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Shareholders' Say on Pay: Does It Create Value?

Jie Cai and Ralph A. Walkling*

Abstract

Congress and activists recently proposed giving shareholders a say (vote) on executive pay. We find that when the House passed the Say-on-Pay Bill, the market reaction was significantly positive for firms with high abnormal chief executive officer (CEO) compensation, with low pay-for-performance sensitivity, and responsive to shareholder pressure. However, activist-sponsored say-on-pay proposals target large firms, not those with excessive CEO pay, poor governance, or poor performance. The market reacts negatively to labor-sponsored proposal announcements and positively when these proposals are defeated. Our findings suggest that say-on-pay creates value for companies with inefficient compensation but can destroy value for others.

I. Introduction

Since Congress passed the Sarbanes–Oxley Act of 2002 (SOX), regulators and activist shareholders have advocated, debated, and in some cases, implemented additional measures that give shareholders more influence in the boardroom and challenge the powers of managers and directors. These initiatives include prohibiting broker votes in director elections, shifts to majority voting, and increased shareholder access to the boardroom. Few, if any, issues under consideration are as contentious as executive compensation. Indeed, excessive executive pay has been an issue throughout the past century, long before the SOX-related

*Cai, jaycai@drexel.edu, Walkling, rw@drexel.edu, LeBow College of Business, Drexel University, 3141 Chestnut St., Philadelphia, PA 19104. We thank Anup Agrawal, David Becher, Hendrik Bessembinder (the editor), N. K. Chidambaran, Jay Dahya, Naveen Daniel, Daniel Dorn, Fabrizio Ferri, Eli Fich, Jacqueline Garner, Ami Jacaranda, Jon Karpoff, Simi Kedia, Ronald Masulis (associate editor and referee), David Pedersen, David Reeb, Joe Rizzi, Laura Starks, David Yermack, Adam Yore, and seminar participants at Drexel University, Chinese University of Hong Kong, Singapore Management University, Temple University, 2008 Villanova Mid-Atlantic Research Conference in Finance, 2008 New York University Issues in Executive Compensation Conference, 2008 FMA European Meetings, 2008 Financial Management Association (FMA) Annual Meetings, 2009 FMA Asian Meetings, and 2009 American Law and Economics Association Annual Meetings for their comments. The authors have also benefited from comments and presentations by Stephen Bainbridge and Harvey Goldschmid at the 2008 University of Pennsylvania say-on-pay debate.

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scandals.[1] Recently, Congress has taken up the issue through a say-on-pay initiative, which allows shareholders to have an annual advisory vote on executive compensation. The objective of this paper is to examine whether say-on-pay initiatives create shareholder wealth.

In classic principal-agent theories, such as Jensen and Meckling (1976), the owner of a firm (principal) designs the compensation contract of the manager (agent) to maximize the value of the firm. The ownership of most public companies in the U.S. is, however, widely dispersed, which makes it infeasible for shareholders to help negotiate the managerial compensation contract. Until recently, shareholders of most U.S. public companies did not have a say, or a vote, on how management is compensated. Instead, shareholders delegate this right to their representatives—the board of directors.

Fama (1980) argues that competitive managerial labor markets induce directors to act in the best interests of the shareholders. Similarly, opponents of say-on-pay assert that current pay practices of most companies are efficient; thus, allowing shareholder votes on executive compensation will distract the board and management and reduce the effectiveness of the board. Opponents point out that if say-on-pay were beneficial, then boards could freely adopt it without the need for legislation. Some opponents also argue that federal legislation usurps state authority. In addition, they worry that say-on-pay initiatives will be divisive or driven by special interests (see Deane (2007)).

Shivdasani and Yermack (1999), Bebchuk (2003), and Cai, Garner, and Walkling (2009), (2010), among others, argue that under the current director election system, it is often the manager, instead of the shareholders, who decides the composition of the board of directors. Given the manager's influence over board nominations, a board may have the incentive to design a compensation contract in the interests of the manager instead of the shareholders. Consistent with this conjecture, Core, Holthausen, and Larcker (1999) find that less effective boards are associated with higher CEO compensation and poorer operating and stock performance. In addition, many studies find evidence that board design, as well as director incentives and actions, are imperfectly aligned with shareholders.[2]

Given the controversy over executive compensation, it is important to ask whether compensation-related initiatives and legislation create value. Recent events provide us opportunities to study this issue. During the 2006–2008 proxy

[1] A quick survey of the *New York Times* found the following historical headlines, quite similar to those of today: "Proposes Change in Executive Pay" (Oct. 5, 1939); "Executive Pay Rise Above Workers' Gain" (Oct. 4, 1937); "Big Salaries in Hard Times" (Apr. 28, 1935); "Lowering High Salaries" (Jul. 15, 1933); "Suggests a Gauge for Executive Pay" (Aug. 18, 1929); "Explains Big Salary of Railroad Head" (Dec. 24, 1922).

[2] For example, Yermack (1996) finds that firms with larger boards have lower valuation. Shivdasani and Yermack (1999) and Coles, Daniel, and Naveen (2007) find outside directors appointed by the CEO are less effective in monitoring the CEO. Fich and Shivdasani (2006) find that firms with busy boards have lower market-to-book ratios, profitability, and sensitivity of CEO turnover to firm performance. Bebchuk, Fried, and Walker (2002) argue that managerial power and rent extraction can better explain the empirical evidence on executive compensation practices. Yermack (2006) finds that CEOs' personal use of company airplanes is associated with lower stock returns to shareholders. Burns and Kedia (2006) find that CEOs' option portfolio sensitivity to stock price is associated with accounting misreporting.

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seasons, activist shareholders (mostly labor unions) submitted 136 proposals to individual companies requesting an advisory vote on executive compensation. A handful of companies have agreed to implement say-on-pay. On April 20, 2007, the House of Representatives passed the Say-on-Pay Bill (House Bill 1257: Shareholder Vote on Executive Compensation Act) by a 2–1 margin. On the same day, then-Senator Barack Obama introduced a companion bill (S.1181) in the Senate. The bill was then put on hold by the Senate Banking Committee. The Say-on-Pay Bill does not limit executive compensation but requires a nonbinding shareholder vote on it. This bill provides a natural experiment to examine whether shareholder votes on executive compensation in particular, and access to the proxy in general, add value to a company.

With Barack Obama elected President and Democrats controlling both houses of Congress, however, it seemed that the Say-on-Pay Bill might soon become law.[3] Moreover, the government recently required over 300 financial firms receiving federal bailout money, including Citigroup and American International Group, Inc. (AIG), to give shareholders a say-on-pay vote and limit executives' salary to $500,000. Indeed, one news article refers to limits on pay as the "name and shame" part of the legislation.[4] Another news article refers to President Obama as "shamer in chief" with regard to executive compensation.[5] With more frequent use of public shaming by regulators to curb CEO pay, say-on-pay may attract more public attention.

The objective of this paper is to examine whether allowing shareholder votes on executive compensation creates shareholder wealth. We perform 3 experiments to examine this issue. In our primary experiment, we examine the market reaction to the passage of the House bill on April 20, 2007. In our 2nd experiment, we examine the shareholder-sponsored say-on-pay proposals targeting individual companies. In our 3rd experiment, we ask whether shareholder votes are related to excess CEO compensation when they are asked to approve equity-based compensation plans.

In our primary experiment, we focus on the day the bill passed the House and examine the stock price reaction of 1,270 of the largest corporations in the United States. The passage of the Say-on-Pay Bill might not be surprising to the market, since Democrats were in control of the House. However, its 2–1 margin (269 positive votes vs. 134 negative votes) was a surprise, as well as the fact that 55 Republican congressmen also supported the bill. According to Cox News Service, Capitol Hill staffers described the House vote as "lopsided."[6] In sharp contrast, just 2 days before the full House vote, only 1 Republican voted for the procedural

[3]Say-on-pay legislation was included in the Dodd–Frank Wall Street Reform and Consumer Protection Act, which was signed into law by President Barack Obama on July 21, 2010.

[4]J. Weisman and J. Lublino, "Obama Lays Out Limits on Executive Pay," *The Wall Street Journal* (Feb. 5, 2009).

[5]K. R. Basinet, M. M. Cauliff, and R. Sisk, "President Obama Caps Executive Compensation Limits at $500K for Firms Receiving Bailout Funds," *NY Daily News* (Feb. 4, 2009), http://www.nydailynews.com/news/politics/2009/02/04/2009-02-04_president_obama_caps_executive_compensat.html.

[6]M. Geewax, "House Approves Shareholder Advisory Vote on CEO Pay," *Cox News Service* (Apr. 21, 2007).

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resolution (HR Res. 301) that provides consideration to the Say-on-Pay Bill. Earlier, at the House Financial Services Committee, only 2 Republicans voted for the bill on March 28, 2007. However, 55 Republican votes helped the House Say-on-Pay Bill to reach the two-thirds majority required to override a presidential veto.[7] The same day the bill passed the House, Senator Barack Obama introduced a companion bill (S 1181) in the Senate. As a candidate for the Democrat presidential nomination at that time, Obama's endorsement of say-on-pay undoubtedly increased the market's awareness of the bill and may have increased the perceived probability of its eventual passage.

Analyzing the impact around the day the bill passed the House is likely to understate the economic significance of shareholders' say on executive pay. Obviously, passage in the House does not guarantee passage in the Senate, let alone approval by the White House and implementation into law. Nevertheless, we find striking results. Stocks of firms with positive abnormal CEO pay and low CEO pay-for-performance sensitivity react positively to the Say-on-Pay Bill.

Arguably, 3 conditions are necessary for firms to benefit from say-on-pay. First, firms with excessive or ineffective executive compensation are those most likely to benefit. Our results are consistent with this argument. Second, firms with independent-minded shareholders willing to vote against management are likely to face more pressure if say-on-pay is implemented. We find that abnormal returns are higher for firms with a higher fraction of mutual fund shareholders that often vote against management (hereafter, "vote-no" mutual funds). Third, since the say-on-pay vote is nonbinding, it is likely to be more effective in firms that are willing to reform as a result of shareholder pressure. Consistent with this conjecture, we find a more favorable reaction to the bill for a subset of firms that have previously responded to shareholder dissatisfaction as expressed in director elections. Additionally, we find that the positive stock price reaction is more pronounced for firms with relatively weak, but not the weakest governance. These firms are likely to benefit from better compensation design if they implement such improvements under shareholder pressure. Conversely, firms with the weakest governance may not respond to advisory shareholder votes at all. The findings of the first experiment suggest that giving shareholders a vote on executive compensation may benefit firms with inefficient compensation design and weaker corporate governance.

In our 2nd experiment, we examine shareholder-sponsored say-on-pay proposals targeting individual companies. Using a sample of 113 say-on-pay shareholder proposals between 2006 and 2008, we find that the companies targeted are not the companies likely to benefit from say-on-pay. On average, the CEOs of these firms are not overpaid. Moreover, targeted firms have similar performance and governance to those of typical firms. Activist shareholders appear to target large firms. In addition, most of these proposals are sponsored by labor unions with very small stock holdings in the companies targeted. The stock prices of targeted firms react negatively to the announcement of union-initiated proposals, and these proposals receive lower support from other shareholders in comparison to

[7]The Bush White House opposed the bill, arguing that Congress should not dictate the process by which executive compensation is approved.

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nonunion-sponsored proposals. Finally, when shareholders vote down these proposals, the stock prices of targeted firms react positively, and the reaction is higher when more shareholders vote against the proposals.

In our 3rd experiment, we ask whether shareholder votes are related to excess CEO compensation. We examine shareholder votes concerning management proposals for approval of incentive compensation (mostly equity-based compensation plans). Using a sample of 2,511 management-sponsored compensation proposals voted on at 1,853 shareholder meetings during the 2003–2008 period, we find that shareholder support for such proposals is lower when abnormal CEO compensation is high and CEO pay-for-performance sensitivity is low.

Taken together, our evidence suggests that say-on-pay may benefit firms with questionable compensation practices but can hurt firms targeted by special interests. Thus, say-on-pay is not one size fits all. From a regulatory point of view, our work is important in providing evidence with regard to shareholder access to the proxy and say-on-pay legislation in particular. Our findings also provide some evidence of how shareholders may vote if say-on-pay is implemented by either the Congress or individual companies.

The remainder of this paper is organized as follows. In Section II we examine the literature relating to the say-on-pay initiative and develop our empirical hypotheses. Section III describes our research design and contains preliminary descriptive characteristics of our sample. In Section IV we present the 3 sets of analyses regarding say-on-pay. Section V concludes.

II. Background and Hypotheses

A. Background and Literature

Shareholder concern about executive pay is not new. The seminal work of Jensen and Murphy (1990) published nearly 20 years ago was motivated by similar concerns that captured the business headlines prior to that period. As lists of the highest paid executives are published each year, the headlines and editorials of the popular press are filled with criticisms objecting to excess.[8]

The current post-SOX climate is no exception. Shareholders complain about the levels and form of executive pay. The "exit packages" of Robert Nardelli of Home Depot and of other executives are referred to as "pay for failure." Over 200 firms have announced probes into option backdating. The recent fiasco about bonus payments to AIG executives outraged the public, particularly in view of the rescue of the firm with taxpayer funds. In view of these events, shareholders appear receptive to reform. In a recent survey of investment professionals conducted by the Chartered Financial Analyst (CFA) Institute, over 70% of U.S. respondents support advisory votes on executive compensation. Support for legislation mandating the votes, however, is mixed. Only 25% of respondents support legislative action requiring such votes, and two-thirds of the respondents oppose such legislation. Further support for say-on-pay initiatives comes from the Counsel of

[8] A Google search of the phrase "Excessive CEO pay" produced 569,000 results.

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Institutional Investors and the Teachers Insurance and Annuity Association and College Retirement Equities Fund (TIAA-CREF).

Shareholder approval has been required for equity-based compensation plans since 2003 (Securities and Exchange Commission (SEC) Release No. 34-48108). In our primary sample of 1,270 firms, equity-based compensation on average accounts for 42% of total CEO compensation.[9] Say-on-pay, if implemented, will allow shareholders to express their views on other compensation components, such as salary, bonus, retirement benefits, and perquisites.[10] In addition, under current SEC rules, shareholders must approve equity compensation plans if a company initiates plans to use such compensation. If a company, however, decides not to use equity compensation, it does not need shareholder approval. Therefore, if a company does not use enough equity compensation and has low pay-for-performance sensitivity, shareholders can do little. Thus, say-on-pay may enable shareholders to voice their dissatisfaction in ways not currently available.

Shareholders in some companies are not waiting for government-imposed say-on-pay and have taken a proactive approach. According to Deane (2007), shareholders in the U.S. have filed 261 pay-related proposals (including but not limited to say-on-pay proposals) during the first 5 months of 2007. This doubles the 131 proposals from a similar period in 2006. Of the 136 say-on-pay proposals voted on in the period 2006–2008, 15 received majority shareholder support. Several proposals have been implemented by boards of directors: American Family Life Assurance of Columbus (AFLAC) and Verizon Communications agreed to nonbinding votes by 2009, TIAA-CREF allowed its policyholders to vote on executive compensation in its 2008 proxy statement, and Blockbuster, Par Pharmaceuticals, Intel, and Hewlett-Packard (H-P) recently agreed to have a shareholder vote.[11] Among these companies, AFLAC and TIAA-CREF voluntarily adopted say-on-pay without the pressure of a shareholder proposal on this issue.

Internationally, Australia, the Netherlands, Norway, Sweden, and the United Kingdom have statutes requiring shareholder votes on executive compensation. Interestingly, countries with higher investor protection (Australia and U.K.) as measured by La Porta, Lopez-de-Silanes, and Shleifer (2006) have required advisory shareholder votes, while countries with lower investor protection (Netherlands, Norway, and Sweden) have required binding shareholder votes.

Even nonbinding shareholder votes can have a real effect. For example, in May 2003, the compensation package of GlaxoSmithKline (GSK), a British

[9]Equity-based compensation as a portion of total CEO compensation increased from close to 0 in the early 1980s to over 50% in the early 2000s. Since then, this ratio has declined in the last several years. For more detailed discussion, see Bryan, Hwang, and Lilien (2000), Core, Guay, and Verrecchia (2003), Hall and Murphy (2003), Bebchuk and Grinstein (2005), and Chhaochharia and Grinstein (2009).

[10]We do not specifically examine CEO pensions, golden parachutes, supplemental executive retirement plans (SERPs), and perquisites. To the extent they are reported and included in total compensation, their effect on say-on-pay and shareholder votes are analyzed together with other forms of compensation. Further, CEO pension and termination-related benefits are often closely related to CEO cash compensation, since these compensations are typically set as a multiple of annual salary or cash pay.

[11]About a dozen companies participated in a work group for say-on-pay in February 2007. None of these firms, however, adopted a say-on-pay policy before the passage of the House bill on April 20, 2007.

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company, was rejected by advisory shareholder votes. As a result, the board of GSK substantially reduced executive severance pay and increased hurdles for option awards later that year. In addition, the entire compensation committee was replaced in the following year. Consistent with this anecdotal evidence, Ferri and Maber (2009) find that there was improved sensitivity between CEO compensation and firm performance after the British say-on-pay legislation in 2002, particularly for firms with overpaid CEOs and firms receiving a high number of dissenting shareholder votes.[12]

Although we are unaware of existing empirical literature on the U.S. say-on-pay legislation, the topic is related to shareholder activism in general. Earlier literature on shareholder activism suggests little impact. Activism may affect governance, but it does not impact operations, earnings, or returns.[13] Activism focusing exclusively on executive compensation proposals also finds little impact (Johnson and Shackell (1997)). More recently, Cai et al. (2009) examine the determinants and efficacy of shareholder votes in director elections during the period 2003–2005. They find that while shareholder votes have little impact on directors' continued tenure at a firm, fewer votes for directors of the compensation committee lead to abnormal CEO compensation declines. Their empirical evidence also suggests that even nonbinding shareholder votes can affect director decisions on executive compensation.

B. The Interference Hypothesis

The arguments relating to the say-on-pay initiative can be categorized by 3 hypotheses: the *interference, alignment*, and *neutral effect hypotheses*. The interference hypothesis argues that the say-on-pay initiative will be disruptive. The reasons for opposing say-on-pay are articulated by Deane (2007) and Bainbridge (2008). Opponents argue that the current pay practices of most companies are efficient, and there is no need for the federal government to regulate the process of determining executive compensation. They further argue that the bill will distract the board and management and reduce the authority of the board. Moreover, they worry that the initiatives will be divisive or driven by special interests.[14] This concern could be warranted; on average the sponsoring shareholder of company-specific say-on-pay proposals in our sample holds about 0.04% of the firm's outstanding shares. Opponents also worry that companies would not understand the reason for a low vote. Finally, the legislation will create compliance costs that may not be offset by its benefits.[15] Consequently, the interference hypothesis suggests:

[12] U.S. firms cross-listed in the U.K. are not subject to the British say-on-pay legislation. See Baird and Stowasser (Oct. 2002), p. 33.

[13] See, for example, Karpoff, Malatesta, and Walkling (1996), Black (1998), Karpoff (2001), and Gillan and Starks (2007). Barber (2006) is a recent exception. He finds that the announcement of the California Public Employees' Retirement System (CalPERS) focus list is associated with significantly positive wealth changes.

[14] Cai et al. (2010) find that almost all proposals for majority voting are initiated by unions.

[15] Bushee and Leuz (2005) find that the SEC "eligibility rule" of 1999 results in significant cost for firms trading on an over-the-counter (OTC) bulletin board. Greenstone, Oyer, Vissing-Jorgensen (2006), however, find that the 1964 Amendment, which extends mandatory disclosure requirement to large OTC firms, adds value to the affected firms.

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Hypothesis 1. Say-on-pay legislation and proposals will reduce firm value.

C. The Alignment Hypothesis

In spite of the concerns that the votes will interfere, Davis (2007) reports increased accountability and communication between the board and shareholders when required shareholder votes are implemented internationally. Allowing shareholders to have a say in executive pay may help reduce the agency costs between executives, directors, and shareholders; result in more efficient compensation contracts; and add value to the firm. The supporting anecdotal evidence in Deane (2007) and Davis suggests the alignment hypothesis: Say-on-pay will better align owner-manager interests and improve governance and performance. Grundfest (1993) notes that while advisory votes are symbolic, symbols can have consequences through negative publicity and embarrassment. To avoid the embarrassment of a low approval vote on executive compensation, management may be more willing to start dialogues with shareholders and listen to their concerns. Moreover, Paul Danos, Dean of Dartmouth's Tuck School of Business, notes in *The Economist*, "If shareholders are able to adopt corporate-governance reforms that increase shareholder democracy and hold [executives] properly accountable for their performance, then they should be more willing to let them get on with the job."[16]

The firms most likely to benefit from a shareholder vote on executive compensation, however, are those with overpaid managers. To protect their own interests, these managers are unlikely to voluntarily allow a shareholder vote on their pay. Therefore, the say-on-pay legislation mandating a shareholder advisory vote may add value, in particular to firms with overpaid managers.[17] The alignment hypothesis suggests:

Hypothesis 2. Say-on-pay legislation and proposals will, on average, increase firm value.

We also explore a variation of this hypothesis focused on firms that overpay managers.

D. The Neutral Effect Hypothesis

Historically, there has been little market impact surrounding the announcement of, or voting on, shareholder proposals. For example abnormal returns surrounding advisory proposals sponsored by shareholders are generally found to be insignificant in the literature (see, e.g., Karpoff et al. (1996), Gillan and Starks (2000), and Thomas and Cotter (2007)). This may be because the votes are symbolic or because management generally does not adopt these proposals even when they receive majority votes. Thomas and Martin (1999) find that shareholder proposals do not have a significant impact on CEO compensation. The trend toward

[16] *The Economist* (June 2, 2007).

[17] Lo (2003) shows that the 1992 revision of executive compensation disclosure rules added value to the firms that lobbied against the rule change.

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adoption of shareholder proposals, however, is increasing. Ertimur, Ferri, and Stubben (2007) note that the rate of adoption has almost doubled from 22% in the 1997–2002 period to over 40% in the 2003–2004 period.

The uncertainties surrounding the Say-on-Pay Bill at the time it passed the House (April 20, 2007) also support the idea of limited market reaction. At the time it was an open question whether the bill would ever become law. Although it had passed the House, Presidential candidate Barack Obama had just introduced the bill in the Senate. Even if it did pass the Senate, President Bush had said (at that time) that he would not sign it. Moreover, the outcome of the next Presidential election or even the ultimate Democratic candidate was in doubt. Thus, the market may not have viewed the House passage of the bill as representing a significant increase in the probability of its eventual passage. The neutral effect hypothesis suggests no significant market reaction to the say-on-pay legislation.

Hypothesis 3. The say-on-pay legislation will not impact firm value.

III. Research Design and Descriptive Statistics

To test hypotheses regarding say-on-pay, we conduct 3 experiments using 3 different samples. First, for all firms with available data we examine the market reaction to the House passage of the Say-on-Pay Bill on April 20, 2007. Specifically, we analyze the relation between the market reaction for these firms and various compensation and governance characteristics. Second, we examine firms that receive a (company-specific) shareholder proposal requesting say-on-pay. For these firms, we examine the market reaction to the announcement and resolution of the proposal, as well as the determinants of shareholder votes on these proposals. Third, we examine management proposals for approval of incentive compensation (mostly stock option plans) to discern the relation between the level of abnormal CEO pay and shareholder votes.

To identify legislative events associated with the Say-on-Pay Bill, we search the Library of Congress Web site (http://thomas.loc.gov/) and *The Wall Street Journal* during the 1-year period between April 23, 2006 and April 23, 2007. Table 1 provides the sequence of the 7 say-on-pay legislation events over this period. To make sure we do not capture the effects of other contemporaneous events, we search *The Wall Street Journal* "Business and Finance" and "World Wide" headlines for confounding events. Table 1 indicates that many earlier developments have confounding events. In addition, the early events relate to the introduction, delay, and subsequent narrow passage of the bill in the House Financial Services Committee. These events are unlikely to have the impact of the ultimate passage of the bill in the House. Thus, we focus on the date when the House of Representatives passes the Say-on-Pay Bill.[18] To avoid bias, we exclude the days surrounding the earlier events from the nonevent estimation window. To the extent that these early actions signal ultimate passage of the bill, however, we bias against our finding significant results on that date.

[18] In sensitivity tests, we also include the House committee passage of the Say-on-Pay Bill on March 28, 2007, as an event. Our main results are qualitatively similar.

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TABLE 1

Chronology of Say-on-Pay Legislation

We establish the sequence of the Say-on-Pay legislation by searching the Library of Congress Web site (http://thomas.loc.gov/) and *The Wall Street Journal* (WSJ). We identify possible confounding events by searching WSJ "Business and Finance" and "World-Wide" headlines around the legislation event dates.

Date	Say-on-Pay Legislation Event	Possible Confounding Event
Jan. 4–22, 2007	A Reuter's article (1/22/2007) mentions that Rep. Barney Frank plans say-on-pay legislation in 2007 as part of the Democratic economic agenda since 1/4/2007.	1) Other Democratic economic agenda mentioned. 2) On 1/23/2007 the WSJ reports that the SEC declined to back Hewlett-Packard's (H-P) effort to block a shareholder resolution aimed at greater proxy access.
Mar. 1, 2007	Rep. Barney Frank introduces the Say-on-Pay Bill to the House.	1) On 2/27/2007 the stock market in Shanghai declines 9%. The Dow industrials drop 3.3%. 2) On 3/1/2007 the House passes legislation to make it easier for unions to organize workers.
Mar. 8, 2007	Lucian Bebchuk and American Federation of State, County, and Municipal Employees (AFSCME) testify to the House committee on shareholders' say on pay.	1) On 3/8/2007 the WSJ reports that the SEC is trying to decide whether and how harshly to penalize firms that backdated stock options.
Mar. 21, 2007	House committee postpones vote on the Say-on-Pay Bill.	1) On 3/20/2007 the WSJ reports that the SEC is probing to see if any rules were broken in connection with revelations of problems related to subprime mortgages. 2) On 3/21/2007 the Fed drops its stated bias to raise rates.
Mar. 28, 2007	House committee passes the Say-on-Pay Bill (37–29).	1) On 3/28/2007 the WSJ reports that the SEC will have more say in the process governing appointments to the Financial Accounting Standards Board (FASB).
Apr. 17, 2007	House starts debate on the Say-on-Pay Bill.	1) On 4/16/2007 the WSJ reports that the SEC is exploring a new policy that would allow companies to resolve complaints by aggrieved shareholders through arbitration, limiting their ability to sue in court. 2) On 4/16/2007 the WSJ reports that the SEC will give mutual-fund fees and disclosure a close look this year.
Apr. 20, 2007	House passage of the Say-on-Pay Bill (269–134).	

We test our hypotheses by examining changes in the market value of firms during the 3-day period centered on the announcement of the House's passage of the bill. Since all firms share this event window, abnormal returns across firms may be correlated. Thus, traditional event study methodology may understate the standard error and lead to biased statistical inference. Schwert (1981) and Campbell, Lo, and MacKinlay (1997), among others, recommend forming portfolios by firm characteristics to diversify away this cross-sectional correlation among the stocks and then testing whether the portfolio return during the event window is significantly different from that during a nonevent period. Many studies on the effects of regulatory actions use this approach.[19]

[19]See, for example, Schipper and Thompson (1983), Chow (1983), Sefcik and Thompson (1986), Karpoff and Malatesta (1989), (1995), Brook, Hendershott, and Lee (1998), Johnson, Kasznik, and Nelson (2000), Berger, Li, and Wong (2005), Greenstone et al. (2006), Li, Pincus, and Rego (2008), Chhaochharia and Grinstein (2007), Litvak (2007), and Zhang (2007).

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We adopt this approach and form portfolios by abnormal compensation, corporate governance, and other firm characteristics. We use the Fama-French-Carhart 4-factor model as the benchmark and estimate the following regression:

$$(1) \qquad R_{p,t} - R_{f,t} = \alpha + \beta_1(R_{m,t} - R_{f,t}) + \beta_2 \mathrm{SMB}_t + \beta_3 \mathrm{HML}_t + \beta_4 \mathrm{UMD}_t + \beta_5 \mathrm{D_EVENT}_t + e_t,$$

where $R_{p,t}$ is the portfolio return at date t, $R_{f,t}$ is the risk-free rate, $R_{m,t}$ is the market return, SMB is the size factor, HML is the book-to-market factor, and UMD is the momentum factor. The dummy variable D_EVENT equals 1 for the 3 trading days between April 19 and April 23, 2007, and 0 for all other dates. The estimation period spans the 222 trading days between April 23, 2006 and April 23, 2007, and excludes the confounding event windows in Table 1. The coefficient β_5 is the estimated average daily abnormal return during the Say-on-Pay Bill event window, and its t-statistic provides the statistical significance of the abnormal return.

The sample consists of 1,270 firms that have data available from ExecuComp, the Center for Research in Security Prices (CRSP), and the Investor Responsibility Research Center (IRRC) Directors and Governance databases. These data requirements effectively exclude very small U.S. firms, as well as all foreign firms. Table 2 presents summary statistics of our sample. The 1,270 CEOs in our sample have an average salary and bonus of $1.9 million, average stock option and restricted stock compensation of $3.3 million, and average total compensation of $5.7 million.

Of course, shareholders should not be concerned with the level of executive pay but rather with the level of pay that is unjustified by performance and the managerial labor market. Consequently, we calculate abnormal CEO compensation as the 3-year average of residuals from compensation regressions using all ExecuComp companies (i.e., not limited to our say-on-pay sample) as our benchmark. Our compensation regressions include 5,525 firms/year observations, or about 1,842 firms per year.[20] Dependent variables of the compensation regressions are the natural log of 3 measures of CEO compensation: salary and bonus, equity-based compensation, and total compensation (including option grants). Independent variables common to all 3 regressions include firm size (the natural log of market value of equity), the 3-year cumulative stock return, industry classification (2-digit Standard Industrial Classification (SIC) codes), leverage, and calendar-year fixed effects.[21,22] For the salary and bonus regression, we also include return on assets (ROA) as an independent variable, since bonus is often

[20]To avoid survivorship bias, we do not require the firms in the compensation regression to be available for all 3 years. Nevertheless, we find similar results when we limit our sample to firms available in all 3 years.

[21]Pressure from product market competition may act as an external governance mechanism to supplement internal governance mechanisms such as the proposed say-on-pay. We do not directly control for product market competition, since it is an industry-wide variable and we have already controlled for industry dummy variables in our compensation regression. Nevertheless, in a robustness test, we include the Herfindahl index of industry market share in the compensation regression without the industry dummy variables (see DeFond and Park (1999), Harris (1998)). The results are similar.

[22]In sensitivity tests, we find similar results using the log of total assets to measure firm size and the Fama-French (1997) 48 industry classifications instead of the 2-digit SIC codes.

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TABLE 2

Summary Statistics

The sample consists of 1,270 firms that have data available from ExecuComp, the IRRC Directors and Governance databases, and CRSP. See the Appendix for the definitions of all variables. The compensation variables take the 3-year average over the period 2004–2006. The other variables are as of the most recent fiscal year-end before April 20, 2007.

Variable	*N*	Mean	Median	Std. Dev.	Min.	Max.
Panel A. Compensation						
CEO salary and bonus ($000)	1,270	1,868	1,364	3,085	0	91,818
CEO equity-based compensation ($000)	1,270	3,272	1,763	4,810	0	53,978
CEO total compensation ($000)	1,270	5,658	3,579	6,723	0	91,818
Pay-for-performance sensitivity ($000)	1,270	1,593	360	13,185	0	428,277
Abnormal CEO salary and bonus	1,270	–0.004	0.03	0.736	–8.066	2.743
Abnormal CEO equity-based compensation	1,270	0.033	0.745	2.227	–9.523	5.432
Abnormal CEO total compensation	1,270	–0.002	0.029	0.656	–8.452	2.278
Panel B. Governance Measures						
Governance index	1,270	9.34	9.00	2.51	2.00	17.00
Entrenchment index	1,270	1.52	2.00	1.10	0.00	5.00
Fraction of outside directors	1,270	0.71	0.73	0.15	0.11	1.00
Fraction of outside directors appointed by CEO	1,270	0.42	0.40	0.36	0.00	1.00
Fraction of busy outside directors	1,270	0.25	0.22	0.22	0.00	1.00
Board size	1,270	9.39	9.00	2.49	1.00	24.00
Outside director stock holdings (%)	1,270	1.17	0.30	3.85	0.00	59.06
Panel C. Shareholdings						
"Vote-no" mutual fund holdings (%)	1,270	13.45	12.23	6.00	1.21	41.12
"Vote-yes" mutual fund holdings (%)	1,270	8.72	7.96	5.41	0.00	35.91
Institutional holdings (%)	1,091	76.78	79.34	15.22	6.87	99.99
Herfindahl index of institutional holdings (%)	1,091	4.70	4.02	3.16	1.41	51.16
Independent institutional holdings (%)	1,091	6.47	5.51	3.39	0.27	27.01
Panel D. Firm Characteristics						
Beta	1,270	1.22	1.17	0.50	0.01	3.14
Total assets ($000,000)	1,270	21,172	2,451	108,939	53	1,884,318
Market value of equity ($000,000)	1,270	10,038	2,502	27,411	13	383,564
Book-to-market ratio of equity	1,270	0.45	0.42	0.37	–6.09	6.16
Leverage	1,269	0.34	0.32	0.25	0.00	1.00

linked to accounting performance. For the equity-based compensation regression, we also include book-to-market ratio as an independent variable to proxy for growth firms.[23] Both ROA and book-to-market ratio are included in the total compensation regression.[24]

Table 2 reveals that for our primary sample of firms, the average abnormal compensation is close to 0. Following Core and Guay (1999), we calculate pay-for-performance sensitivity as the CEO's wealth change from stock and options for a 1% increase in company stock price.[25] The average CEO gains $1.6 million for a 1% increase in stock price. There is, however, substantial cross-sectional

[23]The literature finds mixed results on the relation between a firm's growth opportunity and its stock option awards to executives. Smith and Watts (1992), Gaver and Gaver (1993), and Mehran (1995), among others, find a positive relation between the 2 variables, while Bizjak, Brickley, and Coles (1993) and Yermack (1995) find a negative relation. We control for growth opportunity as an independent variable in the pay regression.

[24]In sensitivity tests, we include all independent variables in all 3 regressions. We find similar results.

[25]The "pay" in this measure may not come directly from the compensation package. Regardless of whether the shares were previously granted to the CEO, inherited from family, or from other sources, this measure represents the reward the CEO receives for better stock performance.

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variation in pay-for-performance sensitivity, as the standard deviation for this measure is over $13 million.

Since we want to examine how corporate governance explicitly affects the market reaction to the say-on-pay legislation, we do not control for governance characteristics or CEO entrenchment measures in the compensation regressions but examine their impact directly in subsequent tests. Thus, the pay variations due to poor internal control and management entrenchment are captured in our abnormal compensation measure.

In later tests of our hypotheses, we will examine the role of governance and mutual fund stock holdings. The average Gompers, Ishii, and Metrick (GIM) (2003) index is 9.3, typical of the literature. In an average firm, just over 42% of the outside directors are appointed by the current CEO, and one-quarter of the outside directors are busy, as defined by holding 3 or more board seats. Outside directors hold about 1.2% of outstanding shares. The average board consists of 9 directors.

In our tests of company-specific say-on-pay proposals, we will examine the level of votes a proposal receives. The level of support for a company-specific proposal is unknown prior to the vote. The level of "vote-no" mutual fund holdings, however, gives an indication of the level of votes known to be supportive of similar issues. We define a mutual fund family as a "vote-no" (or "vote-yes") fund if it votes against the company manager's recommendation more (less) frequently than the median mutual fund family. Since this study focuses on executive compensation and funds may vote differently on compensation and noncompensation proposals, we define the "vote-no" funds using only the compensation-related proposals.[26] The mutual fund voting records during the period 2003–2006 are obtained from Institutional Shareholder Service (ISS), a subsidiary of RiskMetrics. We find that in 98% of all proposals voted at shareholder meetings, all funds in the same family cast the same vote. Thus, we aggregate the votes of all funds in a family. We next manually match the mutual fund families in ISS to those in Thomson Financial's CDA/Spectrum Mutual Funds Holding Data. Our sample includes 130 mutual fund families, and given our definition, half of them are classified as "vote-no" funds and the other half are "vote-yes" funds.[27] Finally, we calculate the percent of a firm's outstanding shares held by "vote-no" or "vote-yes" mutual funds prior to April 19, 2007. The level of "vote-no" mutual fund holdings averages about 13%, and the level of "vote-yes" mutual fund holdings averages about

[26] We find similar results if we define "vote-no" mutual funds using all proposals. In a sensitivity test, we define the "vote-no" funds as those in the top quartile when ranked by votes against management. The results are similar.

[27] A recent study by the American Federation of Labor and Congress of Industrial Organizations (AFL-CIO) also classifies a selected set of funds by their voting records. The AFL-CIO study includes 29 mutual fund families with voting records for 1,590 management proposals and 75 shareholder proposals during 2005 and 2006. The total number of votes they examine is 51,297. In contrast, we examine the records of 130 mutual fund families voting for 31,377 management proposals and 861 shareholder proposals between 2003 and 2006. The total number of votes we use is 1,121,511. Despite the significant sample difference between the 2 studies, the correlation between the mutual fund voting records of the 2 studies, measured by the percentage of times a mutual fund votes against management recommendations, is 0.78 and is statistically significant at the 1% level.

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9%. Note that the variation of "vote-no" mutual fund holdings across firms in our sample is quite large, with a range from 1.2% to over 40%.

Institutions own just over three-fourths of the shares in our sample. The average Herfindahl index, which measures the concentration of institutional holdings, is 4.7%. Hartzell and Starks (2003) and Almazan, Hartzell, and Starks (2005) find that a high concentration of institutional holdings may help to monitor managers and reduce excess compensation. Some institutions are likely to have existing or potential business relations with a company, while others are likely to be independent. We define public pension funds and university and endowment funds as independent institutions, which hold, on average, 6.5% of the outstanding shares of the firms in our sample.

In our 2nd experiment, we obtain the sample of shareholder proposals from ISS, which identifies 136 shareholder proposals (targeting 96 companies) during the period 2006–2008 that ask the board of directors to adopt an advisory shareholder vote on executive compensation. We find 113 proposals targeting 81 firms with available data in CRSP, IRRC, ExecuComp, and Compustat.

In the 3rd experiment, we obtain from ISS a sample of the management-sponsored compensation proposals seeking shareholder approval. We next match these proposals to prior-year compensation, governance, and performance data from CRSP, IRRC, ExecuComp, and Compustat. The final sample consists of 2,511 proposals voted on at 1,853 shareholder meetings during the 2003–2008 period.

IV. Empirical Results

A. Market Reaction to the Say-on-Pay Bill

Panel A of Table 3 presents a univariate analysis of the market reaction to the passage of the Say-on-Pay Bill. We first sort the firms in our sample into 4 portfolios based on their quartile ranking of abnormal CEO compensation (using salary and bonus, equity compensation, or total compensation, as appropriate). Next we use the Fama-French-Carhart 4-factor model in equation (1) to estimate the abnormal returns to the portfolios during the event window. If the Say-on-Pay Bill is beneficial, firms that would benefit the most (i.e., firms with the highest level of abnormal CEO pay) should experience significantly positive abnormal returns. This is precisely what we find. When pay is measured by abnormal salary plus bonus, we find that the market reacts positively for firms with the most highly paid CEOs (a significantly positive 0.56% over the 3-day event window) and negatively for firms with the lowest paid CEOs (a negative 0.08%). A zero-investment portfolio that buys the firms with the highest abnormal CEO pay and sells the firms with the lowest abnormal CEO pay earns a risk-adjusted 3-day abnormal return of 0.64%, which is statistically significant at the 5% level. This return difference is unlikely to be driven by differences in the level of expected returns, since the annualized difference across the quartiles is 71% $((1+0.64\%)^{252/3}-1)$. In addition, to the extent that the 4-factor model proxies for the risk factors that affect expected stock returns, our abnormal returns have controlled for these factors. To verify that the return patterns are not driven by outliers, we also calculate

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the percent of stocks in a portfolio that have positive abnormal returns, where an individual stock abnormal return is calculated in the same fashion as the portfolio abnormal return using the Fama-French 4-factor model. This statistic in Panel A follows a pattern similar to that of the portfolio cumulative abnormal return (CAR).[28]

TABLE 3

Market Reaction to the Say-on-Pay Bill by Abnormal CEO Compensation

The sample consists of 1,270 firms described in Table 2. We sort the sample firms into 4 portfolios based on their average abnormal CEO cash compensation and pay-for-performance sensitivity during the last 3 years. The details of the compensation regressions, calculation of the pay-for-performance sensitivity measure, and estimation of the portfolio CAR are discussed in the Appendix. Percent positive is calculated as the number of stocks in a portfolio with positive abnormal returns, where an individual stock abnormal return is calculated in the same fashion as the portfolio abnormal return. Statistical significance of whether percent positive is different from 50% is determined with a sign test. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A. Market Reaction to the Say-on-Pay Bill by Abnormal CEO Salary and Bonus

Abnormal CEO Salary and Bonus	No. of Firms	Abnormal Compensation ($million)	Portfolio CAR (%)	*t*-Stat.	% Positive
1 (lowest)	317	–0.543	–0.084	–0.35	47.5
2	318	–0.021	0.261	1.11	52.1
3	318	0.367	0.258	1.21	55.5*
4 (highest)	317	1.834	0.558	1.98**	55.6**
Difference (4 – 1)			0.642	2.30**	

Panel B. Market Reaction to the Say-on-Pay Bill by Pay-for-Performance Sensitivity

Pay-for-Performance Sensitivity	No. of Firms	Pay for Performance ($million)	Portfolio CAR (%)	*t*-Stat.	% Positive
1 (lowest)	317	0.072	0.528	1.99**	55.4*
2	318	0.235	0.069	0.28	53.2
3	318	0.559	0.303	1.16	54.3
4 (highest)	317	5.514	0.092	0.37	47.8
Difference (4 – 1)			–0.435	–1.31	

Investors also seem to trade on the House passage of the Say-on-Pay Bill. Based on untabulated results, we find that the zero-investment portfolio that buys the firms with the highest abnormal CEO pay and sells the firms with the lowest abnormal CEO pay among a subset of firms in the highest abnormal volume quartile earns an abnormal return of 1.05%, which is statistically significant at the 5% level.[29]

To examine whether our abnormal compensation measure is a proxy for raw compensation, and to test whether the market cares about the level of compensation or the level of abnormal compensation, we expand our analysis. Specifically, we look at the subset of firms in the highest quartile of raw cash compensation that also have negative abnormal cash compensation.[30] While the level of compensation appears high for executives of these firms, they are actually underpaid

[28]The percent of firms in a portfolio with positive abnormal returns is based on individual stock returns rather than portfolio returns. Thus, they may be more affected by the potential clustering in stock returns.

[29]Following Hsieh and Walkling (2005), we calculate the abnormal volume as the average turnover ratio over the event window minus the average turnover ratio over the nonevent window, where turnover ratio equals the daily trading volume divided by the number of shares outstanding.

[30]We thank Laura Starks and the referee for this suggestion.

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relative to the compensation model. These firms have an insignificant abnormal return of 0.18%, or 0.06% lower than the rest of the sample, surrounding the Say-on-Pay Bill passage. This result suggests that the bill will not benefit firms with highly paid but not overpaid CEOs. It also suggests that the market differentiates overpaid executives from highly paid executives and illustrates the importance of using abnormal compensation measures in our empirical analyses. We find similar results when the subset is further limited to the firms with above industry median prior-year stock returns.

In unreported tests, we find that the market reaction to the Say-on-Pay Bill is insignificantly (p-value $= 0.22$) related to abnormal equity compensation. This result is not surprising, since shareholder votes on equity compensation already exist. Since June 30, 2003, the SEC has required shareholder approval for all equity-based compensation plans. In our 3rd experiment, we examine how shareholders vote on these equity-based compensation plans. The abnormal returns of the portfolios sorted by abnormal CEO total compensation show a similar pattern to those of the abnormal cash compensation, although the abnormal returns are statistically insignificant.

Annual equity compensation usually makes up only a small fraction of a CEO's total equity holdings. In our sample of 1,270 firms, the annual equity compensation accounts for 10.7% of CEO total stock and option holdings. Thus, the lion's share of a CEO's incentive to increase shareholder wealth comes from her total equity holdings, rather than just the current-year equity compensation awards. Consequently, any market reaction to the Say-on-Pay Bill should be related to the CEO's overall pay-for-performance sensitivity due to equity holdings, rather than annual equity compensation. When we sort the firms by their CEO pay-for-performance sensitivity in Panel B of Table 3, we find a significantly positive market reaction of 0.53% for the firms in the lowest pay-for-performance sensitivity quartile. This portfolio also has the highest percentage of firms with positive abnormal stock returns. This result suggests that shareholder votes allowed by the Say-on-Pay Bill may lead to more efficient compensation design for these companies and increase their firm values.

These results are consistent with the alignment hypothesis. The market reaction suggests that the legislation could help reduce the compensation of overpaid CEOs and improve compensation design for firms with the lowest CEO pay-for-performance sensitivity, thus benefiting their shareholders. We caution the readers not to interpret the abnormal returns as the capitalized value of pay reduction or value creation due to better compensation practice, however, since the market reaction is scaled by the perceived increase in the probability of eventual say-on-pay legislation. For example, firms in the highest abnormal cash compensation quartile have an average market value of equity of \$10 billion. Hypothetically, suppose the perceived probability of eventual say-on-pay legislation increased by 50% on April 20, 2007. This implies that the average amount of value created for shareholders of these firms is \$108 million (0.54% $\times$ \$10 billion $\div$ 50%). The present value of the possible reduction of abnormal CEO pay is unlikely to explain this level of value creation, since CEOs in this group are overpaid by an average of \$1.8 million annually. The market reaction is consistent with the belief that allowing a shareholder vote on executive compensation

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for this subset of firms can do more than reduce overpay. In particular, improving the structure of CEO incentives can translate into improved firm performance (see the discussions of Jensen and Murphy (1990), Mehran (1995), among others).

B. Corporate Governance and Market Reaction to the Say-on-Pay Bill

Firm-specific characteristics influence the value of the bill to each firm and the probability that the firm will take corrective action if the bill is implemented. In subsequent sections, we examine several firm-level characteristics that may influence the impact of the bill. First, we analyze the impact of corporate governance. We note that the relation between the market's reaction to the Say-on-Pay Bill and a firm's corporate governance quality need not be linear or even monotonic. As a firm starts to deviate from good corporate governance, giving shareholders an opportunity to voice their dissatisfaction with executive compensation may help improve governance and compensation design, thus increasing firm value. Since the shareholder vote proposed by the bill is advisory, however, it is up to the board of directors to make changes when facing shareholder dissatisfaction. If a firm's corporate governance is so bad that the CEO is entrenched, the board may choose to ignore shareholder discontent, and the legislation may have little effect on these firms. Ultimately, the relation between governance measures and market reaction to say-on-pay legislation is an empirical issue. Our analysis recognizes the possibility of nonlinear effects by looking at quartiles of governance measures.

In Table 4 we examine the market reaction to the Say-on-Pay Bill and 6 measures of corporate governance. As in Table 3, we first sort our sample firms into 4 portfolios based on these governance variables. Since the governance variables are often discrete, the 4 portfolios do not always have the same number of firms.[31] Next, we estimate abnormal portfolio returns during the event window using the 4-factor model in equation (1).

Table 4 reveals the relation between the market reaction to the Say-on-Pay Bill and a firm's governance. Panels A–D examine the quality of the board of directors, while the last 2 panels relate the market reaction to a firm's level of takeover defenses. Shivdasani and Yermack (1999) and Coles et al. (2007) find outside directors appointed by the CEO are less effective in monitoring the CEO. Thus, we calculate the percentage of outside directors of a firm joining the board

[31]The compensation committee usually consists of only a few directors. As a result, many board governance measures take on a few discrete values. In some cases it is difficult to construct a sufficient number of diversified portfolios to test the nonlinear relation between governance and market reaction to the Say-on-Pay Bill. Therefore, we do not use any board measures at the committee level. For the same reason, we do not use the duality variable of whether the CEO is the chairman of the board. Further, the executive compensation of a company often requires approval by the entire board. In addition, the SOX-related regulations require the compensation committees of all public firms to be independent. Thus, there is little cross-sectional variation in the independence of the compensation committee. We find that, on average, over 93% of compensation committee directors in our sample are independent, and 82% of the firms in our sample have their compensation committee entirely made up of independent directors. Firms with more grey directors serving on their compensation committee react more positively to the Say-on-Pay Bill than the other firms. Perhaps due to small sample size, however, the difference is not statistically significant.

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TABLE 4

Market Reaction to the Say-on-Pay Bill by Corporate Governance

The sample consists of 1,270 firms described in Table 2. We sort the sample firms into 4 portfolios based on 6 governance variables. The definition of the governance variables and the estimation of the portfolio CARs are described in the Appendix. Percent positive is calculated as the number of stocks in a portfolio with positive abnormal returns, where an individual stock abnormal return is calculated in the same fashion as the portfolio abnormal return. Statistical significance of whether percent positive is different from 50% is determined with a sign test. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A. Market Reaction to the Say-on-Pay Bill by Percent of Outside Directors Appointed by CEO

Percent of Outside Directors Appointed by CEO	No. of Firms	Mean Percent of Outside Directors Appointed by CEO	Portfolio CAR (%)	*t*-Stat.	% Positive
1 (lowest)	336	0.0%	0.026	0.10	50.3
2	298	23.4%	0.272	1.28	54.0
3	317	54.5%	0.489	2.06**	54.9*
4 (highest)	319	91.7%	0.219	0.90	51.7

Panel B. Market Reaction to the Say-on-Pay Bill by Percent of Busy Outside Directors

Percent of Busy Outside Directors	No. of Firms	Mean Percent of Busy Outside Directors	Portfolio CAR (%)	*t*-Stat.	% Positive
1 (lowest)	354	0.0%	–0.075	–0.31	50.0
2	272	15.9%	0.281	1.07	51.8
3	326	29.2%	0.573	2.67***	57.4***
4 (highest)	318	54.4%	0.243	1.03	51.5

Panel C. Market Reaction to the Say-on-Pay Bill by Board Size

Board Size	No. of Firms	Mean Board Size	Portfolio CAR (%)	*t*-Stat.	% Positive
1 (lowest)	299	6.4	0.161	0.55	47.2
2	175	8.0	0.197	0.64	54.9
3	419	9.4	0.483	1.96**	58.2***
4 (highest)	377	12.3	0.080	0.33	49.9

Panel D. Market Reaction to the Say-on-Pay Bill by Outside Directors' Stock Holdings

Outside Directors' Stock Holdings	No. of Firms	Mean Outside Directors' Stock Holdings	Portfolio CAR (%)	*t*-Stat.	% Positive
1 (highest)	317	3.96%	0.077	0.29	47.3
2	318	0.50%	0.179	0.78	51.3
3	318	0.19%	0.438	1.75*	54.7*
4 (lowest)	317	0.05%	0.295	1.38	57.4***

Panel E. Market Reaction to the Say-on-Pay Bill by GIM Index

GIM Index	No. of Firms	Mean Governance Index	Portfolio CAR (%)	*t*-Stat.	% Positive
1 (lowest)	295	6.07	0.090	0.34	48.8
2	396	8.53	0.147	0.64	51.3
3	331	10.50	0.423	1.78*	54.7*
4 (highest)	248	12.96	0.363	1.38	56.8**

Panel F. Market Reaction to the Say-on-Pay Bill by Entrenchment Index

Entrenchment Index	No. of Firms	Mean Entrenchment Index	Portfolio CAR (%)	*t*-Stat.	% Positive
1 (lowest)	266	0.0	–0.120	–0.44	50.7
2	368	1.0	0.348	1.49	49.5
3	383	2.0	0.477	2.25**	55.9**
4 (highest)	253	3.2	0.143	0.56	54.5

after the current CEO starts her tenure. We see in Panel A that firms in the 3rd quartile of this measure have the highest average abnormal return of 0.49% over the 3-day event window; this return is statistically significant at the 5% level. This portfolio also has the highest percentage of firms with positive abnormal stock returns. At first, this result may seem surprising. These are firms in the 3rd, but not in the highest or poorest, governance quartile of the fraction of outside directors

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appointed by the CEO. As we have noted, however, firms with the very poorest governance, in this case those with over 90% of outside directors appointed by the CEO, may be expected to ignore an advisory vote due to CEO entrenchment.

Fich and Shivdasani (2006) find that busy boards are less effective in monitoring managers. They use a dummy variable to measure whether a majority of outside directors are busy, where busy is defined as holding 3 or more board seats. To have a continuous measure of busy boards, we calculate the percentage of a firm's outside directors who hold 3 or more board seats.[32] Panel B of Table 4 reports that as the outside directors of a board becomes busier (moving from the lowest to the 3rd quartile), the market reaction to the Say-on-Pay Bill becomes more positive, with the 3rd quartile having the highest abnormal portfolio return of 0.57% over the 3-day event period. This figure is statistically significant at the 1% level. For the firms with the highest percentage of busy directors, however, the abnormal portfolio return is an insignificant 0.24%. The 3rd quartile also has the highest percentage of portfolio firms with positive abnormal stock returns.

Yermack (1996) finds that firms with larger boards have lower market valuation. Thus, our next measure of board quality is the number of directors serving on a board. Panel C of Table 4 shows that for firms in the first 3 quartiles of board size, the abnormal returns increase monotonically as the board size increases, with the 3rd quartile having the highest abnormal portfolio return of 0.48% over the 3-day event period. This figure is statistically significant at the 5% level. The abnormal portfolio return equals an insignificant 0.08%, however, for firms with the largest boards. The 3rd quartile also has the highest percentage of firms with positive abnormal stock returns.

Stock ownership by outside directors affects their incentive to monitor the managers. In Panel D of Table 4, we form portfolios by the stock ownership of outside directors, and we again find similar results. Firms in the 3rd (2nd-lowest) ownership quartile have the most positive price reaction to the Say-on-Pay Bill, with an average abnormal portfolio return of 0.44% over the 3-day event period. This figure is statistically significant at the 10% level. The percentage of firms with positive abnormal stock returns, however, shows a more monotonic pattern.

Panel E of Table 4 reports the market reaction to the Say-on-Pay Bill for firms categorized by the GIM (2003) index of takeover defense. We find that firms in the 3rd quartile of the governance index have the highest market reaction, with a portfolio abnormal return of 0.42% over the 3-day event window, which is statistically significant at the 10% level. The percentage of firms with positive abnormal stock returns shows a more monotonic pattern.

Panel F of Table 4 reports the relation between the market reaction to say-on-pay legislation and the index of Bebchuk, Cohen, and Ferrell (BCF) (2009). The results are similar to that of the GIM (2003) index in Panel E. As the BCF index

[32] Fich and Shivdasani (2006) measure busy boards with a dummy variable equal to 1 if the majority of outside directors are busy. To test for possible nonlinearity effects, we perform a sensitivity test, dividing our sample into 3 portfolios: below 25%, between 25% and 50%, and over 50% busy outside directors. We find firms with between 25% and 50% busy outside directors have the highest abnormal returns of 0.48% around the passage of the Say-on-Pay Bill, and this figure is statistically significant at the 5% level. Firms with below 25% or over 50% busy outside directors do not experience significant abnormal returns.

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increases from quartile 1 to quartile 3, the abnormal portfolio return increases monotonically, reaching a peak at 0.48% for quartile 3, which is statistically significant at the 5% level. The average abnormal return becomes lower, however, and insignificant for firms with the highest BCF index. In addition, the 3rd quartile has the highest percentage of firms with positive abnormal stock returns.

Overall, the results in Table 4 are consistent with the following interpretation. Firms are more likely to benefit from improved practices from say-on-pay under 2 conditions: i) a need for the improvement, and ii) a willingness to change. Firms with weak governance are more likely to benefit from the say-on-pay legislation if they are willing to implement better compensation practices. Entrenched managers at firms with very weak governance, however, are likely to ignore an advisory shareholder vote. Consistent with this interpretation, we later show that firms that are responsive to shareholder pressure are more likely to be in the 3rd quartile for 5 out of the 6 governance variables examined here. Taken together, the results of Table 4 provide support for the alignment hypothesis.

C. "Vote-No" Mutual Fund Holdings and Market Reaction to the Say-on-Pay Bill

We define "vote-no" mutual funds as institutions that frequently vote against management on compensation issues. A higher level of mutual fund share holdings that consistently "vote no" increases the probability that a vote on executive compensation will receive fewer supporting votes. This, in turn, increases the likelihood of reforms to executive compensation at these firms. To test this, we sort our sample into 4 portfolios by the level of "vote-no" mutual fund holdings and then examine the market's reaction to the Say-on-Pay Bill for each of the 4 portfolios. The details of our methodology are described in Section III and the Appendix.[33]

Table 5 presents results across the 4 portfolios of "vote-no" fund holdings. Since previous research (Ertimur et al. (2007)) shows that firms are more likely to adopt shareholder-sponsored proposals that receive higher shareholder support, it follows that firms facing more shareholder pressure are more likely to reform executive compensation. We note that firms with higher "vote-no" mutual fund holdings react more positively to the Say-on-Pay Bill. The portfolio of firms with the highest "vote-no" fund holdings earn a CAR of 0.56% during the 3-day event window, while the corresponding abnormal return of the portfolio of firms with the lowest "vote-no" fund share holdings is –0.05%. The abnormal return difference between the 2 portfolios is statistically significant at the 10% level with a *t*-statistic of 1.95. The percentage of firms with positive abnormal stock returns shows a similar pattern. These results support the alignment hypothesis.

D. Multivariate Results

In Table 6 we present multivariate regressions explaining the abnormal return around the passage of the Say-on-Pay Bill. The dependent variable is the 3-day

[33]The classification of the mutual fund families is available from the authors.

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TABLE 5

Do "Vote-No" Mutual Fund Holdings Affect Market Reaction to the Say-on-Pay Bill and CEO Compensation?

The sample consists of 1,270 firms described in Table 2. We sort these 1,270 firms into 4 portfolios by "vote-no" mutual fund holdings. The definition of "vote-no" mutual funds and the estimation of portfolio CAR are described in the Appendix. Percent positive is calculated as the number of stocks in a portfolio with positive abnormal returns, where an individual stock abnormal return is calculated in the same fashion as the portfolio abnormal return. Statistical significance of whether percent positive is different from 50% is determined with a sign test. Statistical significance is determined by the *t*-test for differences in means, and by the Wilcoxon test for differences in medians. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

		Stock Holdings by "Vote-No" Mutual Funds				
		1 (lowest)	2	3	4 (highest)	Difference (4 – 1)
	N	317	318	318	317	
Portfolio CAR (%)	Mean	–0.048	0.254	0.224	0.564	0.612
	t-stat.	–0.21	1.15	1.00	1.89*	1.95*
	% positive	47.3	53.7	52.9	56.3**	
"Vote-no" fund holdings (%)	Mean	6.93	10.50	14.56	21.80	14.87***
	Median	7.13	10.45	14.51	20.73	13.60***

CAR for each firm during the Say-on-Pay Bill event window. Our estimates use the 4-factor model in equation (1).[34] The coefficient β_5 captures the average (1-day) abnormal return over the 3 days of the event period.

Since the abnormal stock returns may exhibit cross-sectional correlation, which can bias the ordinary least squares (OLS) standard errors, we estimate robust standard errors adjusted for industry clustering and calculate *t*-statistics based on these robust standard errors. In addition, we use a bootstrap methodology similar to Zhang (2007) to estimate the *p*-value of the regression coefficients. Specifically, we first randomly select a 3-day nonevent period from our estimation window. Second, we estimate the abnormal return for each sample firm during this nonevent window using the 4-factor model in equation (1), with the dummy variable equaling 1 during this random nonevent window, and 0 otherwise. That is, we estimate an abnormal return for each firm on this same nonevent window. Third, we estimate the regression specifications in Table 6 using the CAR from this random nonevent window. We repeat the 3 steps above 1,000 times to generate an empirical distribution of the regression coefficients from the nonevent days. Finally, we compare the OLS-estimated regression coefficients from the event window to the distribution of coefficients from nonevent windows. The bootstrap *p*-value equals the percentage of the 1,000 coefficients that are higher (lower) than the OLS coefficient if the OLS coefficient is positive (negative).

Our main variables of interest are abnormal CEO compensation, pay-for-performance sensitivity, corporate governance, "vote-no" mutual fund holdings, and institutional holdings. In addition, we control for firm characteristics that may affect cross-sectional stock returns, such as beta, size, book-to-market ratio, leverage, and industry fixed effects. We also control for the percentage of outside directors and the existence of a previous shareholder proposal for say-on-pay in all specifications. Regression (1) in Table 6 shows that abnormal CEO compensation

[34] Since the coefficient estimates of the 4-factor regression are noisy at the *individual firm* level, we winsorize the estimated CAR at the 1% and 99% levels.

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TABLE 6
Multivariate Regressions

The sample consists of 1,270 firms described in Table 2. *For each firm* we estimate the average daily abnormal return for the 3 days in the window (–1, +1) surrounding April 20, 2007. The CAR is defined as the average daily abnormal returns × 3 (since there are 3 days in the event window). The estimation of the average daily abnormal returns is described in the Appendix. Since the coefficient estimates of the 4-factor regression can be noisy at the *individual firm* level, we winsorize the estimated CAR at the 1% and 99% levels. The low pay-for-performance sensitivity dummy variable equals 1 if a firm's average CEO pay-for-performance sensitivity during the 3 years before April 20, 2007, is below the median. The board index equals the sum of quartile rankings (from Table 4) of the 4 board governance variables: percent of busy outside directors, percent of outside directors appointed by current CEO, the board size, and stock ownership of outside directors. Thus, the board index ranges from 4 to 16. Institutional holdings are from Thomson Financial. In our sample, 36 firms received a shareholder proposal prior to the Say-on-Pay Bill. We also include industry fixed effects (2-digit SIC codes) in all regressions. The definitions of other independent variables are described in the Appendix. The *t*-statistics are based on standard errors adjusted for industry clustering and are reported in parentheses. Bootstrap *p*-values, which equal the percentage of 1,000 repetitions that generate coefficients higher (lower) than the OLS coefficient if the OLS coefficient is positive (negative), are reported in brackets. In each repetition, we select one 3-day nonevent period from the estimation window and then estimate the CAR for each sample firm during this nonevent window using the 4-factor model in equation (1). *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

	Dependent Variable = CAR over April 19–April 23, 2007 (industry clustering robust *t*-statistics) [bootstrap *p*-value]											
Independent Variables and Statistics	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Intercept	0.37 (0.36) [0.416]	0.52 (0.46) [0.370]	0.90 (0.78) [0.275]	0.23 (0.23) [0.443]	0.00 (0.00) [0.481]	0.18 (0.17) [0.465]	0.12 (0.12) [0.480]	0.12 (0.11) [0.492]	–1.82 (–1.31) [0.228]	–0.04 (–0.04) [0.481]	–0.12 (–0.11) [0.467]	–0.12 (–0.11) [0.476]
Abnormal CEO salary and bonus	0.28 (2.56)** [0.031]**		0.27 (2.52)** [0.035]**	0.09 (0.69) [0.218]				0.27 (2.47)** [0.035]**	0.25 (2.25)** [0.049]**	0.27 (2.51)** [0.035]**	0.27 (2.22)** [0.049]**	0.26 (2.22)** [0.049]**
log(pay for performance)		–0.13 (–2.22)** [0.034]**	–0.13 (–2.17)** [0.034]**									
Abnormal CEO salary and bonus × low pay-for-performance dummy				0.66 (2.57)** [0.017]**								

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TABLE 6 (continued)

Multivariate Regressions

Independent Variables and Statistics	Dependent Variable = CAR over April 19–April 23, 2007 (industry clustering robust *t*-statistics) [bootstrap *p*-value]											
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
High abnormal CEO salary and bonus dummy					0.41 (2.24)** [0.032]**		0.36 (2.00)** [0.055]*					
Low abnormal CEO salary and bonus dummy						–0.27 (–1.61) [0.115]	–0.15 (–0.94) [0.194]					
BCF index								0.38 (1.99)** [0.028]**				
Square of (BCF index)								–0.10 (–1.86)* [0.053]*				
Board index									0.47 (2.79)*** [0.050]**			
Square of (board index)									–0.02 (–2.52)** [0.065]*			
Stock holdings by “vote-no” mutual funds										2.66 (2.08)** [0.056]*		
Stock holdings by “vote-yes” mutual funds										–1.09 (–0.70) [0.278]		
Institutional holdings											0.56 (0.99) [0.262]	

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TABLE 6 (continued)

Multivariate Regressions

	Dependent Variable = CAR over April 19–April 23, 2007 (industry clustering robust *t*-statistics) [bootstrap *p*-value]											
Independent Variables and Statistics	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Herfindahl index of institutional holdings											–0.92 (–0.38) [0.385]	
Independent institutional holdings												2.87 (1.01) [0.123]
Percent of outside directors	0.21 (0.42) [0.357]	0.18 (0.34) [0.342]	0.09 (0.17) [0.437]	0.23 (0.47) [0.338]	0.29 (0.58) [0.316]	0.25 (0.49) [0.333]	0.25 (0.50) [0.333]	0.17 (0.34) [0.375]	0.25 (0.51) [0.333]	0.18 (0.36) [0.357]	0.46 (0.74) [0.214]	0.52 (0.92) [0.203]
Dummy for receiving a shareholder proposal prior to the bill	–0.58 (–1.19) [0.148]	–0.69 (–1.31) [0.094]*	–0.60 (–1.23) [0.139]	–0.56 (–1.12) [0.167]	–0.69 (–1.31) [0.094]*	–0.65 (–1.29) [0.103]	–0.68 (–1.32) [0.098]*	–0.55 (–1.10) [0.162]	–0.52 (–1.02) [0.187]	–0.61 (–1.26) [0.118]	–0.60 (–1.15) [0.129]	–0.62 (–1.20) [0.128]
Beta	–0.17 (–0.51) [0.361]	–0.19 (–0.54) [0.346]	–0.21 (–0.61) [0.326]	–0.20 (–0.61) [0.345]	–0.16 (–0.49) [0.361]	–0.15 (–0.44) [0.370]	–0.16 (–0.48) [0.365]	–0.16 (–0.49) [0.361]	–0.15 (–0.46) [0.361]	–0.22 (–0.66) [0.326]	–0.25 (–0.78) [0.294]	–0.22 (–0.69) [0.330]
log(assets)	–0.02 (–0.28) [0.494]	0.07 (1.00) [0.269]	0.05 (0.76) [0.316]	–0.04 (–0.57) [0.423]	–0.02 (–0.29) [0.493]	–0.02 (–0.22) [0.494]	–0.02 (–0.34) [0.488]	–0.01 (–0.09) [0.475]	–0.06 (–0.80) [0.373]	0.02 (0.27) [0.405]	–0.01 (–0.08) [0.460]	0.00 (0.05) [0.452]
Book-to-market ratio	–0.73 (–2.15)** [0.097]*	–0.81 (–2.47)** [0.083]*	–0.82 (–2.56)** [0.077]*	–0.72 (–2.18)** [0.097]*	–0.73 (–2.08)** [0.097]*	–0.73 (–2.10)** [0.097]*	–0.73 (–2.11)** [0.097]*	–0.73 (–2.15)** [0.097]*	–0.73 (–2.19)** [0.092]*	–0.79 (–2.29)** [0.083]*	–0.73 (–1.95)* [0.102]	–0.74 (–2.01)** [0.108]
Leverage	0.16 (0.55) [0.405]	0.01 (0.02) [0.492]	0.03 (0.12) [0.485]	0.21 (0.70) [0.369]	0.13 (0.42) [0.424]	0.16 (0.50) [0.405]	0.14 (0.45) [0.429]	0.15 (0.52) [0.406]	0.11 (0.37) [0.448]	0.14 (0.50) [0.428]	0.11 (0.32) [0.436]	0.09 (0.27) [0.467]
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	1,269	1,269	1,269	1,269	1,269	1,269	1,269	1,269	1,269	1,269	1,090	1,090
OLS R^2	0.126	0.125	0.130	0.133	0.125	0.122	0.125	0.129	0.132	0.129	0.142	0.142

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has a significant positive effect on the market reaction to the Say-on-Pay Bill even after controlling for firm characteristics. Both the robust *t*-statistic and the bootstrap *p*-value are significant at the 5% level. Using the coefficient of 0.28, we calculate that a 1-standard-deviation increase in abnormal CEO salary and bonus leads to a 0.21% increase in CAR. The univariate results in Table 3 show that the firms with lower CEO pay-for-performance sensitivity experience more positive abnormal returns. Regression (2) shows that this result holds in a multivariate setting after controlling for other firm characteristics. The log of pay-for-performance sensitivity has a coefficient of –0.13, and both the robust *t*-statistic and the bootstrap *p*-value are significant at the 5% level.

In regression (3), we include both abnormal CEO cash compensation and pay-for-performance sensitivity, along with appropriate control variables. Both variables are statistically significant at the 5% level. In addition, their coefficients are similar to those of regressions (1) and (2), where the 2 variables are included separately. This result suggests that the say-on-pay legislation can help to reduce excess compensation for overpaid CEOs and improve incentive alignment for CEOs with insufficient pay-for-performance sensitivity. The 2 effects do not appear to proxy each other. Firms with low pay-for-performance sensitivity and those that overpay their CEOs with cash compensation may be able to benefit the most from the mandatory say-on-pay. To test this prediction, in regression (4) we interact a dummy variable of below-median pay-for-performance sensitivity and abnormal cash compensation. We find that the interaction term is statistically significant at the 5% level using both the robust *t*-statistics and the bootstrap *p*-value. The coefficient of 0.66 suggests that among the firms with low pay-for-performance sensitivity, a 1-standard-deviation increase in abnormal CEO compensation increases the market reaction to the Say-on-Pay Bill by 0.49%. Consistent with our univariate results, these findings suggest that firms with excessive CEO compensation and poor compensation design will benefit the most from mandatory say-on-pay legislation.

To explore the potential nonlinearity in how the market reacts to the Say-on-Pay Bill with regard to abnormal compensation, we use 2 dummy variables: one for firms in the top quartile of abnormal CEO salary and bonus, and the other for firms in the bottom quartile. Regressions (5)–(7) include the high abnormal compensation dummy variable, the low abnormal compensation dummy variable, and both dummy variables, respectively, among other control variables. We find significantly positive coefficients for the high abnormal compensation dummy variable. This suggests that the Say-on-Pay Bill is likely to benefit firms with overpaid CEOs. The market reaction for firms in the lowest quartile of abnormal compensation (i.e., underpaid) is negative but insignificant.

Since the univariate tests in Table 4 suggest that the market reaction to the Say-on-Pay Bill is nonlinear in corporate governance, we include both linear and square terms of the governance variables in regressions (8) and (9). To recognize the combined effect of the 4 board variables, we construct a board index that equals the sum of the quartile rankings of the 4 variables: the percentage of outside directors appointed by the current CEO, the percentage of busy outside directors, board size, and the outside director stock holdings in the firm. The value of this board index ranges from 4 to 16. In both regressions, the coefficients of the

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linear term of the corporate governance variables (BCF (2009) index and board quality index) are significantly positive, and the squared terms are significantly negative. The bootstrap *p*-value is statistically significant at the 5% level for 2 of the 4 coefficients and at the 10% level for the other 2 coefficients. This result further confirms the inverse-U-shape relation between the market reaction to the Say-on-Pay Bill and corporate governance.[35]

Regression (10) shows that higher "vote-no" mutual fund holdings lead to a more positive market reaction; the coefficient is statistically significant at the 5% level using the robust *t*-statistics and at the 10% level using the bootstrap *p*-value. The coefficient of 2.66 suggests that a 1-standard-deviation increase in "vote-no" fund holdings leads to 0.16% higher CAR. In contrast, we find the stock holdings by "vote-yes" mutual funds have a negative effect on the market reaction to the Say-on-Pay Bill, although the coefficient is statistically insignificant.

Regression (11) reveals that abnormal returns increase with the level of institutional holdings but decline with the concentration of institutional holdings, although both coefficients are statistically insignificant. Regression (12) shows that the stock holdings by the independent institutions also have a positive but insignificant effect on the market reaction to the legislation. Hartzell and Starks (2003) and Almazan et al. (2005) find that a higher Herfindahl index of institutional holdings is associated with lower excess pay. Similarly, we find a significantly negative correlation of –0.10 between the Herfindahl index of institutional holdings and abnormal CEO cash compensation. However, we find no association between the market reaction to the Say-on-Pay Bill and the Herfindahl index. In unreported tests, we also find no significant relation between an institutional blockholder dummy variable (above 5% holdings) and the market reaction to the Say-on-Pay Bill.

To this point, our results are supportive of the alignment hypotheses, that federal say-on-pay legislation is associated with increased firm value for firms where it would provide expected benefits. Specifically, the expected benefit would occur in firms with excessive CEO pay and in those likely to implement changes as a result of shareholder votes. In a subsequent section, we present results related to company-specific say-on-pay proposals submitted by activist shareholders. To preview those results, the firms targeted by company-specific shareholder proposals do not appear to have excessive CEO pay, nor do they have weak corporate governance. Consequently, they are unlikely to benefit from the proposals. Consistent with this, we find that in all 12 regressions, the coefficients on a dummy variable for receiving a company-specific say-on-pay proposal prior to the House bill's passage are negative, with bootstrap *p*-values between 0.09 and 0.19.

E. Responsiveness to Shareholder Pressure

The shareholder vote proposed by say-on-pay is nonbinding. Thus, when facing a low vote, it is up to the board of a company to reduce excessive executive pay or design a better compensation package. Whether say-on-pay legislation can

[35] In a sensitivity test, we replace the BCF (2009) index with the GIM (2003) index in regression (8). The coefficients have the same sign, although they become statistically insignificant (bootstrap *p*-value of 0.113 for the linear term and 0.142 for the squared term).

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create value depends on whether a board is responsive to shareholder pressure. Next, we examine whether companies that are more responsive to shareholder votes have a different reaction to the Say-on-Pay Bill. There is evidence that shareholder votes affect CEO compensation. Cai et al. (2009) find that on average, CEOs are more likely to experience declines in abnormal CEO pay the year after their compensation committee members receive lower votes in director elections.

Using data from Table V of Cai et al. (2009), we identify 91 firms in our current sample as responsive to shareholder votes. In each of these cases the directors serving on compensation committees received more withhold votes in director elections than the median compensation committee member, and their CEOs experience declines in abnormal compensation the following year. We also identify 40 nonresponsive firms. In each of these cases the directors serving on compensation committees received more withhold votes than did the median compensation committee, but their CEOs do not experience a decline in abnormal compensation in the following year. The say-on-pay legislation may induce these more responsive firms to reduce abnormal compensation and thus lead to higher firm value.

Results in Panel A of Table 7 reveal that responsive firms experience significantly higher abnormal portfolio returns (0.69%) in comparison to nonresponsive firms (–0.39%), and the difference is statistically significant at the 5% level, although the percentage of stocks with positive abnormal returns is evenly split. As a result of their response to shareholder pressure, the responsive firms have lower abnormal compensation than the nonresponsive firms. The positive abnormal compensation of the responsive firms suggests, however, that the managers of these firms are still overpaid. Thus, allowing shareholders to have a say on executive compensation may further reduce CEO pay for these firms and add to firm value. Panel B of Table 7 indicates that after controlling for various firm characteristics and industry affiliations, the responsive firms still have a higher abnormal return surrounding the House passage of the Say-on-Pay Bill. Both the industry-clustering robust *t*-statistic and the bootstrap *p*-value are statistically significant at the 5% level.

Data in Table 4 indicate that firms in the 3rd quartile of the governance variables (2nd-weakest governance) have the strongest market reaction to the Say-on-Pay Bill. We interpret this result as suggesting that these firms not only are likely to be affected by the bill, but also are willing to improve their governance under shareholder pressure. Consistent with this interpretation, we find in untabulated results that the responsive firms are more likely than nonresponsive firms to have their corporate governance ranking in the 3rd quartile of the sample for 5 out of the 6 governance variables.

F. What Types of Companies Receive Individual Say-on-Pay Shareholder Proposals?

Some shareholders appear unwilling to wait for say-on-pay legislation to be signed into law. These shareholders, mostly labor union pension funds, have submitted say-on-pay proposals directly to the boards of a number of companies. These proposals provide another opportunity to examine the efficacy of say-on-pay and in this case jointly test the proposition that company-specific

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proposals target firms that are likely to benefit from changes in their compensation practices.

First, we examine the firm characteristics associated with the probability of receiving a shareholder-sponsored say-on-pay proposal. The alignment hypothesis predicts that firms most likely to benefit from say-on-pay are more likely to receive such proposals. Consistent with the interference hypothesis, however, labor unions may have objectives that transcend shareholder wealth maximization. In fact, the average sponsoring shareholder in our sample holds about 0.04% of the company's outstanding shares. Thus, if the proposals do affect shareholder wealth, the loss or gain to sponsoring shareholders is not great.

To test these issues, we estimate a logistic regression where the dependent variable equals 1 if a company receives a say-on-pay shareholder proposal during the period 2006–2008, and 0 otherwise. The independent variables include firm characteristics related to size, performance, and governance. Table 8 indicates that larger firms are significantly more likely to receive proposals. In unreported tests, we only include firm size and industry and calendar-year fixed effects as independent variables; the regression R^2 equals 0.469, which is very close to the R^2

TABLE 7

Do Companies Responsive to Shareholder Votes React Differently to the Say-on-Pay Bill?

Using data from Table V in Cai et al. (2009), we identify 91 firms in our sample as responsive to shareholder votes on compensation committee. The directors serving on the compensation committee of these firms received more withhold votes than the median compensation committee, and their CEO's abnormal compensation decreased in the following year. We also identify 40 firms as not responsive. The directors serving on the compensation committee of these firms received more withhold votes than the median compensation committee, but their CEO's abnormal compensation did not decrease in the following year. In Panel A of Table 7 we report the portfolio CAR of the responsive and nonresponsive firms. The estimation of the portfolio CAR and abnormal compensation are described in the Appendix. Percent positive is calculated as the number of stocks in a portfolio with positive abnormal returns, where an individual stock abnormal return is calculated in the same fashion as the portfolio abnormal return. In Panel B, we estimate for each firm the CAR as 3 × the average daily abnormal return, since there are 3 days in the event window. The estimation of the daily abnormal return is described in the Appendix. Since the coefficient estimates of the 4-factor regression are noisy at the *individual firm* level, we winsorize the estimated CAR at the 1% and 99% levels. In Panel A statistical significance of whether percent positive is different from 50% is determined with a sign test. Statistical significance of return and compensation differences is determined by the *t*-test for differences in means, and by the Wilcoxon test for differences in medians. In Panel B *t*-statistics are based on robust standard errors adjusted for industry clustering and are reported in parentheses. Bootstrap *p*-values, which equal the percentage of 1,000 repetitions that generate coefficients higher (lower) than the OLS coefficient if the OLS coefficient is positive (negative), are reported in brackets. In each repetition, we select one 3-day nonevent period from the estimation window and then estimate CAR for each sample firm during this nonevent window using the 4-factor model in equation (1). *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

		Firms Responsive to Shareholder Vote on Compensation Committee (1)	Firms NOT Responsive to Shareholder Vote on Compensation Committee (2)	Difference (1) – (2)
Panel A. Univariate Tests				
	N	91	40	
CAR (%)	Mean	0.687	–0.393	1.080
	t-stat.	1.87*	–0.70	1.98**
	% positive	49.5	50	
Abnormal CEO Compensation ($million)				
Salary and bonus	Mean	0.625	1.800	–1.175**
	Median	0.315	0.598	–0.283*
Equity-based	Mean	4.416	7.656	–3.240*
	Median	1.774	3.962	–2.188***
Total compensation	Mean	3.577	7.343	–3.766**
	Median	1.144	4.422	–3.278***

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TABLE 7 (continued)

Do Companies Responsive to Shareholder Votes React Differently to the Say-on-Pay Bill?

Independent Variables and Statistics	Dependent Variable = CAR over April 19–April 23, 2007 (industry clustering robust *t*-statistics) [bootstrap *p*-value]
Panel B. Multivariate Regressions	
Intercept	5.67 (1.49) [0.048]**
Dummy for responsive to shareholder vote on compensation committee	1.38 (2.44)** [0.023]**
Percent of outside directors	–0.94 (–0.81) [0.284]
Dummy for receiving a shareholder proposal prior to the bill	–0.80 (–0.80) [0.192]
Beta	–2.12 (–2.84)*** [0.028]**
log(assets)	–0.22 (–0.90) [0.219]
Book-to-market ratio	0.29 (0.18) [0.404]
Leverage	–1.24 (–1.29) [0.221]
Industry fixed effects	Yes
N	131
OLS R^2	0.304

in Table 8, where additional governance and performance variables are included. These results suggest that these proposal-sponsoring shareholders mainly target large firms. In addition, excessive pay does not seem to be a concern for these shareholders: Regressions (1) and (3) show that the level of abnormal CEO pay is not significantly related to the existence of a shareholder-sponsored say-on-pay proposal. Regressions (2) and (4) show that even raw compensation is not significantly related to the say-on-pay proposal after controlling for size and other firm characteristics. In unreported tests, we find that the targeted firms tend to have higher raw compensation, which may be why they are targeted. However, after we control for size, performance, and other firm characteristics, the probability of being targeted is no longer associated with compensation. Further, all 4 specifications in Table 8 show that firms with higher pay-for-performance sensitivity are more likely to be targeted. This evidence suggests that the sponsoring shareholders do not target the "right" firms.

Table 8 also shows that the targeted firms have performance and corporate governance similar to those of other firms. Finally, we find that stock holdings by the independent institutions significantly increase a firm's probability of receiving a shareholder-sponsored say-on-pay proposal. Some large public pension funds, such as CalPERS, have publicly endorsed say-on-pay. Large stock holdings by

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TABLE 8

Probability of Receiving a Shareholder-Sponsored Say-on-Pay Proposal

We identify from ISS 136 company-specific shareholder-sponsored proposals targeting 96 companies that request the board of directors to adopt an advisory shareholder vote on executive compensation during the period 2006–2008. The sample in the following regressions includes 3,401 shareholder meetings during the period 2006–2008 that satisfy data availability requirement. Among the 3,401 meetings, a say-on-pay proposal is voted at 113 meetings of 81 individual companies. The independent variables are as of the year before the shareholder meeting. The definitions of the independent variables are described in the Appendix. *t*-statistics are reported in parentheses. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

	Dependent Variable = Say-on-Pay Proposal Dummy			
Independent Variables and Statistics	(1)	(2)	(3)	(4)
Intercept	–20.90 (–0.24)	–20.79 (–0.25)	–20.59 (–0.38)	–19.83 (–0.37)
log(assets)	0.94 (7.69)***	0.96 (7.74)***	0.92 (7.69)***	0.95 (7.56)***
Abnormal CEO cash compensation	–0.03 (–0.24)			
Abnormal CEO equity compensation	–0.09 (–1.14)			
log(CEO cash compensation)		–0.01 (–0.07)		
log(CEO equity compensation)		–0.10 (–1.25)		
Abnormal CEO total compensation			–0.13 (–1.23)	
log(CEO total compensation)				–0.07 (–0.66)
log(pay-for-performance sensitivity)	0.29 (3.00)***	0.30 (3.06)***	0.34 (3.44)***	0.34 (3.47)***
Industry-adjusted ROA	2.02 (1.08)	2.11 (1.12)		
Prior-year excess stock return			–0.53 (–0.93)	–0.50 (–0.88)
Book-to-market ratio	–0.09 (–0.21)	–0.10 (–0.23)	–0.25 (–0.60)	–0.28 (–0.67)
BCF index	–0.14 (–1.08)	–0.14 (–1.06)	–0.11 (–0.89)	–0.12 (–0.93)
CEO is chairman	0.19 (0.72)	0.19 (0.72)	0.20 (0.75)	0.19 (0.71)
Percent of outside directors	–1.11 (–1.07)	–1.11 (–1.07)	–0.94 (–0.91)	–0.97 (–0.94)
Outside director stock ownership	–0.64 (–0.22)	–0.66 (–0.23)	–0.48 (–0.17)	–0.55 (–0.19)
Board size	0.02 (0.99)	0.02 (0.97)	0.02 (1.15)	0.02 (1.08)
Percent of outside directors appointed by current CEO	–0.64 (–1.49)	–0.65 (–1.51)	–0.64 (–1.47)	–0.65 (–1.51)
Percent of outside directors with 3 or more board seats	1.58 (2.43)**	1.59 (2.45)**	1.71 (2.63)***	1.71 (2.63)***
Independent institutional holdings	0.33 (2.54)**	0.33 (2.52)**	0.32 (2.40)**	0.31 (2.36)**
Calendar-year fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
N (dependent variable = 1)	113	113	113	113
N (dependent variable = 0)	3,286	3,286	3,286	3,286
R^2	0.499	0.500	0.499	0.498

these institutions may attract labor unions to submit shareholder say-on-pay proposals in anticipation of increased support.

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G. Market Reaction to the Announcement of Company-Specific Say-on-Pay Shareholder Proposals

Results in Table 8 suggest that say-on-pay proposals target companies that are unlikely to benefit. Their performance and corporate governance are similar to those of other firms, and they do not appear to suffer from abnormal CEO pay. The primary factor driving the decision to target these firms appears to be their large size. We next examine the market reaction to the announcement of say-on-pay shareholder proposals. We define the announcement date as the earlier of the SEC filing date or the proxy mailing date. Panel A of Table 9 shows that while on average these firms have insignificant proposal announcement returns, when the say-on-pay proposals are sponsored by labor unions, the market reacts significantly more negatively than otherwise.[36]

TABLE 9

Shareholder-Sponsored Say-on-Pay Proposal Announcement and Market Reaction

The sample of 113 shareholder-sponsored say-on-pay proposals is described in Table 8. We define the announcement date as the earlier of the SEC filing date or the proxy mailing date. In Panel A of Table 9 statistical significance of the return difference is determined by the *t*-test for differences in means and by the Wilcoxon test for differences in medians. Statistical significance of whether percent positive is different from 50% is determined with a sign test. In Panel B the independent variables are as of the year before the shareholder meeting. The definitions of the independent variables are described in the Appendix. *t*-statistics are reported in parentheses. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Announcement CAR (%)	*N*	Mean (%)	*t*-Stat.	Median (%)	% Positive
Panel A. Market Reaction to the Announcement of Shareholder-Sponsored Say-on-Pay Proposals					
Full sample	113	–0.12	–0.33	–0.10	47.8%
Union sponsored	48	–0.94	–1.52	–0.64	39.6%
Nonunion sponsored	65	0.48	1.16	0.28	53.8%
Difference		1.42**		0.92*	

Independent Variable and Statistics	Dependent Variable = Announcement CAR of Shareholder-Sponsored Say-on-Pay Proposals (%) (1)	(2)
Panel B. Multivariate Regressions		
Intercept	0.48	1.58
	(1.03)	(1.93)*
Dummy for labor union sponsored	–1.43	–1.29
	(–1.98)**	(–1.83)*
Abnormal CEO cash compensation		–0.35
		(–1.03)
Union sponsored × abnormal CEO cash compensation		1.26
		(2.80)***
First proposal		–0.82
		(–1.08)
Dummy for proponent disclose share holdings		–0.83
		(–1.15)
Dummy for proponent disclose share holdings × proponent share holdings		–2.34
		(–0.97)
N	113	113
Adjusted R^2	0.025	0.108

[36]For a small sample of 23 firms, we find insignificant abnormal returns when they announce the implementation of say-on-pay. Due to small sample size, we caution the readers about the interpretation of this result.

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We examine the cross-sectional variation of the market reaction to say-on-pay proposals by estimating regressions of the abnormal returns in Panel A of Table 9. Panel B reports that when the say-on-pay proposal is submitted by a labor union, the market reaction is significantly more negative (–1.3% using the multivariate regression coefficient), and the results hold in both univariate and multivariate tests. This result suggests that say-on-pay may be used by special interest groups for agendas not in the best interests of the shareholders. On the other hand, the significantly positive coefficient of the interaction of a union dummy variable and the CEO's abnormal cash compensation suggests that when the unions happen to target firms with overpaid CEOs, market reaction is less negative. Overall, these results are consistent with both the interference hypothesis (for firms targeted by unions) and the alignment hypothesis (when these firms happen to have overpaid CEOs).

H. Voting Outcome of Say-on-Pay Shareholder Proposals and Market Reaction

Panel A of Table 10 shows that the say-on-pay proposals on average do not receive majority shareholder backing. On average, less than 30% of all outstanding shares support the proposals. This finding is consistent with earlier results that the companies receiving the proposals are unlikely to benefit from say-on-pay.

In Panel B of Table 10 we examine the determinants of shareholder support for the say-on-pay proposals. The dependent variables are 3 measures of voting outcome. In all 3 regressions, we find that proposals sponsored by labor unions receive significantly lower shareholder support. Two of the 3 coefficients are statistically significant at the 5% level, and the 3rd coefficient is significant at the 10% level. The significantly positive coefficients of abnormal CEO pay suggest that shareholders tend to support the say-on-pay proposals if the company overpays its CEO. The interaction terms of the union sponsor dummy variable and abnormal CEO pay have negative coefficients with similar magnitudes to those of abnormal CEO pay. We interpret this result as follows: The negative impact of having a proposal sponsored by a labor union offsets shareholder concerns about excess pay.

Firms with more outside directors also receive more support for the say-on-pay proposals. Board holdings have significantly negative coefficients. This is consistent with the fact that boards typically recommend voting against these proposals and presumably vote their own shares accordingly. Finally, stock holdings by independent institutions are positively related to the voting outcome. This is not surprising, since some public pension funds, such as CalPERS, have publicly endorsed say-on-pay.

Panel C of Table 10 further shows that when these proposals are voted down by the shareholders, the average abnormal return is 2.3% higher than when the proposals pass. In untabulated results, we find that conditional on the proposal being defeated, the average abnormal return is significantly more positive for firms with negative abnormal CEO pay than for firms with positive abnormal CEO pay. We next examine the cross-sectional variation of the market reaction to say-on-pay proposal votes by estimating multivariate regressions of the abnormal returns.

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Regressions (1)–(3) of Panel D show that the market reaction to vote outcomes is negatively related to the votes in favor of the say-on-pay proposal, and the coefficients are statistically significant at the 10% level for 2 out of 3 measures of votes. Regression (4) shows that when the proposal is defeated, abnormal returns are about 2.3% higher, consistent with the univariate result. These results support the interference hypothesis. When a proposal is defeated, however, the market reaction is also negatively related to abnormal CEO compensation. This result supports the alignment hypothesis. The results are consistent with the following interpretation: In general, company-specific say-on-pay proposals target firms that are unlikely to benefit from compensation-related changes. Thus, the market reaction is negative when proposals targeting these firms receive higher levels of support. To the extent that a firm's CEO is overpaid, however, the negative effect is reduced.

TABLE 10

Shareholder-Sponsored Say-on-Pay Proposal Voting Outcome and Market Reaction

The sample of 113 shareholder-sponsored say-on-pay proposals is described in Table 8. ISS reports 3 measures of voting outcomes: the number of "for" votes divided by the sum of "for" and "against" votes; the number of "for" votes divided by the sum of "for," "against," and "abstain" votes; and the number of "for" votes divided by the total number of shares outstanding. ISS also reports the vote measure a company designates to determine whether the proposal passed or failed. The defeat dummy variable equals 1 if the designated voting measure is less than 50%, and 0 otherwise. In Panel C statistical significance of the return difference is determined by the *t*-test for differences in means and by the Wilcoxon test for differences in medians. Statistical significance of whether percent positive is different from 50% is determined with a sign test. In Panels B and D the independent variables are as of the year before the shareholder meeting. The definitions of the independent variables are described in the Appendix. *t*-statistics are reported in parentheses. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Voting Measures	*N*	Mean	Min.	Median	Max.
Panel A . Distribution of Votes for Say-on-Pay Shareholder Proposals					
For/(For + Against) (%)	113	40.9	17.1	41.3	69.6
For/(For + Against + Abstain) (%)	113	38.6	16.7	39.4	66.6
For/Outstanding shares (%)	113	29.0	14.4	28.6	54.6

	Dependent Variable =		
Independent Variable and Statistics	For/ (For + Against) (1)	For/ (For + Against + Abstain) (2)	For/ Outstanding Shares (3)
Panel B. Multivariate Regressions			
Intercept	17.46 (2.67)***	16.02 (2.52)**	16.22 (3.05)***
Union sponsored	–3.39 (–2.25)**	–3.37 (–2.31)**	–2.18 (–1.78)*
Abnormal CEO cash compensation	1.47 (2.08)**	1.26 (1.84)*	0.97 (1.69)*
Union sponsored × abnormal CEO cash compensation	–2.00 (–2.13)**	–1.58 (–1.74)*	–0.73 (–0.95)
Percent of outside directors	0.24 (3.47)***	0.22 (3.26)***	0.11 (1.91)*
Board stock ownership	–0.22 (–3.97)***	–0.20 (–3.68)***	–0.13 (–2.87)***
Independent institutional holdings	2.84 (2.64)***	3.09 (2.95)***	2.28 (2.60)***
N	113	113	113
Adjusted R^2	0.293	0.273	0.170

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TABLE 10 (continued)

Shareholder-Sponsored Say-on-Pay Proposal Voting Outcome and Market Reaction

Voting Day CAR (%)	*N*	Mean (%)	*t*-Stat.	Median (%)	% Positive
Panel C. Market Reaction to the Voting Outcome of Say-on-Pay Shareholder Proposals					
Full sample	113	0.18	0.56	–0.32	44.2
Proposal defeated	102	0.41	1.22	–0.26	46.1
Proposal passed	11	–1.89	–1.60	–0.59	27.2
Difference		2.30**		0.33	

	Dependent Variable = Voting Day CAR (%)			
Independent Variable and Statistics	(1)	(2)	(3)	(4)
Panel D. Multivariate Regressions				
Intercept	2.53 (1.72)*	2.43 (1.68)*	2.70 (1.93)*	–1.89 (–1.91)*
For/(For + Against) (%)	–0.06 (–1.65)*			
For/(For + Against + Abstain) (%)		–0.06 (–1.61)		
For/Outstanding shares (%)			–0.08 (–1.87)*	
Proposal is defeated				2.26 (2.17)**
Defeat dummy × abnormal CEO cash compensation	–0.67 (–2.97)***	–0.68 (–2.98)***	–0.66 (–2.92)***	–0.71 (–3.16)***
N	113	113	113	113
Adjusted R^2	0.087	0.086	0.093	0.103

I. Evidence of Shareholder Voting on Incentive Compensation Plans

Our findings suggest that future shareholder votes on executive compensation, mandated by the Say-on-Pay Bill, will create value for firms with overpaid CEOs and firms more likely to respond to shareholder votes. If shareholders care about executive compensation, their votes on proposals should be related to the level of abnormal CEO pay. Our last experiment examines *past* compensation proposals to see if abnormal pay does indeed influence shareholder voting. We focus on management proposals for approval of incentive compensation plans because they are most similar to the proposals that would be submitted for shareholder approval if the Say-on-Pay Bill became law. The sample for this 3rd experiment consists of 2,511 compensation proposals voted on at 1,853 shareholder meetings during the 2003–2008 period. Most of these proposals are for the approval of equity-based compensation plans. The dependent variable is the percentage of votes supporting these proposals, which equals the number of favorable votes divided by a base of votes as reported by ISS.[37] ISS reports the base of votes in 3 alternative ways, namely, as the sum of "for" and "against" votes; the sum of "for," "against," and "abstain" votes; or the number of shares outstanding.

[37]We measure the voting outcome with the number of "for" votes divided by the base votes as this ratio is what companies report and it determines whether a proposal passes or fails. In a sensitivity test, we measure the votes with the number of "for" votes divided by the total number of shares outstanding and find qualitatively similar results.

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Table 11 shows that shareholder support is significantly lower when abnormal CEO compensation is higher (in particular if the abnormal equity-based compensation is higher). Shareholder support is also significantly higher when the CEO pay-for-performance sensitivity is higher. Shareholder votes are also significantly lower when "vote-no" mutual fund holdings, as well as the aggregate institutional holdings, are higher. These are consistent with our prior results, suggesting that if the Say-on-Pay Bill is signed into law, firms with high abnormal CEO compensation, low pay-for-performance sensitivity, and independent-minded shareholders are likely to receive lower approval votes from the shareholders.

TABLE 11

Determinants of Votes for Compensation Proposals

The sample includes 2,511 management-sponsored compensation proposals seeking shareholder approval at 1,853 shareholder meetings during the 2003–2008 period. The dependent variable is the percent of votes supporting these proposals, which equals the number of "for" votes divided by the base of votes. ISS identifies the base of votes as the sum of "for" and "against" votes; the sum of "for," "against," and "abstain" votes; or the total shares outstanding. If more than one proposal is voted on at a shareholder meeting, we calculate the average supporting votes. The abnormal CEO compensation variables are the residuals from compensation regressions using all ExecuComp companies during 2002–2007 as the benchmark. The details of the compensation regressions are described in the Appendix. Then we use the abnormal compensation before the shareholder meeting as the key independent variable. CEO stock holdings are calculated from ExecuComp. The Fama-French (1993) 4-factor regression is estimated during the 36 months prior to the shareholder meeting. EBITDA/assets equals the earnings before interest, tax, depreciation, and amortization during the fiscal year before shareholder meeting divided by the total assets at the beginning of the fiscal year. All other independent variables are described in the Appendix. The *t*-statistics are based on standard errors adjusted for industry and calendar-year clustering and are reported in parentheses. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Independent Variables and Statistics	Dependent Variable = Votes for Management Compensation Proposals (%)					
	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	84.37 (21.69)***	86.47 (21.34)***	82.09 (20.46)***	83.89 (21.22)***	86.81 (21.52)***	81.88 (20.46)***
Abnormal log(CEO total compensation)	–1.14 (–3.46)***					
Abnormal log(CEO cash compensation)		0.17 (0.55)				
Abnormal log(CEO equity-based compensation)			–0.30 (–3.41)***			
Top quartile of abnormal log(CEO total compensation)				–1.30 (–1.85)*		
Bottom quartile of abnormal log(CEO total compensation)				0.98 (1.44)		
Top quartile of abnormal log(CEO cash compensation)					0.40 (0.56)	
Bottom quartile of abnormal log(CEO cash compensation)					–0.54 (–0.74)	
Top quartile of abnormal log(CEO equity-based compensation)						–1.18 (–1.72)*
Bottom quartile of abnormal log(CEO equity-based compensation)						1.56 (2.39)**
log(CEO pay-for-performance sensitivity)	0.77 (3.43)***	0.75 (3.42)***	0.86 (3.84)***	0.84 (3.48)***	0.71 (3.25)***	0.85 (3.78)***
"Vote-no" fund holdings	–0.16 (–4.54)***			–0.16 (–4.42)***		
Institutional holdings		–0.06 (–3.40)***			–0.06 (–3.37)***	
Independent institutional holdings			–0.10 (–0.99)			–0.10 (–1.00)

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TABLE 11 (continued)
Determinants of Votes for Compensation Proposals

Independent Variables and Statistics	Dependent Variable = Votes for Management Compensation Proposals (%) (1)	(2)	(3)	(4)	(5)	(6)
CEO stock holdings	–0.04 (–0.47)	–0.01 (–0.10)	–0.02 (–0.19)	–0.03 (–0.33)	0.00 (–0.06)	–0.02 (–0.19)
Outside director stock holdings	0.09 (1.70)*	0.12 (2.27)**	0.14 (2.77)***	0.09 (1.73)*	0.12 (2.31)**	0.14 (2.78)***
Board size	0.08 (1.69)*	0.11 (1.92)*	0.11 (2.16)**	0.08 (1.65)*	0.11 (1.91)*	0.11 (2.02)**
Busy board dummy	0.06 (0.09)	0.11 (0.16)	0.28 (0.42)	0.04 (0.06)	0.11 (0.16)	0.22 (0.33)
GIM index	0.24 (2.23)**	0.24 (2.27)**	0.27 (2.48)**	0.24 (2.27)**	0.23 (2.19)**	0.27 (2.52)**
% of outside directors appointed by current CEO	–0.84 (–0.92)	–1.31 (–1.48)	–1.60 (–1.82)*	–1.02 (–1.15)	–1.33 (–1.52)	–1.56 (–1.76)*
Percent of outside directors	–3.97 (–2.16)**	–4.29 (–2.33)**	–4.85 (–2.61)***	–4.03 (–2.20)**	–4.36 (–2.38)**	–4.84 (–2.60)***
Intercept from Fama-French 4-factor regressions	0.04 (0.28)	0.03 (0.20)	0.04 (0.29)	0.06 (0.43)	0.02 (0.12)	0.04 (0.31)
Prior-year EBITDA/assets	2.92 (1.17)	3.73 (1.47)	2.56 (0.97)	2.61 (1.06)	3.81 (1.51)	2.58 (0.98)
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Calendar-year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
OLS R^2	0.113	0.100	0.099	0.111	0.100	0.100
N	1,853	1,853	1,853	1,853	1,853	1,853

V. Conclusion

The post-SOX period is associated with several initiatives designed to give shareholders an increased voice in the boardroom. The latest of these initiatives, say-on-pay, would allow shareholders to vote on executive compensation. The House of Representatives passed the Say-on-Pay Bill on April 20, 2007, by a 2–1 margin. The bill does not limit CEO pay but requires a nonbinding advisory shareholder vote on executive compensation packages. Proponents argue that the bill will increase shareholder democracy and align owner-manager interests. Opponents argue that it will usurp power that is best left to the management and boards of specific firms.

We perform 3 separate experiments to test hypotheses related to say-on-pay. In our primary experiment, we analyze the abnormal return of 1,270 firms surrounding the House passage of this bill. Stocks of firms with the highest abnormal CEO pay and low pay-for-performance sensitivity react in a significant, positive manner to the Say-on-Pay Bill. Mandatory say-on-pay legislation seems to create value for these firms. We find that the positive market reaction is stronger for firms with weak, but not the weakest, governance. This result suggests that while the advisory shareholder vote proposed by the Say-on-Pay Bill may benefit firms with overpaid CEOs, it is up to the board of directors to make these changes. The legislation is unlikely to affect deeply entrenched managers. In addition, we find that the Say-on-Pay Bill will create more value for firms with greater proportions of shares held by "vote-no" mutual funds. These funds tend to vote against

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management recommendations and are more likely to exert pressure on firms during votes on executive compensation. Finally, the results suggest that higher value can be created for firms that are more willing to improve compensation practice under the pressure of shareholder votes.

These findings are surprising, given that several uncertainties at that time biased against us finding significant results. First, while the measure passed the House, it had yet to reach the floor of the Senate. Then-Senator Barack Obama introduced the bill in the Senate Banking Committee on the day it passed the House. Second, even if the bill passed the Senate in its original form, the Bush White House had promised to veto it. Third, even if the bill became law, it was an advisory vote without binding management to a particular action. The significant findings obtained in spite of these facts suggest our results understate the value impact of the bill.

Say-on-pay does not, however, benefit all firms. In a 2nd experiment, we examine individual companies targeted by shareholder say-on-pay proposals. This sample provides additional evidence on say-on-pay and on the joint test that the targeted firms would benefit from the proposals. Our results show that targeted firms suffer negative abnormal returns when proposals sponsored by labor unions are announced. These proposals tend to receive lower shareholder support, and when they are voted down the market reaction is positive. We also find that, after controlling for size, performance, and other firm characteristics, firms targeted by shareholder proposals are not overpaying their CEOs. In addition, the targeted firms have similar performance and corporate governance to the other firms. It appears that these firms are targeted because of high CEO compensation driven by large firm size. These results are supportive of the interference hypothesis. In a 3rd experiment, we confirm that shareholders vote as if they care about the level of abnormal executive compensation.

Our results provide important evidence pertaining to the current initiatives being considered by Congress. Our work also provides evidence of the importance of activist shareholders and corporate governance in general. Say-on-pay creates value only in those firms that could benefit from an improvement in compensation practices and where the vote is likely to lead to changes in firm compensation policy.

Appendix. Definition of Variables

The abnormal CEO compensation variables are the residuals from compensation regressions using all ExecuComp companies with available data as the benchmark. The dependent variables of the 3 compensation regressions are CEO's cash compensation (salary and bonus), equity-based compensation (stock options and restricted stocks), and total compensation (including option grants). The common independent variables for all 3 regressions are 3-year stock returns, the log of the market value of equity, 2-digit SIC codes, leverage, and calendar-year fixed effects. Additionally, we include ROA in the cash compensation regression, the book-to-market ratio in the equity-based compensation regression, and both variables in the total compensation regression as independent variables. Since compensation variables are highly skewed, we use the natural logarithm of the 3 compensation measures in the regressions.

The single event date of the *1st experiment* is April 20, 2007. The reported compensation variables take the average value during the 3 years before this date. In the *2nd and 3rd*

experiments, the event dates are proxy filing/mailing dates or shareholder meeting dates. Since these dates are different for each sample firm, we use abnormal compensation in the fiscal year before event dates. Since some firms appear in multiple years, we avoid overlapping explanatory variables by using the previous year's abnormal compensation in these 2 experiments. Specifically, since the sample of shareholder proposals in the 2nd experiment (Tables 8–10) spans 2006–2008, we estimate the compensation regressions discussed above using all ExecuComp companies during 2005–2007. We then take the residual in the year before the shareholder meeting date as the abnormal CEO compensation. The sample of shareholder voting on equity compensation plans in Table 11 spans 2003–2008. Thus, we estimate the compensation regressions using all ExecuComp companies during 2002–2007, and then we take the residual in the year before the shareholder meeting date as the abnormal CEO compensation.

Pay-for-performance sensitivity equals the dollar change of a CEO's stock and option wealth for every 1% increase in company stock price, where the change in stock value equals the number of shares × a 1% increase of stock price, and the change in option value equals the number of options × the delta of the options times a 1% increase of stock price. We use the procedure of Cai and Vijh (2007) to infer the terms of the option holdings of a CEO. We then calculate the pay-for-performance sensitivity based on the CEO's portfolio of stock and options at the end of each fiscal year. Similar to the abnormal CEO compensation, we use the 3-year average pay-for-performance sensitivity before April 20, 2007, in the 1st experiment and use the fiscal year-end value before the shareholder meetings in the 2nd and 3rd experiments.

The *GIM index* is from IRRC following the methodology of GIM (2003). The *BCF index* is the sum of 6 antitakeover provisions following BCF (2009).

We define an *outside director as being appointed by the CEO* if she joins the board after the current CEO, where outside directors are identified by IRRC. We classify a *busy director* as one who holds 3 or more board seats. We then calculate for each firm the percent of its outside directors that are appointed by the current CEO or are busy. *Board size* equals the number of directors serving on the board. *Outside director stock holdings* equals the total number of shares owned by outside directors divided by the number of shares outstanding.

We define a mutual fund family as a *"vote-no" fund* if it votes against a company manager's recommendation more frequently than the median mutual fund family, and a *"vote-yes" fund* if otherwise. Since this study focuses on executive compensation, we define "vote-no" funds using only the *Compensation*-related proposals. The mutual fund voting records are obtained from ISS. We find that in 98% of all proposals voted at shareholder meetings, all funds in the same family cast the same vote. Thus, we aggregate the votes of all funds in a family. We next manually match the mutual fund families in ISS to those in Thomson Financial. Finally, we calculate the percent of a firm's outstanding shares held by "vote-no" and "vote-yes" mutual funds prior to April 19, 2007. We classify the mutual funds using voting records during the 2003–2006 period for the 1st experiment and voting records during the 2003–2008 period for the 3rd experiment.

Institutional holdings are from Thomson Financial. We classify an *institution as independent* if it is a public pension fund or a university or foundation endowment fund. We then aggregate the percent of a firm' outstanding stock held by independent institutions. We thank Professor Brian Bushee of Wharton for providing classification data for institutions.

Beta is estimated with daily stock returns during the nonevent period between April 23, 2006 and April 18, 2007, and excluding the confounding event windows in Table 1.

Leverage equals the book value of debt divided by the book value of debt and equity.

We estimate the *Portfolio CAR* as the average daily abnormal returns times 3, since there are 3 days in the event window. The *average daily abnormal returns* are estimated as the regression coefficient of the event window dummy variable using the Fama-French-Carhart 4-factor model as in equation (1), where the *dependent variable equals the average daily stock return of the firms in a portfolio*. The independent variables include the market excess return, the size factor SMB, the book-to-market factor HML, the momentum factor UMD, and the event window dummy variable that equals 1 for the 3 trading days during

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April 19–23, 2007, and 0 otherwise. The estimation period spans the 222 trading days between April 23, 2006 and April 23, 2007, and excludes the confounding event windows in Table 1.

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