine are unrelated to governance regulation. For each group of N events (see Section 5.2) we randomly select N non-event days from January 2007 to June 2009. We then re-estimate Eq. (2) on these random non-event days. We iterate this procedure one thousand times and retain coefficient estimates from each of the iterations.

Rather than test whether the coefficients in Eq. (2) are different from zero, we test whether they are different from the average non-event day coefficients. Specifically, we test whether the coefficients for the event day group are significantly different from the average of the one thousand estimated coefficients for the non-event day group using the empirical distribution of the one thousand non-event coefficients. This test amounts to a difference-in-difference estimator. That is, we assess whether abnormal returns on a given event day vary cross-sectionally with certain governance variables (i.e., the difference in returns between firms with and without staggered boards), and then assess whether this variation is significantly different between event and non-event days. Comparing the result between non-event and event days enables us to rule out the possibility that what we document is a general phenomenon not specific to the market's reaction to governance regulation. Thus, we control for any temporally constant relation between abnormal returns and the variables of interest (i.e., the sort of relation one would expect if coefficients were biased or the result of an omitted variable).

6. Results

6.1. Executive pay regulation

Panel A of Table 3 shows the abnormal returns to each of the eight events related to executive pay regulation. Because our sample captures most of the market, we view these abnormal returns as purely descriptive. Three of

Table 3

Market reaction to executive pay events.

This table presents results from estimating the market reaction to eight events dates related to the regulation of executive pay (see Table 1). Panel A presents the average abnormal return on the day of each event, in which the abnormal return for each firm is computed relative to the Center for Research in Security Prices (CRSP) value-weighted market index. Panel B presents results from a regression of abnormal returns on the day of the event on various governance and control variables. *Size* is the natural log of market value, *BM* is the ratio of book value to market value, *Momentum* is the market adjusted return over the prior six months, *Staggered* is an indicator variable equal to one if the firm has a staggered board and zero otherwise, *IsChair* is an indicator variable equal to one if the chief executive officer (CEO) or any corporate insider is chairman of the board and zero otherwise, *ExcessPay* is the natural logarithm of total annual pay for the CEO (measured in millions) less the natural logarithm of median total annual pay for all CEOs in firm's size and industry peer group, *NLargeBlock* is the natural log of one plus the number of institutions holding at least 1% of shares outstanding, and *NSmallCoalitions* is the natural log of one plus number of small institutional investor coalitions of size two that hold combined ownership of at least 1%. Heteroskedastic-robust *t*-statistics appear in parentheses. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.10 level (two-tail), respectively.

Variable	Event #1	Event #2	Event #3	Event #4	Event #5	Event #6	Event #7	Event #8
<i>Panel A: Event day returns</i>								
$\Delta\text{Pr}(\text{Regulation})$	Increase	Increase	Increase	Increase	Increase	Increase	Increase	Increase
<i>Abn. Ret.</i>	-0.16***	0.05	-0.10	-0.24***	0.32	-0.07	0.70***	-0.10
<i>t</i> -statistic	(-3.11)	(1.08)	(-1.32)	(-3.40)	(1.17)	(-0.63)	(8.33)	(-1.27)
<i>Panel B: Cross-sectional variation in event day returns</i>								
$\Delta\text{Pr}(\text{Regulation})$	Increase	Increase	Increase	Increase	Increase	Increase	Increase	Increase
Governance variables								
<i>Staggered</i>	0.00 (0.06)	0.14** (2.28)	0.05 (0.42)	-0.20* (-1.88)	0.13 (0.60)	-0.20 (-1.28)	-0.10 (-0.77)	0.10 (0.87)
<i>IsChair</i>	0.23*** (2.94)	-0.02 (-0.35)	0.02 (0.13)	-0.17 (-1.44)	-0.21 (-0.90)	0.04 (0.23)	-0.09 (-0.67)	0.12 (1.03)
<i>ExcessPay</i>	-0.03 (-0.72)	-0.04 (-0.90)	-0.00 (-0.05)	-0.04 (-0.66)	-0.00 (-0.03)	-0.09 (-0.90)	0.05 (0.64)	-0.16** (-2.34)
<i>NLargeBlock</i>	-0.05 (-0.56)	0.31*** (2.97)	0.61*** (3.60)	0.07 (0.43)	-0.84*** (-2.69)	-0.41* (-1.85)	-0.26 (-1.51)	0.06 (0.35)
<i>NSmallCoalitions</i>	-0.00 (-0.04)	0.04 (0.93)	-0.10 (-1.47)	0.17*** (2.72)	-0.12 (-0.96)	-0.08 (-0.88)	0.00 (0.01)	-0.02 (-0.29)
Control variables								
<i>Size</i>	0.11*** (4.02)	0.01 (0.22)	0.04 (0.99)	-0.05 (-1.16)	-0.02 (-0.18)	-0.02 (-0.26)	0.13*** (2.60)	0.11** (2.40)
<i>BM</i>	0.40*** (3.26)	0.06 (0.57)	0.70*** (3.34)	0.33* (1.72)	-0.28 (-1.54)	0.04 (0.28)	0.30*** (3.44)	-0.29*** (-3.6)
<i>Momentum</i>	0.03 (0.21)	0.05 (0.35)	-0.57** (-2.41)	1.38*** (5.97)	-0.47 (-1.35)	3.10*** (9.45)	0.28 (1.55)	-0.36*** (-2.98)
<i>F</i>	5.09	5.42	4.31	8.13	4.42	16.06	2.73	8.28
<i>N</i>	2,701	2,629	2,368	2,472	2,731	2,676	2,728	2,715

the eight events have a statistically significant market reaction ($p < 0.10$, two-tail). Two of the three significant market reactions are negative. Specifically, the introduction of the Shareholder Vote on Executive Compensation Act is associated with an average abnormal return of -0.16% (*t*-statistic of -3.11), the introduction of the Corporate Executive Compensation Accountability and Transparency Act is associated with an abnormal return of -0.24% (*t*-statistic of -3.40), and the introduction of the Shareholder Bill of Rights Act is associated with an abnormal return of 0.70% (*t*-statistic of 8.33).

The more informative results are contained in Panel B of Table 3, which presents the coefficient estimates for Eq. (1) on each of the eight event days. Seven of the eight events have a negative coefficient on *ExcessPay*, and one of these coefficients is statistically significant. Specifically, the statistically negative result occurs for the introduction of the Shareholder Empowerment Act (*t*-statistic of -2.34). The significance and sign of the

coefficients on the remaining governance variables are mixed.⁴³

6.2. Proxy access regulation

Panel A of Table 4 shows the abnormal returns to each of the ten events related to proxy access regulation. Five of these events are related to increases in regulation and five to decreases. Of the five that are related to increases in regulation, three are negative. Of the five that are related to decreases in mandatory proxy access regulation, all five

⁴³ Because these eight events contain information about regulating executive compensation, we expect the coefficients on *ExcessPay* are of primary interest. Consistent with event-specific regressions not having sufficient power to detect slight variations in returns that occur consistently across events, Panel B of Table 5 shows that, when pooling across all eight events related to executive pay, the relation is negative and statistically significant.

are positive and four are highly significant ($p < 0.01$, two-tail). Specifically, the SEC announcement that the final ruling on amendments to Rule 14a8(i)(8) would maintain the status quo is associated with an average abnormal return of 0.66 (t -statistic of 8.94), and the pre-emptive Delaware law codifying the status quo is associated with an average abnormal return of 0.70% (t -statistic of 3.90) on introduction, 2.12% (t -statistic of 2.60) when it passes the Delaware House, and 1.16% (t -statistic of 11.69) when it passes the Senate.

Panel B of Table 4, presents the results from estimating Eq. (1) on each of the event days. Six of the ten events have a significant coefficient on *NLargeBlock*, and six of the ten have a significant coefficient on *NSmallCoalitions*. In all six cases, the coefficients on *NLargeBlock* are of the opposite sign as the change in the probability of regulation (t -statistics of -2.26 , 1.93 , 2.51 , 2.65 , -2.19 , and -2.11 , respectively). Further, in five of the six cases, the coefficients on *NSmallCoalitions* are also of the opposite sign as the change in the probability of regulation (t -statistics of 4.62 , 5.37 , 2.89 , 2.51 , and -1.76 , respectively). Some of the most pronounced results are observed for events #11 to #15, in which either the SEC changed its

views about proxy access or Delaware adopted the status quo on proxy access. With regard to increased proxy access regulation, the announcement of the proposed amendment to Rule 14a8 and 14a8(i)(8) (Event #10), the announcement that the SEC is considering amendments to Rule 14a-11 (Event #16), and the SEC publishes draft of proposed amendments to Rule 14a-11 (Event #18) have significant negative coefficients on *NLargeBlock* (t -statistics of -2.26 , -2.19 , and -2.11 , respectively).

6.3. Pooled multi-event analysis

Table 5 presents results pooling across different categories of events. Three findings are worth noting. First, on average, we find an insignificant reaction to all 18 events (t -statistic of -1.62). However, on average, the market reaction to all regulation events is decreasing in the number of large blockholders (t -statistic of -3.91 for *NLargeBlock*) and the number of small institutional coalitions (t -statistic of -2.32 for *NSmallCoalitions*). In addition, we find no relation between the market reaction and *ExcessPay* (t -statistic of -1.49) or

Table 4

Market reaction to proxy access events.

This table presents results from estimating the market reaction to various events related to the regulation of proxy access (see Table 1). Panel A presents the average abnormal return on the day of each event, where the abnormal return for each firm is computed relative to the Center for Research in Security Prices (CRSP) value-weighted market index. Panel B presents results from a regression of abnormal returns on the day of the event on various governance and control variables. *Size* is the natural log of market value, *BM* is the ratio of book value to market value, *Momentum* is the market-adjusted return over the prior six months, *Staggered* is an indicator variable equal one if the firm has a staggered board and zero otherwise, *IsChair* is an indicator variable equal to one if the chief executive officer (CEO) or any corporate insider is chairman of the board and zero otherwise, *ExcessPay* is the natural logarithm of total annual pay for the CEO (measured in millions) less the natural logarithm of median total annual pay for all CEOs in firm's size and industry peer group, *NLargeBlock* is the natural log of one plus the number of institutions holding at least 1% of shares outstanding, and *NSmallCoalitions* is the natural log of one plus number of small institutional investor coalitions of size two that hold combined ownership of at least 1%. Heteroskedastic-robust t -statistics appear in parentheses. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.10 level (two-tail) respectively.

	Event #9	Event #10	Event #11	Event #12	Event #13	Event #14	Event #15	Event #16	Event #17	Event #18
<i>Panel A: Event day returns</i>										
$\Delta\text{Pr}(\text{Regulation})$	Increase	Increase	Decrease	Decrease	Decrease	Decrease	Decrease	Increase	Increase	Increase
<i>Abn. Ret.</i>	0.07	-0.07	0.01	0.66***	0.70***	2.12***	1.16***	-0.08	0.03	-0.05
<i>t</i> -statistic	(1.46)	(-1.19)	(0.18)	(8.94)	(3.90)	(2.60)	(11.69)	(-0.50)	(0.36)	(-0.57)
<i>Panel B: Cross-sectional variation in event day returns</i>										
$\Delta\text{Pr}(\text{Regulation})$	Increase	Increase	Decrease	Decrease	Decrease	Decrease	Decrease	Increase	Increase	Increase
Governance variables										
<i>Staggered</i>	0.03	-0.12	0.07	0.14	0.50**	-0.04	0.08	-0.28*	0.06	0.05
	(0.45)	(-1.30)	(0.62)	(1.24)	(2.01)	(-0.12)	(0.58)	(-1.80)	(0.53)	(0.45)
<i>IsChair</i>	0.08	0.02	0.25**	0.09	0.15	-0.20	-0.17	0.42**	-0.05	-0.11
	(1.08)	(0.20)	(2.00)	(0.70)	(0.55)	(-0.61)	(-1.08)	(2.55)	(-0.39)	(-0.85)
<i>ExcessPay</i>	-0.03	-0.14**	-0.15**	0.12	-0.25*	0.36**	0.18**	0.28***	-0.06	-0.10
	(-0.66)	(-2.60)	(-2.03)	(1.62)	(-1.71)	(2.06)	(2.04)	(3.00)	(-0.82)	(-1.39)
<i>NLargeBlock</i>	-0.12	-0.30**	0.33*	0.43**	0.33	0.41	0.55***	-0.53**	-0.26	-0.36**
	(-1.21)	(-2.26)	(1.93)	(2.51)	(0.92)	(1.01)	(2.65)	(-2.19)	(-1.54)	(-2.11)
<i>NSmallCoalitions</i>	-0.01	-0.06	0.32***	0.38***	0.41***	0.22	0.21**	-0.09	-0.12*	0.16**
	(-0.28)	(-1.07)	(4.62)	(5.37)	(2.89)	(1.32)	(2.51)	(-0.96)	(-1.76)	(2.44)
Control variables										
<i>Size</i>	0.06*	0.01	-0.15***	-0.31***	0.17*	-0.17	-0.17***	0.05	0.14***	0.13***
	(2.10)	(0.23)	(-3.28)	(-6.87)	(1.70)	(-1.37)	(-2.97)	(0.79)	(2.94)	(2.66)
<i>BM</i>	-0.06	-0.18	-0.68***	-0.21	0.57*	0.87*	-0.13	0.13	0.1	0.13
	(-0.46)	(-1.09)	(-2.92)	(-0.92)	(1.77)	(1.72)	(-0.88)	(0.80)	(1.24)	(1.42)
<i>Momentum</i>	-0.25*	-0.46***	0.29	-1.10***	-8.05***	-5.63***	-1.52***	0.43	0.09	0.05
	(-1.73)	(-2.27)	(1.30)	(-4.49)	(-14.43)	(-7.63)	(-5.10)	(1.41)	(0.50)	(0.42)
<i>F</i>	2.10	5.24	11.82	15.76	35.44	10.21	10.93	5.08	2.60	4.31
<i>N</i>	2,614	2,488	2,378	2,374	2,575	2,583	2,603	2,602	2,729	2,717

Table 5

Pooled multi-event analysis.

This table presents results from estimating the market reaction to various events pooling across *Executive Pay Events*, *Proxy Access Events*, *Legislative Events*, and *Regulatory Events*. *Executive Pay Events* refer to Events #1 through #8, *Proxy Access Events* refer to Events #6 through #18, *Legislative Events* refer to Events #1 through #8 and #13 through #15, and *Regulatory Events* refer to Events #9 through #12, and #16 through #18. Panel A presents the average abnormal return for each group of events, in which the abnormal return for each firm-day is computed relative to the Center for Research in Security Prices (CRSP) value-weighted market index. Abnormal returns for Events #11 through #15 are multiplied by negative one. Panel B presents results from a regression of abnormal returns on various governance and control variables for each group of events. *Size* is the natural log of market value, *BM* is the ratio of book value to market value, *Momentum* is the market adjusted return over the prior six months, *Staggered* is an indicator variable equal to one if the firm has a staggered board and zero otherwise, *IsChair* is an indicator variable equal to one if the chief executive officer (CEO) or any corporate insider is chairman of the board and zero otherwise, *ExcessPay* is the natural logarithm of total annual pay for the CEO (measured in millions) less the natural logarithm of median total annual pay for all CEOs in firm's size and industry peer group, *NLargeBlock* is the natural log of one plus the number of institutions holding at least 1% of shares outstanding, and *NSmallCoalitions* is the natural log of one plus number of small institutional investor coalitions of size two that hold combined ownership of at least 1%. *t*-statistics corrected for cross-sectional dependence appear in parentheses and are based on standard errors clustered by date. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.10 level (two-tail), respectively.

Variable	All events	Executive Pay Events	Proxy Access Events	Legislative Events	Regulatory Events
<i>Panel A: Event day returns</i>					
<i>Abn. Ret.</i>	-0.24	0.06	-0.32*	-0.32	-0.10
<i>t</i> -statistic	(-1.62)	(0.50)	(-1.64)	(-1.37)	(-1.18)
<i>Panel B: Cross-sectional variation in event day returns</i>					
Governance variables					
<i>Staggered</i>	-0.07 (-1.58)	0.03 (0.34)	-0.13** (-2.27)	-0.09 (-1.12)	-0.04 (-1.04)
<i>IsChair</i>	-0.02 (-0.45)	-0.04 (-0.58)	-0.03 (-0.51)	-0.02 (-0.21)	0.00 (0.06)
<i>ExcessPay</i>	-0.05 (-1.49)	-0.08** (-2.05)	-0.07 (-1.36)	-0.08* (-1.79)	0.00 (0.04)
<i>NLargeBlock</i>	-0.28*** (-3.91)	-0.09 (-0.76)	-0.33*** (-5.91)	-0.32*** (-2.99)	-0.30*** (-3.95)
<i>NSmallCoalitions</i>	-0.09** (-2.32)	-0.03 (-0.50)	-0.13** (-2.56)	-0.07 (-1.39)	-0.10 (-1.50)
Control variables					
<i>Size</i>	0.07*** (2.96)	0.06** (2.26)	0.09*** (3.36)	0.04 (1.42)	0.12*** (4.00)
<i>BM</i>	-0.02 (-0.27)	-0.02 (-0.12)	-0.01 (-0.09)	-0.10 (-0.79)	0.06* (1.84)
<i>Momentum</i>	0.47 (1.42)	0.15 (0.45)	0.60 (1.39)	0.86 (1.41)	0.11 (0.62)
Event numbers	#1–18	#1–8	#6–18	#1–8, #13–15	#9–12, #16–18
<i>N</i>	46,683	21,020	33,782	28,781	13,867

the presence of a staggered board or CEO-chairman duality (*t*-statistic of -1.58 and -0.45, respectively). Second, on average we find an insignificant reaction to all eight executive pay events (*t*-statistic of 0.01), but that the reaction is decreasing in “excess” CEO pay (*t*-statistic of -2.05 for *ExcessPay*) and unrelated to institutional ownership, staggered board, and CEO-chairman duality. Third, on average we find a negative market reaction to all ten proxy access events (*t*-statistic of -1.64). However, this reaction is decreasing in the number of large blockholders (*t*-statistic of -5.91 on *NLargeBlock*) and number of small institutional coalitions (*t*-statistic of -2.56 on *NSmallCoalitions*). We do find some evidence that the market reaction is negatively related to the presence of a staggered board (*t*-statistic of -2.27), but not for CEO-chairman duality. Finally, the events pertaining to actions taken by the legislature are related to both executive pay and proxy access, and accordingly we find significant negative coefficients on both *ExcessPay* (*t*-statistic of -1.79) and *NLargeBlock* (*t*-statistic of -2.99). In contrast, regulatory events (actions taken by the SEC) are related only to proxy

access, and accordingly we find a significant negative coefficient only on *NLargeBlock* (*t*-statistic of -5.91).

6.4. Monte Carlo simulation

The results of the Monte Carlo simulation appear in Table 6. For each event group, we tabulate the respective coefficient from Table 5 (β) and the average coefficient resulting from repeating the same regression on groups of random non-event days one thousand times ($E[\beta]$). We then test whether β is different from its expected value under the null that the event day is unrelated to governance, $E[\beta]$. These results are consistent with the results in Table 5. We find that testing whether coefficients are different from zero (Table 5) or different from the average non-event coefficients (Table 6) does not affect inferences and in many cases yields stronger inferences. For example, we find that on non-event days the average coefficient on *Staggered* is 0.01, whereas pooling across all of the events related to governance regulation we find the

Table 6

Monte Carlo simulation.

This table presents results from a Monte Carlo analysis simulating the expected cross-sectional variation in event returns under the null hypothesis. The simulation proceeds as follows. First, for each group of events, we estimate coefficients from a regression of abnormal returns on various governance and control variables (see Table 5). *Executive Pay Events* refer to Events #1 through #8, *Proxy Access Events* refer to Events #6 through #18, *Legislative Events* refer to Events #1 through #8 and #13 through #15, and *Regulatory Events* refer to Events #9 through #12, and #16 through #18. Second, we randomly select $N(\text{Events})$ non-event days from January 2007 through June 2009 and regress abnormal returns for this group of non-events on various governance and control variables. We repeat this step one thousand times retaining coefficient estimates for each iteration. We then test whether estimated coefficients for the event days (β) are significantly different from the average of the one thousand estimated coefficients for the non-event days ($E[\beta]$) using the empirical distribution of β on non-event days to compute the standard error of $E[\beta]$. p -values (two-tailed) for the test $\beta = E[\beta]$ appear in brackets. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.10 level, respectively.

Variable	All Events		Executive Pay Events		Proxy Access Events		Legislative Events		Regulatory Events	
	β	$E[\beta]$	β	$E[\beta]$	β	$E[\beta]$	β	$E[\beta]$	β	$E[\beta]$
Governance variables										
<i>Staggered</i>	-0.07	0.01	0.03	0.01	-0.13	0.01	-0.09	0.01	-0.04	0.01
	[0.02]**		[0.78]		[0.001]***		[0.02]**		[0.32]	
<i>IsChair</i>	-0.02	0.00	-0.04	0.00	-0.03	0.00	-0.02	0.00	0.00	0.00
	[0.60]		[0.51]		[0.57]		[0.81]		[0.98]	
<i>ExcessPay</i>	-0.05	-0.02	-0.08	-0.02	-0.07	-0.02	-0.08	-0.02	0.00	-0.02
	[0.18]		[0.11]		[0.10]*		[0.09]*		[0.66]	
<i>NLargeBlock</i>	-0.28	0.02	-0.09	0.02	-0.33	0.03	-0.32	0.02	-0.30	0.02
	[0.002]***		[0.46]		[0.001]***		[0.01]***		[0.05]**	
<i>NSmallCoalitions</i>	-0.09	0.01	-0.03	0.01	-0.13	0.02	-0.07	0.02	-0.10	0.01
	[0.04]**		[0.57]		[0.03]**		[0.21]		[0.19]	
Control variables										
<i>Size</i>	0.07	0.02	0.06	0.01	0.09	0.01	0.04	0.02	0.12	0.01
	[0.21]		[0.45]		[0.09]*		[0.71]		[0.09]*	
<i>BM</i>	-0.02	0.02	-0.02	0.02	-0.01	0.01	-0.10	0.02	0.06	0.01
	[0.77]		[0.87]		[0.92]		[0.49]		[0.78]	
<i>Momentum</i>	0.47	0.13	0.15	0.10	0.60	0.14	0.86	0.13	0.11	0.17
	[0.37]		[0.93]		[0.29]		[0.13]		[0.91]	
Event numbers	#1–18		#1–8		#6–18		#1–8, #13–15		#9–12, #16–18	
$N(\text{Events})$	18		8		13		11		7	

coefficient on *Staggered* is -0.07 (p -value of 0.02 for the difference in coefficients). Similarly, we find that on non-event days the average coefficient on *NLargeBlock* is 0.02, whereas pooling across all of the events related to governance regulation the coefficient on *NLargeBlock* is -0.28 (p -value of 0.002 for the difference in coefficients). Thus, the relation between returns and governance on event days is significantly different from the relation between returns and governance on non-event days. This suggests that the variation in returns that we find on event days is unique to such days and, therefore, is likely to be driven by governance regulation rather than test misspecification or some omitted determinant of the cross section of returns.

7. Sensitivity analyses

7.1. Alternative governance variables

In our analysis we estimate cross-sectional variation in the market's reaction to each event as a function of excess CEO pay, institutional ownership, whether the firm has a staggered board, and whether the CEO is also chair. We selected these governance variables because they map directly to various provisions of the regulations we examine. However, this list is not exhaustive. For example, the Shareholder Bill of Rights Act also mandates that firms establish a risk committee, the Shareholder Empowerment Act also requires that firms develop and disclose

clawback provisions, and the Corporate Executive Compensation Accountability and Transparency Act also requires that compensation consultants be independent. Data on whether the firm follows such practices are either not publicly available or are very difficult to obtain. Therefore, we focus on the primary governance practices regulated by each bill, those that permit us to capture a broad cross-section of the economy, instead of exhaustively examining all aspects of the bill.

It is conceivable that cross-sectional variation in the market's reaction to governance regulations is not directly related to the provisions in the regulation. For example, proxy access regulation that gives shareholders more say in nominating directors could have a greater effect on those firms with few independent directors, on those firms in which managerial entrenchment is high, or those firms in which "shareholder democracy" is low. In untabulated analyses, we re-estimate our cross-sectional regressions after including the percent of independent directors and the percent of CEO ownership, the G-index (Gompers, Ishii, and Metrick, 2003), or E-index (Bebchuk, Cohen, and Ferrell, 2009) as additional independent variables. The first specification only marginally reduces our sample size as data on independent directors and CEO ownership are readily available from the data sources employed in this paper. We find no incremental relation between the market's reaction and either of these variables. The second and third specifications require data on various anti-takeover provisions from the Independent

Regulatory Review Commission (IRRC) and reduce our sample by more than 50%. Regardless, we find no incremental relation between the market reaction and either of these indices.

Finally, we repeat our analysis including an indicator variable for whether the firm is incorporated in Delaware. If the Delaware law codifying the status quo was an attempt to pre-empt the forthcoming federal regulations requiring mandatory proxy access, we expect similar abnormal returns for both Delaware and non-Delaware firms for Events #13, #14, and #15. However, if the law did not have ramifications for federal law, we expect it to affect primarily Delaware firms. We find the Delaware variable is statistically insignificant ($p > 0.10$, two-tail) consistent with the former.

7.2. Alternative measurements of key variables

In our primary analysis we compute abnormal returns relative to the CRSP value-weighted index, firm size, book-to-market ratio, and return momentum. A number of other methods have been proposed in the literature to compute abnormal returns and we assess the robustness of our results to several of these. We find our results are robust to using raw returns, using the equally weighted CRSP index, and using the residuals from a Fama-French four factor model.

In our analysis we exclude financial firms and estimate abnormal returns as a function of “excess” pay and institutional ownership. In untabulated tests, we find our results are robust to the inclusion of financial firms and using total pay instead of year-industry-size adjusted pay.⁴⁴ In addition, because proxy access regulations apply to all shareholders holding 1% or more shares outstanding irrespective of the percent held, we include the number of institutional investors holding 1% or more. In untabulated tests, we include the percent of shares owned (either by 1% institutions or across all institutions) and find that the number of institutional investors holding 1% or more instead of the percent held is significant. Additionally, if we consider only “activist institutions” as defined in [Cremer and Nair \(2005\)](#), we find somewhat weaker results. Because proxy access regulations apply to all shareholders holding 1% or more, they lower the cost of becoming an “activist” (i.e., waging proxy contests). Thus, proxy access could affect those firms with previously non-activist shareholders even more than firms with activist shareholders.

7.3. Confounding events

Many other events related to macroeconomic news could be occurring simultaneously with the regulatory

events we study. Thus, the relations we document might not be attributable to governance regulation, but to the coincident confounding macroeconomic events. This might explain why we find significant abnormal returns on any given day. However, to explain our cross-sectional results, it also must be the case that the response to the macroeconomic news systematically varies with our governance variables and macroeconomic news is systematically being released on the same days as our events. In an attempt to address this concern, we examine the Business & Finance section of the *Wall Street Journal* for the next trading day after each event.⁴⁵ This section of the newspaper reports the aggregate market activity for the previous trading day (in our case, the event day) and contains a short commentary, often a single sentence, speculating on the cause of that activity. For example, on March 8, 2008, the day after Event #3, the section reads: “The Dow industrials fell 146.70 points, or 1.2%, to 11893.69 amid rising recession fears.”⁴⁶ This can potentially reveal what pundits believe was driving stock returns on the day of each event. We report the respective text for each event in the Appendix. While some macroeconomic news is released on the same days as governance regulation (e.g., Event #11), macroeconomic news does not appear to systematically coincide with events related to governance regulation and, therefore, does not appear to be driving our collective results.

8. Conclusion

There is an ongoing debate about whether existing governance practices are characterized by rent extraction or shareholder value maximization. Examining the market reaction to recent events pertaining to corporate governance regulation provides an opportunity to study the effect of an exogenous shock to equilibrium governance practices on shareholder value. The managerial power view of governance suggests that many existing governance practices are the result of managerial rent extraction. This perspective predicts that the economy-wide regulation that limits rent-extracting governance practices results in contracts that increase shareholder value. In contrast, another view of governance suggests that existing governance practices are the result of value-maximizing contracts between shareholders and management. This perspective predicts that regulation of corporate governance results in less efficient contracts and decreases shareholder value.

With regard to executive pay regulation, the evidence suggests that shareholders react increasingly negative to firms with highly paid CEOs. One possible explanation for this result is that the market perceives that the regulation of executive compensation ultimately results in less desirable contracts and potentially decreases the supply of high-quality executives to public firms.

⁴⁴ We also consider more elaborate measures of excess compensation such as computing “excess” compensation as the residual from regressions of CEO compensation on the firm’s market value, growth opportunities, and past stock performance. However, because these variables also affect expected returns, we control for their effects on both returns and compensation by including *Size*, *BM*, and *Momentum* as additional independent variables in our regressions.

⁴⁵ For Event #6, which falls on a Saturday, we examine the *Wall Street Journal* two trading days later (i.e., one trading day after returns are measured).

⁴⁶ “Business and Finance.” *Wall Street Journal*, March 8, 2008, Eastern Edition,

With regard to proxy access regulation, the evidence suggests the market reaction is decreasing in the number of large blockholders and decreasing in the number of coalitions small institutional investors can form to control a combined 1% of shares outstanding. This is consistent with critics' claims that shareholders (and shareholder coalitions) who hold 1% or more will use the privileges afforded them by proxy access regulation to manipulate the governance process to make themselves better off at the expense of other shareholders. Because the costs and benefits of proxy access vary significantly across firms, our results suggests that shareholders may best be served by voluntary proxy access in which shareholders themselves (instead of the government) determine the rules that govern proxy access on a company-by-company basis (e.g., Grundfest, 2010).

With regard to specific governance practices, the evidence suggests the market reaction is increasingly negative for firms with staggered boards. This is consistent with the notion that the presence of a staggered board is a value-maximizing governance choice, such that banning staggered boards decreases shareholder value.

Across all tests, we find generally robust evidence of negative stock price reactions for firms whose governance practices would be affected by the proposed regulations. The results support the notion that the proposed governance regulations harm shareholders of affected firms. However, an important caveat is that the results do not rule out the possibility that there exists some alternative form of governance regulation that is wealth increasing for shareholders.

Appendix. Potential confounding events

This table presents the portion of the "Business & Finance" section of the *Wall Street Journal* that reports the aggregate market activity for the previous trading day and a short commentary speculating on the cause of that activity, for the trading day immediately following each event. In this way, the text pertains to events occurring on the event day.

Event #1: "The Dow industrials slipped 34.29 points to 12234.34 as an overnight sell-off in Asian shares spilled into US markets."

Event #2: "The Dow industrials posted their seventh-straight gain, jumping 153.35 points to a record 12961.98 in a rally led by Honeywell and Caterpillar."

Event #3: "The Dow industrials fell 146.70 points, or 1.2%, to 11893.69 amid rising recession fears. Oil fell 32 cents to \$105.15 but rose 3.3% for the week."

Event #4: "The Dow industrials rose 60.41 points to 12362.47, the biggest gain in two weeks."

Event #5: "The DJIA fell 102.43 points, or 1.2%, to 8409.85. Treasury prices also fell."

Event #6: "Drug stocks soared but other market sectors such as airlines dropped in reaction to the swine-flu scare. The Dow Jones industrials fell 51.29 points, or 0.64%, to 8025.00."

Event #7: "Stocks finished little changed as a measure of investor sentiment suggested market volatility may be

slowing. The Dow industrials slipped 29.23 points to 8474.85."

Event #8: "Financial markets have been buoyed by the money being pumped out by governments around the world, and some investors have begun speaking of a "bailout bubble" being created in certain markets. The industrials rose 28.34 points to 8799.26."

Event #9: "The Dow industrials closed up 34.54 points at 12953.94 after touching an intraday record, aided by a jump in IBM shares and a drop in oil to \$64.58."

Event #10: "Stocks tumbled on concerns about tightening credit and declining home prices. The Dow industrials slid 208.10 points, or 1.5%, to 13265.47."

Event #11: "The Fed hinted a rate cut may come next month amid mounting signs of a slowdown. Remarks by Vice Chairman Kohn that credit-market turmoil remains a threat sent the Dow industrials soaring 331.01 points, or 2.6%, to 13289.45, despite more weak economic data."

Event #12: "The Dow industrials soared 174.93 points, or 1.3%, to 13619.89, as financial stocks led the way higher. Crude rose \$2.74 to \$90.23 a barrel. Bonds fell."

Event #13: "Stocks had their biggest rally since November, with the Dow Jones Industrial Average gaining 379.44 points, or 5.8%, to 6926.49. Though the Dow has had other one-day surges during the bear market, in one day it was able to restore \$134.5 billion of its value."

Event #14: "The Fed will buy up to \$300 billion in long-term Treasuries and billions more in mortgage-backed securities, as rates already are near zero. The markets' reaction was loud. The 10-year note's yield slid to 2.533%, its largest drop since the 1987 crash. The Dow rose 90.88 points, or 1.2%, to 7486.58."

Event #15: "Stocks rose to break a two-day losing streak, with the Dow Jones Industrial Average up 47.55 points, or 0.6%, to 7837.11."

Event #16: "Stocks fell for the first time in a week as concerns about banks and deals resurfaced. The Dow industrials fell 41.74 points, or 0.5%, to 7975.85."

Event #17: "Stocks fell late in the day as Fed meeting minutes damped recent optimism. The Dow industrials fell 52.81 points, or 0.6%, to 8422.04."

Event #18: "Stocks fell as Treasury yields and oil futures hit their highest levels in nearly eight months. The Dow industrials were down 123.11 points but recovered most of their losses to end 24.04 points lower at 8739.02."

References

- Albuquerque, A., 2009. Peer firms in relative performance evaluation. *Journal of Accounting and Economics* 48, 69–89.
- Albuquerque, A., De Franco, G., Verdi, R., 2009. Peer choice in CEO compensation. Unpublished working paper. Boston University.
- Bebchuk, L., 2005. The case for increasing shareholder power. *Harvard Law Review* 118, 835–914.
- Bebchuk, L., Coates, J., Subramanian, G., 2002. The powerful antitakeover force of staggered boards: theory, evidence, and policy. *Stanford Law Review* 54, 887–951.
- Bebchuk, L., Cohen, A., 2005. The costs of entrenched boards. *Journal of Financial Economics* 78, 409–433.

- Bebchuk, L., Cohen, A., Ferrell, A., 2009. What matters in corporate governance. *Review of Financial Studies* 22, 783–827.
- Benston, G.J., 1973. Required disclosure and the stock market: an evaluation of the Securities Exchange Act of 1934. *American Economic Review* 63, 132–155.
- Bhagat, S., Bolton, B.J., Romano, R., 2008. The promise and peril of corporate governance indices. *Columbia Law Review* 108, 1803–1882.
- Bhagat, S., Jefferis, R.H., 2005. *The Econometrics of Corporate Governance Studies*. MIT Press, Cambridge, MA.
- Binder, J.J., 1985. Measuring the effects of regulation with stock price data. *RAND Journal of Economics* 16, 167–183.
- Brauer, R., Nathan, C., 2009. Delaware law changes to facilitate voluntary adoption of proxy access and reimbursement policy for proxy contests. *Corporate Governance Commentary*, 22.
- Brickley, J., Coles, J., Jarrell, G., 1997. Leadership structure: separating the CEO and chairman of the board. *Journal of Corporate Finance* 3, 189–220.
- Cadbury, 1992. *The Report of the Committee on the Financial Aspects of Corporate Governance*. Gee, London, UK.
- Cai, J., Walkling, R.A., 2009. Shareholders' say on pay: does it create value? Unpublished working paper. Drexel University.
- Coles, J.L., Naveen, D.D., Naveen, L., 2008. Boards: does one size fit all? *Journal of Financial Economics* 87, 329–356.
- Core, J.E., Guay, W.R., Larcker, D.F., 2003. Executive equity compensation and incentives: a survey. *Economic Policy Review* 9, 1–25.
- Core, J.E., Guay, W.R., Larcker, D.F., 2008. The power of the pen and executive compensation. *Journal of Financial Economics* 88, 1–25.
- Core, J.E., Guay, W.R., Rusticus, T.O., 2006. Does weak governance cause weak stock returns? An examination of firm operating performance and investors expectations. *Journal of Finance* 61, 655–687.
- Core, J.E., Holthausen, R.W., Larcker, D.F., 1999. Corporate governance, chief executive officer compensation, and firm performance. *Journal of Financial Economics* 51, 371–406.
- Cremer, K.J., Nair, V.B., 2005. Governance mechanisms and equity prices. *Journal of Finance* 60, 2859–2894.
- Daines, R., Gow, I.D., Larcker, D.F., 2010. Rating the ratings: how good are commercial governance ratings? *Journal of Financial Economics* 98, 439–461.
- Daines, R., Klausner, M., 2001. Do IPO charters maximize firm value? Antitakeover protection in IPOs. *Journal of Law and Economics and Organizations* 17, 83–120.
- Duchin, R., Matsusaka, J.G., Ouzhan, O., 2010. When are outside directors effective? *Journal of Financial Economics* 96, 195–214.
- Ertimur, Y., Ferri, F., Muslu, V., 2009. Shareholder activism and CEO pay. Unpublished working paper. Duke University.
- Faleye, O., 2007. Classified boards, firm value, and managerial entrenchment. *Journal of Financial Economics* 83, 2501–2529.
- Fich, E.M., Shivdasani, A., 2006. Are busy boards effective monitors? *Journal of Finance* 61, 689–724.
- Gompers, P.A., Ishii, J.L., Metrick, A., 2003. Corporate governance and equity prices. *Quarterly Journal of Economics* 118, 107–155.
- Grinstein, Y., Valles Arellano, Y., 2008. Separating the CEO from the chairman position: determinants and changes after the new corporate governance regulation. Unpublished working paper. Cornell University.
- Grundfest, J.A., 2010. The SEC's proposed proxy access rules: politics, economics, and the law. *Business Lawyer* 65, 361–394.
- Jarrell, G.A., Poulsen, A.B., 1987. Shark repellents and stock prices: the effects of antitakeover amendments since 1980. *Journal of Financial Economics* 19, 1127–1168.
- Johnson, S.A., Moorman, T.C., Sorescu, S., 2009. A reexamination of corporate governance and equity prices. *Review of Financial Studies* 22, 4753–4786.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., Vishny, R., 1998. Law and finance. *Journal of Political Economy* 106, 1113–1155.
- Larcker, D., Richardson, S., Tuna, I., 2007. Corporate governance, accounting outcomes, and organizational performance. *Accounting Review* 82, 963–1008.
- Mayers, D., Smith, C., 2005. Agency problems and the corporate charter. *Journal of Law and Economics and Organizations* 21, 417–440.
- Morck, R., Shleifer, A., Vishny, R.W., 1988. Management ownership and market valuation: an empirical analysis. *Journal of Financial Economics* 20, 293–315.
- Murphy, K.J., 1999. Executive compensation. In: Ashenfelter, O., Card, D. (Eds.), *Handbook of Labor Economics*, vol. 3B. North-Holland, Amsterdam, pp. 2485–2567.
- Paredes, T., 2009. The proper limits of shareholder proxy access. Remarks at the Center of Capital Markets Competitiveness, US Chamber of Commerce, Washington, DC.
- Petersen, M.A., 2009. Estimating standard errors in finance panel data sets: comparing approaches. *Review of Financial Studies* 22, 435–480.
- Rechner, P.L., Dalton, D.R., 1991. CEO duality and organizational performance: a longitudinal analysis. *Strategic Management Journal* 12, 155–160.
- Roe, M.J., 2003. *Political Determinants of Corporate Governance: Political Context, Corporate Impact*. Oxford University Press, New York.
- Schwert, W.G., 1981. Using financial data to measure effects of regulation. *Journal of Law and Economics* 24, 121–158.
- Schipper, K., Thompson, R., Weil, R.L., 1987. Disentangling interrelated effects of regulatory changes on shareholder wealth: the case of motor carrier deregulation. *Journal of Law and Economics* 30, 67–100.
- Wall Street Journal, 2009a. Investors take note: new bill to target boards, 'say on pay.' P. Dvorak, K. Scannell, April 25.
- Wall Street Journal, 2009b. SEC to launch investor board nomination measure: regulations for short sellers, CEO pay, and investor power coming, says SEC. R. D. Orol, MarketWatch, April 6.
- Zhang, I.X., 2007. Economic consequences of the Sarbanes-Oxley Act of 2002. *Journal of Accounting and Economics* 44, 74–115.