Board of Directors and Shareholder Value: New Evidence*

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Abstract

Historically, NYSE rule 452 permitted broker discretionary voting in routine voting matters such as election of directors. Since broker discretionary voting typically follows managements' recommendation, managements' nominees receive more votes than would otherwise be the case. Thus, any expression of true shareholder sentiment about directors is muted. Rule 452 was amended in 2009 to eliminate discretionary broker voting in the election of directors. We employ this regulatory event as a natural experiment to examine whether there is indeed any evidence of links between shareholder value and corporate boards. We find that the elimination of discretionary broker voting is value enhancing, on average. Importantly, the effect is more pronounced for firms with weak corporate governance, which suggests that effective boards of directors, if elected, can influence firm value.

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"The end of discretionary broker voting means that management can no longer expect elections to be routine. It will level the playing field. Now the vote will be a clearer expression of shareholder sentiment."
- Hye-Won Choi, Head of Corporate Governance, TIAA-CREF, as quoted in Sweeney (2010).

Abstract

Historically, NYSE rule 452 permitted broker discretionary voting in routine voting matters such as election of directors. Since broker discretionary voting typically follows managements' recommendation, managements' nominees receive more votes than would otherwise be the case. Thus, any expression of true shareholder sentiment about directors is muted. Rule 452 was amended in 2009 to eliminate discretionary broker voting in the election of directors. We employ this regulatory event as a natural experiment to examine whether there is indeed any evidence of links between shareholder value and corporate boards. We find that the elimination of discretionary broker voting is value enhancing, on average. Importantly, the effect is more pronounced for firms with weak corporate governance, which suggests that effective boards of directors, if elected, can influence firm value.

1. Introduction

One of the major tenets of corporate finance is shareholder advocacy and representation by the board of directors of a corporation. The board's major function is to ensure that optimal decisions are taken by management on behalf of shareholders and to discipline management in cases of egregious conduct. However, since the early work of Berle and Means (1932), it has been known that the interests of directors may not always be well aligned with those of the shareholders. This is because the board may be more sympathetic to management than shareholders due to a cozy relationship between the two. Strong evidence exists on this issue and we mention a couple of examples below.

Yermack (2006) documents a relationship between managerial consumption of perquisites and inferior stock returns. From an efficiency standpoint, it is reasonable to believe that vigilant shareholder-aligned boards would have prevented such egregious managerial conduct which resulted in shareholder

welfare losses. Brick, Palmon and Wald (2006) report a strong positive correlation between excess director compensation and excess CEO compensation; in essence, evidence of "backscratching" between management and board members. Possibly, board members are willing to approve excess compensation to management at the expense of shareholders because they are reaping unjustified rewards in return. Board members may also be unwilling to rein in managements' excesses because they may not be renominated if they oppose management.[1]

Given this tenuous situation between the board of directors and shareholders, it is to be expected that shareholders will attempt to remove ineffective boards and replace them with shareholder-friendly boards. One of the avenues open to shareholders to accomplish this goal is elections of board members. Unfortunately, recent evidence shows that board elections are not effective in remedying this situation. First, Bebchuk (2003) finds that there were only 118 contested elections in the 1996-2005 period, of which, the rivals were unsuccessful in two-thirds of the cases. In other words, an overwhelming majority of director elections are uncontested, and even when contested, incumbents continue to retain their board memberships! More recently, Cai, Garner and Walkling (2009) show that elections for directors mean little in the way of removing ineffective boards even despite inferior performance. They state,

> *"At both the firm and director level, votes exceeding 90% are the norm even for poorly performing firms and directors."*

Such evidence paints a sad picture about the democratic effects underlying director elections, and there appears to be little recourse for individual small shareholders except via voting with their feet by selling their stock. Surprisingly, this course of action is not limited to small individual investors alone - in a survey of institutional investors, McCahery, Sautner, and Starks (2011) find that selling the stock is the most common form of activism. The associated price decline caused by the selling pressure potentially causes boards to intervene with management. This is consistent with the findings in Parrino, Sias, and Starks (2003) where they report that the likelihood of forced CEO turnover is positively related to institutional sales. Further, Edmans, Fang and Zur (2011) show that institutions which invest in stocks with high liquidity will use exit as a "governance" mechanism instead of activism (voice).

[1]See Warther (1998) for a theoretical model on board opposition to or collusion with management.

Despite the overwhelmingly uncontested director elections, there are some claims that shareholder voting is important because it can convey the sentiments of the shareholders; a view not lost in the literature. For example, Grundfest (2003) mentions that low votes received may cause embarrassment and negative publicity for directors and companies involved. This view, however, is not supported by the recent evidence in Cai et al (2009). Specifically, they mention,

> *"...lower levels of votes appear to have little impact on the election of directors themselves or any change in firm performance. Directors also do not appear to suffer any reputational effects from low votes."*

Not withstanding their evidence, Cai et al (2009) hold out some hope for recent reforms in the election process. They mention the elimination of the discretionary broker vote as one among several recent reforms and suggest that it could significantly affect CEO compensation and corporate governance.[2] This is because brokers typically vote in favor of management and the true extent of shareholder dissatisfaction with incumbent directors may be obscured if broker votes are included. This aspect of regulatory reform in the voting process serves as one of the motivations for our study. Specifically, we examine whether voting patterns change as a result of the reform. To implement this analysis, we hand collect voting results before and after the rule change, and our examination of this data reveals that shareholder views become more "visible" after the rule change. We next examine the more important question of whether the market places any value on the elimination of discretionary broker voting. Our analysis in this regard provides evidence on the intuition expressed by Cai et al (2009) that the regulatory reform augurs well for corporate welfare.

Another contribution that we make is to establish a direct link between shareholder value and effective corporate governance via boards of directors. The nature of our contribution has to do with the fact that we do so via a natural experiment involving regulatory reform. This is an approach advocated by Adams, Hermalin and Weisbach (2010), after their extensive survey of the board of directors literature. Specifically, their survey paper asserts that conventional empirical work in corporate governance that explores board of directors issues suffers from endogeneity problems and consequently, they call for the use of natural experiments. They state,

[2]We discuss institutional aspects of discretionary broker voting later.

> *"Empirical work will need to continue to devise ways of dealing with the joint-endogeneity issue. A possible strategy in this regard is to look for "natural experiments." One set of such experiments are changes in regulation."*

Taking the cue from Cai, et al (2009) and Adams, et al (2010), we follow the events leading to the adoption of new regulation eliminating discretionary broker voting on director elections. We measure the stock price reaction to the sequence of events and show that the stock market reacts positively, on average, to the adoption of this new regulation. More importantly, we show that this positive reaction is significantly related to corporate governance measures. Specifically, the market reaction is more positive the weaker the corporate governance within the firm, thus establishing a direct link between boards of directors, corporate governance, and firm value.[3]

Our study's results demonstrating: (i) a significant decline in votes "for" managements' nominees for the board thereby enabling a truer expression of shareholder sentiment, (ii) a positive stock price reaction, on average, to elimination of discretionary broker voting, and (iii) the association of the stock price reaction to corporate governance status, have public policy implications. Specifically, we suggest that the elimination of discretionary broker voting should perhaps be extended beyond merely director elections to include all corporate decisions for which a vote of the shareholders is required.

The rest of this paper is organized as follows. In Section 2, we review the institutional aspects underlying discretionary broker voting and the recent changes in regulation governing discretionary broker voting. This section also provides key informational dates that are relevant to our study, and our hypotheses. In Section 3, we describe our sample and discuss our analysis of the change in voting patterns associated with the regulatory reform. We next present our multivariate event study methodology in Section 4. The multivariate event study results and interpretation thereof appear in Section 5. Further empirical tests including cross-sectional analyses of the stock price reaction are presented in Section 6. Finally, Section 7 concludes with a summary of our findings.

[3]While Cunat, Gine, and Guadalupe (2012) also show this link between corporate governance and firm value, they do not employ an exogeneous event. We believe that our employing a truly exogenous event is superior from an empirical testing perspective, and provides conclusive evidence on this link.

2. Discretionary Broker Voting and Reform

2.1. Rule 452 and reform

We first describe the status of NYSE Rule 452 as it existed prior to its recent reform, and then follow that with details on the change to the rule. We also discuss the associated stock price valuation implications through the evolution of the regulatory reform process.

Discretionary broker voting, governed by NYSE Rule 452, arose in 1937 with the express purpose to help corporations achieve quorum at meetings. This has become more necessary over time as stock holdings transitioned to street name ownership.[4] If the beneficial owners of the stock in street name do not submit their proxies in a timely manner, it is possible that the quorum necessary for meetings may not be satisfied. Consequently, NYSE Rule 452 allowed brokers to vote on routine corporate matters such as uncontested director elections as long as they did not receive specific voting instructions from beneficial owners ten days before a shareholder meeting.

As mentioned earlier, NYSE Rule 452 originated in 1937 but it has undergone changes over time. Prior to the reform we examine in this paper, the recent trend in amendments had been to narrow the set of situations that brokers could vote on without any instructions from the beneficial owners as evidenced by the 2003 amendment to Rule 452 eliminating broker discretionary voting on equity compensation plans.[5] Following this trend, the NYSE created The Proxy Working Group in April 2005 to review the NYSE rules on proxy voting and make recommendations, particularly with respect to Rule 452. The group made its recommendations in a report dated June 5th 2006, and this is the first date employed in our empirical analysis. In the report, the first recommendation stated, "The NYSE should move to amend Rule 452 to make the election of directors a non-routine matter." Arguably, from a stock valuation perspective, this is the first time the markets would have learned of this initiative, and conceivably reacted to it.

Any amendment to operating rules by a Self Regulatory Organization such as the NYSE must be filed with the SEC and approved by the com-

[4]According to Dixon and Thomas (1998), an average firm in 1997 had 70-80% of its shares held in street name. They also report that brokers vote these shares as recommended by management. See also Bethel and Gillan (2002) for added evidence that broker-votes tend to favor management.

[5]See SEC Release No. 34-48108; File Nos. SR-NYSE-2002-46 and SR-NASD-2002-140.

mission. Accordingly, the amendment as recommended by the NYSE Proxy Working Group was formally filed with the SEC by the NYSE via a 19b-4 filing with the SEC on October 24th 2006. In this filing, it was proposed that discretionary broker voting for uncontested director elections be eliminated for meetings beginning January 1st 2008.[6] The 19b-4 filing date of the proposed amendment with the SEC is the second event date of interest in our empirical analysis. We speculate that on this date, the market would revise its priors on the move to eliminate discretionary broker voting, and will react accordingly. Specifically, this event may have suggested to the market that the NYSE was not about to dismiss the working group's recommendation off-hand, and in fact, was serious about moving forward on it.

Following this event, the NYSE filed an amendment to their previous filing with the SEC. This amendment, filed on May 23rd 2007, mentioned that the elimination of discretionary broker voting for director elections was not applicable to companies registered under the Investment Company Act of 1940. The rationale for this exemption was that investment companies had to comply with the Investment Company Act, and were, therefore, subject to stricter regulations than ordinary operating companies. Thus, more shareholder protections were afforded to such entities and consequently, nothing was to be gained by eliminating discretionary broker voting. The investment company community also raised several other "mitigating" factors such as: the cost and difficulty of obtaining a quorum, problems associated with voting by fund shareholders, and different shareholder profiles of such investment companies versus operating companies.[7] The filing date of this amendment to the original filing is our third event date in our examination of valuation effects. We believe that the exemption of investment companies could be a sign to the market that further exemptions might follow in due course and render toothless any actual rule change.

On June 28th 2007, the NYSE filed another amendment to codify previous interpretations pertaining to discretionary broker voting related to investment advisory contracts with an investment company. In essence, this amendment was in response to minor comments by SEC staff. We cite the relevant text in the amendment filing below:

[6]The fact that discretionary broker voting was eventually eliminated for shareholder meetings beginning only on January 1st 2010 (i.e., two years later) suggests that there was considerable uncertainty whether the rule change would even be enacted when it was originally filed in 2006.

[7]No such investment companies are in our sample.

> *"This amendment is being filed to reflect minor SEC staff comments to Amendment No. 1 ... ... This proposed change codifies an NYSE interpretation that was published in 1992."*

This date is our fourth event date. We include it in our analysis of valuation effects because even though the amendment only codifies previous interpretations, there is a possibility that this amendment could suggest to the market that the rule change's efficacy is being diluted.

According to the SEC's Release No. 34-60215; File No. SR-NYSE-2006-92, the NYSE filed a third amendment on February 26th 2009, and immediately withdrew it for technical reasons. It then replaced it with a fourth amendment the same day. This amended version mentioned that the effective date for the elimination of discretionary broker voting would be January 1st 2010, and was the final version of the proposal to be considered for approval by the SEC. The market may also have been led to believe that this would be the final one as is apparent from the text of the filing which we cite below:

> *This amendment is being filed to update the provision regarding the effective date, and to reflect minor SEC staff comments on Amendment No. 2. Amendment No. 3 was withdrawn for technical reasons.*

As expected, the SEC soon thereafter published this version for comment in the Federal Register. Thus, the fourth amendment filing date of February 26th 2009 is our fifth event date for our empirical analysis. We expect a market reaction on this date because this particular version was probably the final one and removed any further uncertainty regarding changes from the NYSE.

As mentioned earlier, the version arising from the fourth amendment above was published by the SEC for public comment in the Federal Register. The SEC received 153 comment letters from 137 commenters. Twenty-eight commenters explicitly supported the proposal, while twelve commenters explicitly opposed the proposal. A vast majority of the commenters also suggested that the SEC not take action at this time. Thus, during the comment period, there was considerable uncertainty whether the rule change would be approved by the SEC Commissioners. Finally, on July 1st 2009, the SEC Commissioners, by a 3-2 vote, approved the NYSE proposal to eliminate broker voting in director elections effective January 1st 2010. The SEC approval date represents the sixth event date in our empirical analysis and the market

reaction on this date would capture the remaining effects of the elimination of discretionary broker voting on stock prices. Table 1 summarizes the dates discussed above and the associated events.[8]

2.2. Hypotheses

The previous discussion captures the essence of the regulatory reform associated with the elimination of discretionary broker voting in director elections. In this subsection, we discuss our hypotheses with respect to the effects of elimination of discretionary broker voting for director elections.

First, there are two views on discretionary broker voting as it existed prior to the recent regulatory reform as to how and whether investor sentiment was obscured. One view as suggested by Dixon and Thomas (1998) and Bethel and Gillan (2002) is that brokers primarily vote as recommended by management in the proxy statement. This position is also held by others in the investing community - for example, the Council of Institutional Investors as evident in its comment letter to the SEC which states,

> "*Rule 452 taints the integrity of director elections by giving brokers - who have no fiduciary obligation to vote the shares in the best interests of beneficial owners the ability to effectively stuff the ballot box for management.*"

If this view is valid, then the true sentiment by beneficial owners towards the nominees on the ballot will be obscured by broker votes. A countervailing view exists wherein discretionary broker voting may not obscure true investor sentiment at all. This occurs if brokers vote using proportionate voting.[9] Specifically, if brokers vote in the same ratio as the voting instructions actually received from beneficial owners, then their votes will represent true investor sentiment. Consequently, it is not immediately clear whether eliminating discretionary broker voting will obscure investor sentiment and lead to changes in voting patterns. Therefore, whether there will be a change

[8] We believe that the event dates identified above and captured in Table 1 are the most relevant in the process and appropriate for the empirical analysis where we seek to determine the stock price effects associated with the voting reform.

[9] A press release by Morrow & Company in 2007, available at: `http://www.morrowco.com/reports/mnews/RiseofProportionalVotingFEB09.pdf`, lists the following brokerages: Charles Schwab & Co., Edward D. Jones, Goldman Sachs & Co., Goldman Sachs International, Merrill Lynch, Morgan Stanley & Co., Ridge Clearing and Outsourcing Solutions, and Ameritrade as voting uninstructed shares in the same proportion as instructed shares.

in voting patterns is clearly an empirical question.

If the reform fulfills its intended purpose to produce a more "visible" expression of shareholder sentiment, we should observe a change in voting pattern in director elections after the elimination of discretionary broker voting. Based on the evidence in Bethel and Gillan (2002) which documents more votes favorable to management with discretionary broker voting, votes for director candidates nominated by management should decrease when discretionary broker voting is eliminated. Conversely, if discretionary broker voting does not obscure shareholder sentiment, then no change in voting patterns should be detected. This leads to our first hypothesis stated in the alternate form below:

H1: *The elimination of discretionary broker voting, which presumably allows the revelation of true investor sentiment regarding director nominees, will reduce the percentage of votes in favor of management-nominated director candidates.*

Some researchers have suggested that revealing true investor sentiment can have valuation implications for firms. For example, Grundfest (2003) mentions that low votes received may cause embarrassment to the director involved and negative publicity for the firm. This, in turn, may serve to catalyze improvements at the concerned firm. In a recent BusinessWeek article, Green (2011) provides examples of directors who resigned after not receiving a majority of votes in director elections. However, Green also provides several examples of directors who were unaffected despite not receiving a majority of votes. Thus, whether the true revelation of investor sentiment via elections can lead to changes in the board room, and in turn, affect firm value, is not transparent. Clearly, this is also an empirical question and evidence on this issue may be revealed in the stock price reaction to the elimination of discretionary broker voting.[10]

In our study, we examine the market reaction to the elimination of discretionary broker voting and thereby, try to establish a link between firm

[10]Some supportive evidence for this appears in Del Guercio, Seery and Woidtke (2008) who report on 112 publicly announced "Just Say No" campaigns. However, theirs is not a natural experiment and consequently, is subject to the normal criticism of selection bias and endogeneity concerns. Our study which utilizes an exogeneous event is not subject to this criticism, but supports their evidence since we show that the prospect of revelation of true investor sentiment about director nominees affects stock prices.

value and the true revelation of investor sentiment. This leads to our second hypothesis stated in the alternate form:

H2: *The elimination of discretionary broker voting for NYSE listed firms, which presumably allows the revelation of true investor sentiment regarding director nominees, will affect stock prices of those firms.*

Next, we ask the question, "For which kind of firms may this revelation of investor sentiment be more important?" If true revelation of shareholder sentiment can result in changes to the board of directors and improve corporate governance within a firm, then the potential to replace boards at firms with inferior corporate governance should be associated with larger increases in shareholder value. Our examination here connects the role of board directors in corporate governance and shareholder value. Adams, Hermalin and Wesibach (2010) survey the literature exploring the role of the board of directors and raise concerns about endogeneity in empirical work that relate firm value to corporate boards. Our study uses an exogenous event (i.e., a natural experiment) to investigate whether issues related to the board of directors are associated with corporate governance and, in turn, shareholder value. This leads to our third hypothesis stated in the alternate form below:

H3: *The stock price reaction of NYSE listed firms to elimination of discretionary broker voting will be negatively related to corporate governance metrics, i.e., the better the corporate governance, the lower will be the stock price reaction to elimination of discretionary broker voting.*

3. Sample, and Changes in Voting Patterns

3.1. Sample

Our sample is drawn from an intersection of NYSE listed firms as identified in the CRSP database and firms for which we obtained corporate governance data from Institutional Shareholder Service (ISS). Institutional Shareholder Service (ISS) has compiled corporate governance data on over 8000 firms, global and domestic, on a monthly basis since November 2003. The firm's overall corporate governance score (CGQ) is based on more than 233 governance measures, which can be classified under one of the following categories: *Board*, *Audit*, *Bylaws*, *State*, *Compensation*, *Qualitative*, *Ownership*, and *Director Education*.

The *Board* category considers board characteristics such as board independence, committee composition, board structure and size, and voting. The *Audit* category looks at the audit committee, audit fees, and whether the firm has had restatements. The *Bylaws* category considers whether the firm has a poison pill, dual class stock, takeover defenses, and how the board responds to shareholder proposals. *State* considers state antitakeover provisions and laws. The *Compensation* category takes into account the compensation packages for executives and directors. *Qualitative* factors provide a measure of the effectiveness of Board reviews, succession plans, and director resignations and reviews. *Ownership* considers the independence of the board and how much of the firm directors and executives control. Finally, *Director Education* provides a measure for the number of directors that have participated in the ISS accredited director education program.

Taken together, the 8 category scores are combined to create an overall corporate governance score for the firm, *CGQ*, - with larger scores signifying better governance relative to firms with lower scores. For the purpose of this study we use the *CGQ* score reported on May 1, 2007.[11]

The sample obtained from ISS was merged with the CRSP database, from which we extracted daily stock return data. We also employed the exchange listing identifier information from CRSP to retain only NYSE listed firms. Additionally, we also required firms' returns to cover the entire period from day -251 relative to the first date in Table 1 to day +251 relative to the last date in Table 1. After imposing the above restrictions, the resulting sample is called our ISS Sample which consists of 1239 firms.

3.2. Change in voting pattern

Here, we explore whether the elimination of discretionary broker voting had any direct effect on actual voting patterns for board members. In other words, we are testing our first hypothesis, **H1**. For this test, the results of director elections were hand collected. The collection process consisted of first determining the date of the annual meeting from the DEF14a filing at the SEC for each firm in our sample. Then, the voting results were extracted from either the ensuing 8-K or 10-Q filing by the firm following the annual meeting date from the SEC's EDGAR website. We eliminated all firms for which the results were not available for both 2008 and 2010. This is because

[11]The results are not qualitatively different if we use governance scores preceding the first date in Table 1.

we wanted to examine a change in voting patterns from before discretionary broker voting was eliminated (i.e., 2008) to after it was (i.e., 2010).[12] We also eliminated dual class firms from the analysis because of their unique voting situation.

From the 10-Q or 8-K filing following the annual meeting, the following information was collected for each firm in our sample:

- total votes cast for
- total votes cast against
- total votes withheld
- total votes abstained
- broker non-votes

For our first test to examine a change in voting patterns, for each of the years 2008 and 2010, we computed the percentage of votes for nominees on the ballot, by dividing the total number of votes cast for by the total number of votes in the elections. Specifically, this variable, $PF_{i,t}$, is calculated as:

$$PF_{i,t} = \frac{\text{Total Votes For }_{i,t}}{\text{Total Votes Cast }_{i,t}}$$

for firm, i, in year, t, where $t \in$ (2008, 2010). The change in $PF_{i,t}$ from 2008 to 2010 is:

$$\Delta PF_i = PF_{i,2010} - PF_{i,2008}$$

As stated in our first hypothesis, if the view that the elimination of discretionary broker voting will result in lower votes for management's director nominees is valid, then ΔPF_i should be negative and significant. We examine this hypothesis using a t-test and a nonparametric Wilcoxon signed rank test. The results of this test appear in Panel A of Table 2. The mean ΔPF_i is -0.1032 which implies a 10.3% decrease in votes for director nominees on the ballot after discretionary broker voting was eliminated. The median ΔPF_i is

[12]The 2009 proxy season was eliminated because it may have been an adjustment year where market participants were adjusting to the change in regulation.

-0.0869, which is a 8.69% decrease in votes for nominees on the ballot. Both of these are statistically significant and support rejection of **H1**. Further, the decrease in votes for management's candidates is economically meaningful.

We further note that in 2008, firms were not required to report the number of broker non-votes in director elections separately. Instead, brokers typically voted all the shares for which they had the discretion to vote. Thus, non-votes were treated as regular votes and counted as either votes for, votes against, or votes withheld depending on how the broker voted. In general, brokers tended to vote with management. Thus, for our next empirical test, we assume that any broker non-votes would have impacted only the "votes for" category in 2008. Given this view, we next take into account the fact that the "percentage for" in 2008 might be overstated by discretionary broker voting on behalf of stockholders who did not exercise their right to vote. To measure this extent of discretionary broker voting embedded in the "percentage for" in 2008, we compute an implied "broker non-vote" metric for 2008 using the 2010 voting data for the same firm.[13] Specifically, for firm i, this metric, $IBNV_{2008,i}$, is:

$$IBNV_{i,2008} = \frac{\text{Number of Broker Non-votes}_{i,2010}}{\text{Number of Directors Elected}_{i,2010}}$$

Next, we next compute $APF_{i,2008}$, a revised "percentage for" in 2008 for firm i after adjusting for the implied broker non-vote percentage for 2008 as follows:

$$APF_{i,2008} = \frac{\{\frac{\text{Total Votes For}_{i,2008}}{\text{Number of Directors}_{i,2008}}\}}{\{\frac{\text{Total Votes Cast}_{i,2008}}{\text{Number of Directors}_{i,2008}}\}} - \frac{IBNV_{i,2008}}{\{\frac{\text{Total Votes Cast}_{i,2008}}{\text{Number of Directors}_{i,2008}}\}}$$

We then compute Φ_i, as the difference between $APF_{i,2008}$ and $PF_{i,2008}$ as shown below:

$$\Phi_i = APF_{i,2008} - PF_{i,2008}$$

Under the null hypothesis of no difference caused by broker non-votes, Φ_i should be zero. We examine this hypothesis using a t-test and a nonparametric Wilcoxon signed rank test. Our results for this test appear in Panel

[13] Admittedly, this assumes that the cross-section of stockholders in all the sample firms were similar in 2008 and 2010.

B of Table 2.[14] Our results indicate that the "percentage for" in 2008 would have been statistically significantly lower if brokers were not allowed to vote according to their discretion. The mean is about -0.8% while the median is about -0.3%. While this may appear small on average, the estimate is statistically significant. At the extreme 99th percentile value, the difference is about -9.6% which may be enough to influence the outcome of an election.

The above test does not control for the identity of the director who is up for election; rather, it assumes that the same individuals are on the ballot in both 2008 and 2010. This assumption may be viewed as a shortcoming which could affect our previously decribed results on voting patterns in director elections. Specifically, if the director candidates in 2008 are all well-regarded, and the opposite for 2010 director candidates, the results of our previous test would be biased in favor of rejecting **H1**. Consequently, we next turn to a test that controls for the identity of the director.

For each firm in the sample of 1076 firms, we examined DEF14a filings to determine which, if any, directors nominated for the 2008 annual meeting were also nominated for the 2010 annual meeting. 475 firms (44%) had no directors in common between the two elections. After eliminating these firms, for each director that was nominated in both years, we hand-collected actual voting data for 2008 and 2010 from 10-Q and 8-K filings. Using the data for 2010 elections, for each director, j, in a firm, i, we first calculated the percentage of broker non-votes received in 2010, $PBV2010_{i,j}$, as follows:

$$PBV2010_{i,j} = \frac{\text{Broker non-votes}_{i,j}}{\text{2010 Total votes cast}_{i,j}} \tag{1}$$

where the denominator is given by:

$$\begin{aligned} \text{2010 Total votes cast}_{i,j} \;=\; & \text{Votes for}_{i,j} + \text{Votes against}_{i,j} \\ & + \text{Votes withheld}_{i,j} + \text{Abstentions}_{i,j} \\ & + \text{Broker non-votes}_{i,j} \end{aligned} \tag{2}$$

[14] We winsorize the Φ_i values at the 1% and 99% levels. Not winsorizing the values provides similar results.

We next compute an approval rate for 2008 for director, j, in firm, i, based on year 2008 election results. We call this variable Approval2008$_{i,j}$ and it is computed as:

$$\text{Approval2008}_{i,j} = \frac{\text{Votes for}_{i,j}}{\text{2008 Total votes cast}_{i,j}} \tag{3}$$

where the denominator is computed as:

$$\begin{aligned} \text{2008 Total votes cast}_{i,j} &= \text{Votes for}_{i,j} + \text{Votes against}_{i,j} \\ &\quad + \text{Votes withheld}_{i,j} + \text{Abstentions}_{i,j} \end{aligned} \tag{4}$$

In the above, we have not provided a subscript on any right hand side variables to denote the year since it is obvious which year the data is from. Note that the denominators in eq. (2) and (4) only differ by the broker non-votes variable, which is available in 2010 but not in 2008. We next compute an adjusted approval rate for each director, j, in firm, i, to account for the fact that the approval rate computed in eq. (3) is possibly inflated by broker votes. To make this adjustment, we assume that the broker votes implicit in the approval rate in eq. (3) is captured by the broker non-votes for that director in the 2010 election. In other words, we are assuming that the unobserved percentage of broker votes in 2008 for director j would be equal to the percentage of broker votes in 2010 for that particular director as computed in eq. (1). Our adjusted approval rate for 2008 for director, j, in firm, i, denoted by AdjApp$_{i,j}$, is thus computed using 2008 director election data as:

$$\text{AdjApp}_{i,j} = \frac{\text{Votes for}_{i,j} \; - \; (PBV2010_{i,j} \times \text{2008 Total votes cast}_{i,j})}{(1 - PBV2010_{i,j}) \times \text{2008 Total votes cast}_{i,j}} \tag{5}$$

We then compute the difference between the raw approval rate and the adjusted approval rate in eq. (3) and eq. (5), which we denote as $\Gamma_{i,j}$. This variable is unique at the director level, and it is a measure of the increase in the approval rate conferred by permitting discretionary broker voting. Our first test consists of a difference of location test on this variable across all the directors in our sample. In essence, we are assuming a uniform director population irrespective of firms. We employ a parametric t-test and a

non-parametric Wilcoxon signed-rank test. Our results for this test are provided in the first row of Panel C of Table 2. Next, we average $\Gamma_{i,j}$ across all directors in a particular firm, i, and compute a firm specific variable, Γ_i. This variable is also tested in a similar fashion using a parametric t-test and nonparametric Wilcoxon signed-rank test. The results for this variable are provided in the second row of Panel C of Table 2. Both rows show that the difference in approval rate is negative and significant. Specifically, if discretionary broker voting is eliminated, approval rates for director nominees will decline. While the mean and median estimates are small as expected, we note that the extremes are important - the approval rate declines up to 25% for one director (see first row) and in one firm, the average approval rate declines by about 20% (see second row). Such large values suggest that discretionary broker voting helps directors obtain majority approval.

Taken together, the evidence in Panels A, B, and C supports the view that the elimination of discretionary broker voting is consistent with the true expression of shareholder views on director nominees. The question that next arises is whether there is any change in stock value that incorporates the changed voting environment.

4. Multivariate Event Study Methodology

4.1. Main tests

To analyze the stock price effects for firms in response to the regulatory reform eliminating discretionary broker voting, we use three different methods.[15] All methods are based on a variation of the Multivariate Regression Model (MVRM) proposed by Schipper and Thompson (1983). The MVRM is derived using the Seemingly Unrelated Regression (SUR) methodology (Zellner, 1962). In what follows, we describe the most general method first, and then provide details on two other variations.

Method 1: Incorporating corporate governance scores into the event study

Standard event study methods assume that across the firms in the sample, market model residuals are independent and identically distributed. Since

[15]In what follows in this section, the first and third methods incorporate corporate governance measures into the test thereby testing hypothesis **H3** directly. The second method tests **H2**.

the event dates in this study are the same for all firms, contemporaneous cross-sectional correlation may be a potential problem. This problem arises since the assumption of independently distributed residuals implicit in standard event study methods is violated.

Cross-sectional heteroscedasticity may be another problem in this study because the corporate governance attribute may vary across firms. A modification of the original Schipper and Thompson (1983) method, proposed by Schipper, Thompson, and Weil (1987), that adjusts for both crosscorrelation and heteroscedasticity is thus employed as the general model. This method conditions the return generating model (the market model, in this case) on the occurrence or non-occurrence of an event. This is accomplished by adding unique dummy variables to the market model that take on a unit value for each event in Table 1 and zero otherwise.[16] The following model is estimated using portfolio returns, R_{pt}, as shown below:

$$\begin{aligned} R_{pt} &= \alpha_p + \beta_p R_{mt} + \gamma_1 D_{1t} + \gamma_2 D_{2t} + \gamma_3 D_{3t} + \\ &\quad \gamma_4 D_{4t} + \gamma_5 D_{5t} + \gamma_6 D_{6t} + \epsilon_t \end{aligned} \tag{6}$$

where R_{mt} is the return on the CRSP Value Weighted Index on day t, D_{it}, $i = 1, ..., 6$ are dummy variables equal to 1 if day t is ith date among the six dates mentioned in table 1, and α_p, β_p, and γ_i, $i = 1, ..., 6$ are regression coefficients to be estimated. We use the CRSP Value Weighted Index as the proxy for the overall market based on the work of Canina, Michaely, Thaler, and Womack (1998). The γ_i are estimates of the abnormal return in response to each of the six events in Table 1.

To construct the portfolio whose returns are used as the dependent variable in eq. (1), the vector of weights, $\mathbf{W}$, is obtained from an estimated sample covariance matrix, $\mathbf{S}$. This covariance matrix results from computing pair-matched covariances between residuals obtained from estimating eq. (1) on individual firms in the sample. This firmwise estimation is conducted using daily stock returns over a period that begins 251 trading days before the first event and ends 251 trading days after the last event in Table 1. The portfolio weights are then computed using:

$$\mathbf{W} = (\mathbf{\Psi}'\mathbf{S}^{-1}\mathbf{\Psi})^{-1}\mathbf{S}^{-1}\mathbf{\Psi} \tag{7}$$

[16]Several other studies have used a similar structure see, for example, Allen and Peristiani (2004), Brown, Cummins, Lewis, and Wei (2004), Chang and Nichols (1992), Espahbodi, Strock and Tehranian (1991), Foerster and Karolyi (1999), and Zhang (2007).

where $\mathbf{\Psi}$, is a vector where each element, ψ_j for firm j is given by:

$$\psi_j = \frac{1}{CGQ_j} \tag{8}$$

In the above, CGQ_j is the corporate governance score from ISS for firm j. This scheme thus provides greater weight in the portfolio to firms with lower corporate governance scores. Thus, in this method, we are incorporating the corporate governance scores directly into the event study.

Method 2: Vector $\mathbf{\Psi}$ is assumed to be the unit vector

Specifically, this method assumes that all firms have the same corporate governance score, i.e., no importance is given to corporate governance in the event study. However, cross-sectional correlation due to the same event dates is taken into account through the use of the weighting matrix, $\mathbf{S}$.

Method 3: Pooled WLS time-series cross-sectional regression

This method assumes complete independence of observations across firms and time, and homogeneity in the data. However, we weight each firm-day observation by the firm's weight, ψ_j. Thus, all firm-day observations are pooled into a single panel WLS regression. This regression thus gives greater weight to firms with lower CGQ scores.[17]

4.2. Robustness tests

The empirical tests described previously employ data for firms for which we have corporate governance metrics from ISS. To demonstrate robustness, we use another commonly used governance metric, the Entrenchment Index, as described in Bebchuk, Cohen, and Ferrell (2009). This robustness check is motivated by the Bhagat, Bolton and Romano (2008) study which states, "*there is no one "best" measure of corporate governance.*" The data are downloaded from Lucian Bebchuk's website[18] and we employ firms with data in 2006, the last year for which the entrenchment index information is

[17] While corporate governance scores are used in the weighting scheme as in Method 1, it does not adjust for contemporaneous correlations in returns.

[18] http://www.law.harvard.edu/faculty/bebchuk/data.shtml

available. After merging this data with the CRSP database, we retain only data for NYSE firms and with all stock return data from 251 trading days before the first event in Table 1 to 251 trading days after the last day in Table 1. The resulting sample is called our E-Index Sample.

For the robustness checks, we employ the same tests as described in the previous subsection except that we now use the Entrenchment Index as our measure of corporate governance instead of the information from ISS.[19] There is one distinct difference with respect to the weights employed in conjunction with the E-Index Sample. The Entrenchment Index is higher for firms with inferior governance, while the CGQ score is higher for superior governance. Consequently, for the E-Index sample, we use the entrenchment index itself as the weight, ψ_j, for firm, j. Accordingly, weaker governance firms are weighted more in the empirical specifications using this measure.

5. Multivariate event study results

We first discuss the results for the ISS sample and follow that up with a discussion of results for the E-Index Sample.

5.1. ISS sample

The results using the ISS Sample for each of the three methods are presented in Table 3. In the first row, the results for Method 1 indicate a statistically significant abnormal return on the sixth date. This is the date when the SEC finally approved the elimination of discretionary broker voting. This result suggests that the market believes that the voting reform will be good for firms. The results of Methods 2 and 3 corroborate this finding. It should be noted that across all three methods, the only date which produces a significant abnormal return is the sixth date. Consequently, we conclude that the only robust abnormal return is on the sixth day. In terms of a valuation impact, the average abnormal return based on all three methods is 0.75% of equity value, an economically significant number.

[19]The sample of firms for which we have the Entrenchment Index is somewhat different from the sample employing ISS corporate governance scores. To that extent, this is an added robustness check on sample firm composition.

5.2. E-Index sample

The results of estimating the three models employing the E-Index sample are shown in Table 4. The sixth event day abnormal return (γ_6 appears significant in Methods 1 and 3 where we weight by the Entrenchment Index. In Method 2, where we do not weight by the governance score, γ_6 is not significant. Nonetheless, that coefficient, γ_6, is the most significant among all the six event dates' coefficients in that row. We thus conclude, that when weighting by the corporate governance information, the abnormal return on the sixth date (i.e., when the SEC approves the elimination of discretionary broker voting) is statistically significant. The average magnitude based on the three models using the E-Index Sample is 0.78%. This is of the same order of magnitude as we obtained using the ISS Sample. Thus, our results are robust to the choice of governance index thus allaying any concerns raised in Bhagat, Bolton and Romano (2008).

The net takeaway from the multivariate event study tests is that there is a positive abnormal return on the order of 0.75% to the official elimination of discretionary broker voting for NYSE listed firms. Further, the effect is stronger for firms with weaker corporate governance. Consequently, both null hypotheses **H2** and **H3** are rejected.

6. Further empirical tests

Above, we reported that the market reacts positively to the news of the elimination of discretionary broker voting. These results also support the prediction in Cai et al (2009) where they say that the elimination of discretionary broker voting may positively affect corporate welfare. Next, we further examine whether the effect is stronger for firms with weaker corporate governance.

6.1. Standard event study

We first employ a standard event study using the sixth date in Table 1 as the event date and determine the abnormal return for each of the NYSE listed firms in our ISS Sample. Further, given Prabhala's (1997) justification for using standard event-study methods to detect short-window abnormal returns, this serves as an extra check on the results we previously reported using the multivariate event study method.

Our method is similar to that in Mikkelson and Partch (1988). In our event study, we estimate the market model for each issuer over a 255 day period ending on day -101 relative to the event date. As before, we use the CRSP value-weighted index as proxy for the market's rate of return. A further criterion for inclusion in the event study was that at least 50 non-missing daily returns should be available for the firm in the market model estimation period. We report the results of two tests to assess whether the returns in each event window are abnormal. The first statistic pertains to a two-tail parametric test of the null hypothesis that the mean standardized abnormal return over the event window is zero. The second statistic comes from a nonparametric generalized sign test (see Cowan, 1992) of the hypothesis that the ratio of positive to negative abnormal returns in any event window is not different from the ratio computed over the market model estimation period.

The results of the event study conducted using the sixth date in Table 1 as the event day are reported in Table 5. Recall that the event date (i.e., day 0) here is the date that the SEC voted to approve elimination of discretionary broker voting for director elections. As seen in the middle row of Table 5, the abnormal return on day 0 is positive and statistically significant using the parametric test and the nonparametric generalized sign test. The precision weighted magnitude of the average abnormal return on that day is 0.87%. These results once again corroborate the results using the more elaborate tests reported on in Table 3. Specifically, the market reacts positively, on average, to the elimination of discretionary broker voting in director elections, in effect rejecting our null hypothesis, **H2**.

6.2. Abnormal returns and corporate governance

Next, we examine whether the stock price reaction is dependent on the corporate governance score and its components, i.e., we are examining hypothesis **H3** again. For this series of tests, we employ the abnormal return from the market model on day 0 from the previously mentioned standard event study as the dependent variable in weighted least squares (WLS) regressions. The weights used in the WLS regressions are the reciprocal of the mean squared error from the individual firmwise market model regressions employed in the estimation period for the event study.[20] For independent variables, we first employ each individual governance category score that ISS provides (i.e., *Audit*, *Board*, *Bylaws*, *Compensation*, *Director Education*,

[20]Basically, firms for which the market model is estimated with greater precision are given greater weight in the regression.

Ownership, *Qualitative*, and *State*). We then follow that up with the summary score, *CGQ*. Summary statistics on the independent variables for the 1239 firms used in our analysis are provided in Table 6. Most of the variables exhibit fairly symmetrical distributions. The one exception is *Audit* where the median is the same as the maximum. This is not surprising given the high degree of compliance by NYSE listed firms with the Sarbanes-Oxley Act of 2002.

The results for the WLS regressions for the governance variables alone are shown in Panel A of Table 7. Univariate regressions are first estimated using each of the ISS category scores as independent variables. The results for these univariate regressions are shown in Models 1 through 8. With the exception of the *Ownership* variable, all the other governance components are significant and negatively associated with the abnormal return. Since higher scores for these components imply better governance, the negative association with the positive abnormal return on the event date suggests that the abnormal return is lower for firms with better governance. In other words, the worse the governance, the higher the abnormal return to the event. This evidence strongly rejects the null hypothesis, **H3**.

In Model 9, we report results of a multiple WLS regression with all eight components as independent variables. Surprisingly, only *Compensation* and *State* show up as being significantly associated with the abnormal return. We conjecture that the market especially believes that the removal of discretionary broker voting for directors will help in alleviating problems at firms where governance in these two areas is weak. With respect to the *Compensation* component, the market possibly believes that removal of management-friendly directors may result in better alignment between management compensation and future firm performance. For the *State* component, we believe that in certain states, there exist laws (anti-takeover, etc) that protect management and where market discipline via takeovers is harder to pursue. This state-based barrier to market discipline makes an alternative remedy for management entrenchment such as the selection of an effective board of directors that much more important for firm performance. Consequently, the elimination of discretionary broker voting becomes more valuable in such states.

Finally, in Model 10, we present the results of a univariate regression using the overall ISS corporate governance score, *CGQ*, as the independent variable. The results from Model 10 reveal that there is a significant and negative association between the abnormal return and the *CGQ* score. Essentially,

the market reacts positively to the elimination of disretionary broker voting for director elections, but this reaction is tempered for firms with better corporate governance. Taken together, the evidence thus far shows that both our null hypotheses, **H2** and **H3**, can be rejected.

The event study evidence dovetails with our results on voting pattern changes reported on previously in our examination of hypothesis **H1**. It appears that the stock market's positive stock price reaction was in anticipation of a truer expression of shareholder voice on directors; an expectation that appears to be fulfilled given our results on voting pattern changes in director elections following the elimination of discretionary broker voting.

6.3. Robustness using control variables

The results in Panel A of Table 7 showing the association between the abnormal return and our corporate governance metric, CGQ, do not incorporate control variables. This section discusses robustness checks using control variables in regressions of the abnormal return as the dependent variable. We discuss these control variables below.

There is a rich literature that argues that institutional investors have incentive to monitor firms. For example, Gillan and Starks (2000) suggest that institutional investors will monitor firms in their portfolio since they may not be able to readily sell off their holdings in underperforming firms, i.e., cannot use "exit" as a tool.[21] There is also research that questions the monitoring that institutional investors really provide. Instead, this strand of the literature suggests that"exit" by institutional investors is a strong form of activism (see McCahery, Sautner, and Starks (2011)). The evidence on this issue suggests that the monitoring by institutional investors may be tied to the size of their holdings. For example, Aggarwal, Erel, Ferreira, and Matos (2011) find that firms with higher institutional ownership are more likely to fire poorly performing CEOs, presumably as a result of monitoring by institutional investors. Therefore, the monitoring explanation would argue for a positive relationship between institutional investor holdings and firm

[21]This inability to sell off arises because of two main reasons. First, liquidating large holdings of a particular firm's stock will create adverse price movements and exacerbate losses when an institutional investor sells off the stock. Second, many institutions hold stock as part of an indexed portfolio in conjunction with a publicly disclosed investment strategy. As such, selling the stock of a poorly performing firm which is part of that portfolio index implies that the institutional investor then will not own the index that their investment strategy professes to follow.

value (see McConnell and Servaes (1990) who report a positive relationship between the two.)

When discretionary broker voting is eliminated, the stock price reaction should be more positive for firms which also suffer from diminished monitoring via low institutional ownership. On the other hand, high institutional ownership would imply that external monitoring is greater, and thus the elimination of discretionary broker voting should have less of a benefit. Thus, a negative relationship should exist between institutional investor holdings and the stock price reaction to elimination of discretionary broker voting.

The data for institutional holdings was obtained from Thomson One through their web interface: www.thomsonone.com. For each firm, the number of shares held by institutional investors was obtained for the quarter-end immediately preceding July 1st, 2009 (i.e., the date on which discretionary broker voting was finally eliminated). The related number of total shares outstanding for each firm was obtained from CRSP. The percent institutional holdings, *INST*, is simply the number of shares held by institutions divided by shares outstanding.

Apart from *INST*, we also employ: (i) the change in "percentage for" votes, ΔPF, and (ii) insider holdings as a percentage of total shares, *INSIDER*, as control variables. Previously, we hypothesized that ΔPF would be negative if discretionary broker voting was eliminated. Specifically, the percentage of votes in favor of management's nominees for the board would decline after discretionary broker voting was eliminated. If we endow the market with perfect foresight, the largest benefit would be reaped by firms with the highest reduction in votes favoring management nominees. In other words, the stock price reaction should be more positive for firms where the ΔPF is more negative, implying a negative relationship between the stock price reaction and ΔPF.

For insider holdings, when insiders own more of a firm's shares, then discretionary broker voting becomes less important. This is because insiders can get their director candidates elected without relying on the discretionary broker vote. Consequently, the stock price reaction to elimination of discretionary broker voting may be weaker in firms with higher insider ownership, *INSIDER*. An alternate story can also apply. Specifically, if we buy the Grundfest (2003) view that low external votes received by a director can lead to embarassment for the director concerned, the elimination of discre-

tionary broker voting allows for a clearer expression of this dissatisfaction by non-insider shareholders. This clearer expression will be more valuable for firms with higher insider ownership, thus arguing for a positive association between insider holdings and the stock price reaction.

We create the variable *INSIDER* as follows. Insider holding data is hand collected from filings with the SEC. Specifically, insider holdings are manually noted from the 2009 Annual meeting DEF14a if filed before July 2009 and from the 2008 Annual meeting DEF14a otherwise. We use July 2009 as a cutoff to ensure we have the holdings before the July 1st 2009 event date. The number of shares outstanding for each firm was obtained from the CRSP database for the same date corresponding to the appropriate DEF14a filing. The percent insider holdings variable, *INSIDER*, is computed as the number of shares held by insiders divided by shares outstanding.

The results of the weighted least squares regression appear in Panel B of Table 7. In Model 1 of Panel B, we report results using *CGQ* as the only independent variable to replicate the results reported previously in Model 10 of Panel A. We do this since the sample size for the regressions using control variables (N=1071) is smaller than the sample used in Panel A (N=1239). We find that the stock price reaction to elimination of discretionary broker voting is negatively and significantly related to *CGQ*. This result is thus robust to estimation using a reduced sample. More importantly, this result persists in Models 5 and 6 in the presence of other control variables suggesting a robust relationship. The evidence here strongly indicates that the value increase from the elimination of discretionary broker voting is especially valuable to firms with inferior corporate governance, in effect rejecting our null hypothesis, **H3**.

In Models 2, 5, and 6 of Panel B, we find that institutional holdings *INST* are negatively associated with the abnormal return, suggesting that the elimination of discretionary broker voting does not enhance value at firms with higher institutional holdings. Presumably, this is because monitoring by institutions already prevents losses in value from inferior boards. In Models 3 and 5, the change in the percentage of votes "for" management nominees between 2008 and 2010, ΔPF, is not related to the abnormal return. Finally, *INSIDER* is positively related to the abnormal return suggesting that the elimination of discretionary broker voting is more beneficial in firms where insider ownership is higher. This supports the idea that elimination of discretionary broker voting allows a clearer expression of dissatisfaction with

directors in firms with higher insider ownership.

7. Conclusion

In this study, we examine the market reaction to regulatory reform that eliminated discretionary broker voting in director elections for NYSE listed firms. This regulatory change is an exogenous event that helps us establish a link between director elections, corporate governance, and shareholder value. As a result, we avoid the pitfalls of endogeneity and sample selection bias that have been raised as criticisms in previous papers in corporate governance research. In empirical tests that control for heterogeneity and contemporaneous event dates across the sample, we find that the market reaction to the final approval by the SEC of the rule eliminating discretionary broker voting is positive and significant. Furthermore, the abnormal return points to a value increase in affected firms by around 0.75% in shareholder value which, we believe, is economically significant. This result confirms the intuition in Cai et al (2009) wherein elimination of discretionary broker voting supposedly augurs well for corporate governance.

In further tests, we find that the abnormal return is associated with our corporate governance metric. Specifically, we find that while the average stock price reaction to the elimination of discretionary broker voting is positive and significant, it is tempered in firms with better corporate governance. In other words, this regulatory reform has less of a valuation effect on better governed firms. When we further examine this relationship by disaggregating the corporate governance score into its eight components, we find that governance issues relating to executive compensation, and state laws preventing takeovers are most important. The market appears to believe that accurate measures of investor sentiment about nominees for the board of directors will lead to better shareholder value. Presumably, this arises from the selection of more effective board members which will provide for better corporate governance. This also provides first hand evidence relating board of directors to corporate governance and, in turn, to shareholder value using an exogenous event. In this respect, our study responds directly to the call in Adams, Hermalin, and Weisbach (2010) for studies examining board of director issues to employ exogenous regulatory events.

Our experimental setting also provides an avenue to empirically validate the market's perception about institutional monitoring. In our tests, we find

that the market reaction to the elimination of discretionary broker voting is tempered for firms with higher institutional holdings. This result suggests that the market believes that institutions monitor firms, and consequently, any curative effects that the elimination of discretionary broker voting can bring to the board of directors are reduced. Our results in this respect are supportive of Gillan and Starks (2000) and Aggarwal et al (2011) which argue that institutions monitor firms to benefit shareholders.

We also analyzed actual voting results in 2008 versus 2010, i.e., before and after the elimination of discretionary broker voting. Our results here show that the percentage of votes in favor of directors on the ballot significantly decreases after the regulation comes into effect. Further, we demonstrate, using an implied broker non-vote metric for 2008, that the approval rate would have been significantly lower in 2008 had discretionary broker voting been eliminated. Therefore, it appears that it has become easier for shareholder dissatisfaction with directors to be manifested through the voting process without the muting effect of discretionary broker votes. Our results strongly support the proponents of the elimination of discretionary broker voting in director elections. The results also have public policy implications since they suggest that perhaps this rule change should be extended to all corporate matters requiring a shareholder vote; not just in the election of board members.

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Table 1. Event Dates in Broker Voting Reform

These event dates were gathered from SEC documents and capture the key steps in the regulatory reform process associated with the elimination of discretionary broker voting in director elections.

Event	Event Date	Description of event
1	June 5th, 2006	Publication of NYSE Working Group recommendation on elimination of discretionary broker voting
2	October 24th, 2006	Filing by NYSE of 19b-4 with the SEC for rule change to eliminate discretionary broker voting for director elections
3	May 23rd, 2007	NYSE filed 1st amendment to original 19b-4 filing to address companies governed by Investment Company Act
4	June 28th, 2007	NYSE filed 2nd amendment to original 19b-4 filing to address minor SEC comments and codify previous rules
5	February 26th, 2009	NYSE filed 3rd amendment and withdrew it for technical reasons. Also filed 4th amendment which hinted that it would be the last one
6	July 1st, 2009	SEC Commissioners vote 3-2 to approve the rule change eliminating discretionary broker voting for director elections.

Table 2. Voting Pattern Change
Panel A. Change in the "Percentage For" due to Elimination of Discretionary Broker Voting

Using the voting data obtained from 8-K or 10-Q filings following the annual meetings for each of the years 2008 and 2010, we computed the percentage of votes for nominees on the ballot, by dividing "the total number of votes cast for" by the total number of votes in the elections. Specifically, we compute, $PF_{i,t}$ as:

$$PF_{i,t} = \frac{\text{Total Votes For }_{i,t}}{\text{Total Number Cast }_{i,t}}$$

for firm, i, in year, t, where $t \in$ (2008, 2010). The change in $PF_{i,t}$ from 2008 to 2010 is the variable of interest in our analysis. For firm, i, this variable is:

$$\Delta PF_i = PF_{i,2010} - PF_{i,2008}$$

The analysis consists of a location test on this variable, ΔPF_i. We employ a t-test with significance level indicated on the mean, and a nonparametric Wilcoxon signed rank test with significance level indicated on the median. The superscripts, a, b, c, d represent significance at the 0.1, 0.05, 0.01 and 0.0001 levels, respectively.

Number of observations	Mean	Median	Std Dev	Minimum	Maximum
1076	-0.1032^d	-0.0869^d	0.1223	-0.7418	0.5062

Table 2 (continued). Voting Pattern Change
Panel B. Change in the "Percentage For" in 2008 after Correcting for Broker Non-votes Based on 2010 Data

We first computed an implied " broker non-vote" metric for 2008 based on 2010 voting results for the same firm, i. This implied broker non-vote metric is computed as:

$$IBNV_{i,2008} = \frac{\text{Number of Broker Non-votes}_{i,2010}}{\text{Number of Directors Elected}_{i,2010}}$$

Next, we next compute $APF_{i,2008}$, a revised "percentage for" in 2008 for firm i after adjusting for the implied broker non-vote percentage for 2008 as follows:

$$APF_{i,2008} = \frac{\{\frac{\text{Total Votes For}_{i,2008}}{\text{Number of Directors}_{i,2008}}\}}{\{\frac{\text{Total Votes Cast}_{i,2008}}{\text{Number of Directors}_{i,2008}}\}} - \frac{IBNV_{i,2008}}{\{\frac{\text{Total Votes Cast}_{i,2008}}{\text{Number of Directors}_{i,2008}}\}}$$

We then compute Φ_i, as the difference between $APF_{i,2008}$ and $PF_{i,2008}$ as shown below:

$$\Phi_i = APF_{i,2008} - PF_{i,2008}$$

Under the null hypothesis of no difference caused by broker non-votes, Φ_i should be zero. We employ a t-test with significance level indicated on the mean, and a nonparametric Wilcoxon signed rank test with significance level indicated on the median. The superscripts, a, b, c, d represent significance at the 0.1, 0.05, 0.01 and 0.0001 levels, respectively. We winsorize the Φ_i values at the 1% and 99% levels.

Number of observations	Mean	Median	Std Dev	Minimum	Maximum
1076	-0.008^d	-0.003^d	0.014	-0.096	0.006

Table 2 (continued). Voting Pattern Change
Panel C. Identical director candidates in 2008 and 2010

To be included in the sample, a director had to have been nominated in both 2008 and 2010. Using the data for 2010 elections, for each director, j, in a firm, i, we first calculated the percentage of broker non-votes received in 2010, $PBV2010_{i,j}$ as follows:

$$PBV2010_{i,j} = \frac{\text{Broker non-votes}_{i,j}}{\text{2010 Total votes cast}_{i,j}}$$

where the denominator is given by:

$$\begin{aligned} \text{2010 Total votes cast}_{i,j} &= \text{Votes for}_{i,j} + \text{Votes against}_{i,j} \\ &\quad + \text{Votes withheld}_{i,j} + \text{Abstentions}_{i,j} \\ &\quad + \text{Broker non-votes}_{i,j} \end{aligned}$$

We next compute an approval rate for 2008 for director, j, in firm, i, based on year 2008 election results. We call this variable $\text{Approval2008}_{i,j}$ and it is computed as:

$$\text{Approval2008}_{i,j} = \frac{\text{Votes for}_{i,j}}{\text{2008 Total votes cast}_{i,j}}$$

where the denominator is computed as:

$$\begin{aligned} \text{2008 Total votes cast}_{i,j} &= \text{Votes for}_{i,j} + \text{Votes against}_{i,j} \\ &\quad + \text{Votes withheld}_{i,j} + \text{Abstentions}_{i,j} \end{aligned}$$

We next compute an adjusted approval rate for each director, j, in firm, i, to account for the fact that the approval rate previously computed above is inflated by discretionary broker votes. Our adjusted approval rate for 2008 for director, j, in firm, i, denoted by $\text{AdjApp}_{i,j}$, is computed using 2008 director election data as:

$$\text{AdjApp}_{i,j} = \frac{\text{Votes for}_{i,j} \; - \; (PBV2010_{i,j} \times \text{2008 Total votes cast}_{i,j})}{(1 - PBV2010_{i,j}) \times \text{2008 Total votes cast}_{i,j}}$$

We then compute the difference between the raw approval rate and the adjusted approval rate, which we denote as $\Gamma_{i,j}$. This variable is unique at the director level, and it is a measure of the increase in the approval rate conferred by allowing discretionary broker voting to occur. We also average $\Gamma_{i,j}$ across all directors in a particular firm, i, and compute a firm specific variable, Γ_i. Under the null hypothesis of no difference caused by discretionary broker votes, $\Gamma_{i,j}$ and Γ_i should be zero. We employ a t-test with significance level indicated on the mean, and a nonparametric Wilcoxon signed rank test with significance level indicated on the median. The superscripts, a, b, c, d represent significance at the 0.1, 0.05, 0.01 and 0.0001 levels, respectively.

Variable	Number of observations	Mean	Median	Std Dev	Minimum	Maximum
$\Gamma_{i,j}$	4362	-0.0068^d	-0.0026^d	0.0158	-0.2550	0.0000
Γ_i	602	-0.0076^d	-0.0029^d	0.0171	-0.1988	0.0000

Table 3. Multivariate Regression Models for ISS Sample

The multivariate regression model is based on the market model and adds dummy variables, D_i, that are equal to one on specific event days, t, as shown in Table 1. The basic form estimated is given by:

$$R_{pt} = \alpha_p + \beta_p R_{mt} + \gamma_1 D_{1t} + \gamma_2 D_{2t} + \gamma_3 D_{3t} + \gamma_4 D_{4t} + \gamma_5 D_{5t} + \gamma_6 D_{6t} + \epsilon_t$$

The $\gamma_i, i = 1, ...6$ represent abnormal return estimates on each of event days, i. In the table below, the superscripts, a, b, c, d represent significance at the 0.1, 0.05, 0.01 and 0.0001 levels, respectively.

Method	Regression coefficients and t-statistics in parenthesis								Adjusted R^2 (F-statistic)
	α	β	γ_1	γ_2	γ_3	γ_4	γ_5	γ_6	
1	0.0003 (3.06)^c	1.1170 (184.11)^d	0.0014 (0.41)	0.0023 (0.69)	-0.0034 (-1.01)	-0.0016 (-0.48)	-0.0023 (-0.68)	0.0061 (1.83)^a	0.9638 (4853.3)^d
2	0.0003 (3.03)^c	1.1234 (185.07)^d	0.0015 (0.44)	0.0020 (0.60)	-0.0028 (-0.84)	-0.0018 (-0.53)	-0.0016 (-0.48)	0.0064 (1.91)^a	0.9642 (4903.6)^d
3	0.0003 (12.60)^d	1.2411 (773.96)^d	0.0007 (0.75)	0.0017 (1.96)^b	-0.0026 (-2.94)^c	0.0000 (0.01)	-0.0035 (-3.94)^d	0.0101 (11.49)^d	0.2874 (85793)^d

Table 4. Multivariate Regression Models for E-Index Sample

The multivariate regression model is based on the market model and adds dummy variables, D_i, that are equal to one on specific event days, t, as shown in Table 1. The basic form estimated is given by:

$$R_{pt} = \alpha_p + \beta_p R_{mt} + \gamma_1 D_{1t} + \gamma_2 D_{2t} + \gamma_3 D_{3t} + \gamma_4 D_{4t} + \gamma_5 D_{5t} + \gamma_6 D_{6t} + \epsilon_t$$

The $\gamma_i, i = 1, ...6$ represent abnormal return estimates on each of event days, i. In the table below, the superscripts, a, b, c, d represent significance at the 0.1, 0.05, 0.01 and 0.0001 levels, respectively.

Method	Regression coefficients and t-statistics in parenthesis								Adjusted R^2 (F-statistic)
	α	β	γ_1	γ_2	γ_3	γ_4	γ_5	γ_6	
1	0.0003	1.2504	0.0000	0.0018	-0.0013	0.0003	0.0002	0.0078	0.9436
	$(1.88)^d$	$(145.87)^d$	(0.00)	(0.37)	(-0.28)	(0.06)	(0.04)	$(1.66)^a$	$(3046.6)^d$
2	0.0003	1.2553	0.0001	0.0021	-0.0018	-0.0002	-0.0001	0.0070	0.9384
	$(1.92)^a$	$(139.25)^d$	(0.03)	(0.43)	(-0.36)	(-0.04)	(-0.01)	(1.41)	$(4903.6)^d$
3	0.0003	1.2269	0.0001	0.0021	-0.0027	-0.0002	-0.0019	0.0087	0.3201
	$(9.74)^d$	$(685.27)^d$	(0.13)	$(2.13)^b$	$(-2.77)^c$	(0.16)	$(-1.89)^a$	$(8.84)^d$	$(67246.9)^d$

Table 5. Stock Price Reaction to SEC Approval of Elimination of Discretionary Broker Voting

The SEC voted to approve elimination of discretionary broker voting for director elections on July 1st, 2009. The event study examined the stock price reaction of NYSE listed firms whose corporate governance score is available from Institutional Shareholder Service. An estimation period of 255 days ending on day -101 relative to the event date is used to estimate the benchmark market model. Below, the superscripts, a, b, c, d represent significance at the 0.1, 0.05, 0.01 and 0.0001 levels, respectively.

Event window	Precision weighted abnormal return	Z-statistic for standardized abnormal return	Number of positive to negative abnormal returns	Generalized sign Z-statistic
(-50, -1)	-0.16%	-0.280	560:679	-2.684^{c}
0	0.87%	12.965^{d}	773:466	9.240^{d}
(+1, +50)	0.92%	1.636	599:640	-0.648

Table 6. Summary Statistics for Corporate Governance Variables from Institutional Shareholder Service

Institutional Shareholder Service (ISS) monitors more than 233 governance measures. These individual measures can be aggregated into one of the following categories: *Board*, *Audit*, *Bylaws*, *State*, *Compensation*, *Qualitative*, *Ownership*, and *Director Education*. The *Board* category considers board characteristics such as board independence, committee composition, board structure and size, and voting. The *Audit* category looks at the audit committee, audit fees, and whether the firm has had restatements. The *Bylaws* category considers whether the firm has a poison pill, dual class stock, takeover defenses, and how the board responds to shareholder proposals. *State* considers state antitakeover provisions and laws. The *Compensation* category takes into account the compensations packages for executives and directors. *Qualitative* factors provide a measure of the effectiveness of Board reviews, succession plans, and director resignations and reviews. *Ownership* considers the independence of the board and how much of the firm directors and executives control. Finally, *Director Education* provides a measure for the number of directors that have participated in the ISS accredited director education program. These 8 category scores are combined to create an overall corporate governance score (*CGQ* for the firm with larger scores signifying better governance relative to firms with lower scores. For the purpose of this study we use the *CGQ* score reported on May 1, 2007

Variable	Mean	Std deviation	Minimum	Median	Maximum
Audit	7.456	1.462	-2.78	8.21	8.21
Board	26.479	5.849	7.06	27.87	37.94
Bylaws	5.790	3.362	-6.15	6.39	15.49
Compensation	19.074	5.562	2.55	18.69	27.17
Director Education	0.276	0.297	0	0.44	1.33
Ownership	4.375	2.376	0	4.25	11.83
Qualitative	10.159	1.720	0	11.32	12.32
State	2.521	0.563	0.84	2.87	3.5
CGQ	76.131	12.590	33.8	77.83	103.82

Table 7. Cross-sectional Analysis of Abnormal Returns

The dependent variable in the WLS regressions is the abnormal return in response to the approval by the SEC of elimination of discretionary broker trading in director elections. The weights used are the reciprocal of the mean squared error for each firm's market model regression in the estimation period. The independent variables related to corporate governance are as mentioned in Table 6's header. $INST$ is the percentage held by institutions of the firm's shares outstanding immediately preceding the event date. $INSIDER$ is the percentage of shares held by officers and directors of the firm as mentioned in SEC filings preceding the event date. ΔPF_i is defined in Table 2. Below, the superscripts, a, b, c, d represent significance at the 0.1, 0.05, 0.01 and 0.0001 levels, respectively.

Panel A. ISS corporate governance variables

Variables	Model									
	1	2	3	4	5	6	7	8	9	10
Intercept	0.01502	0.01644	0.01037	0.01654	0.00962	0.00772	0.01740	0.01391	0.03266	0.02375
(t-statistic)	(4.31)^d	(5.26)^d	(7.95)^d	(6.58)^d	(10.64)^d	(5.90)^d	(4.37)^d	(5.00)^d	(5.48)^d	(5.80)^d
Audit	-0.0009								-0.00050	
(t-statistic)	(-1.99)^b								(-1.05)	
Board		-0.00030							-0.00013	
(t-statistic)		(-2.70)^c							(-1.01)	
Bylaws			-0.00037						-0.00032	
(t-statistic)			(-1.90)^a						(-1.61)	
Compensation				-0.00041					-0.00029	
(t-statistic)				(-3.43)^c					(-2.12)^b	
Director Education					-0.00450				-0.00222	
(t-statistic)					(-2.18)^b				(-1.00)	
Ownership						0.00010			0.00044	
(t-statistic)						(0.40)			(1.64)	
Qualitative							-0.00089		-0.00040	
(t-statistic)							(-2.34)^b		(-0.97)	
State								-0.00230	-0.00255	
(t-statistic)								(-2.11)^b	(-2.35)^b	
CGQ										-0.00020
(t-statistic)										(-3.85)^d
Adjusted R^2	0.0024	0.0050	0.0021	0.0086	0.0030	-0.0007	0.0036	0.0028	0.0156	0.0110
F-Statistic	3.96^b	7.27^c	3.62^a	11.75^c	4.74^b	0.16	5.49^b	4.46^b	3.45^c	14.80^d

Panel B. Regressions with Control Variables

Variables	Model					
	1	2	3	4	5	6
Intercept	0.02115	0.01256	0.00686	0.00650	0.01955	0.02048
(t-statistic)	$(4.41)^d$	$(6.39)^d$	$(7.73)^d$	$(9.07)^d$	$(3.42)^c$	$(3.66)^c$
CGQ	-0.00017				-0.00012	-0.00012
(t-statistic)	$(-2.85)^c$				$(-1.93)^a$	$(-1.90)^a$
INST		-0.00611			-0.00425	-0.00492
(t-statistic)		$(-2.67)^c$			$(-1.73)^a$	$(-2.11)^b$
ΔPF			-0.00683		-0.00503	
(t-statistic)			(-1.18)		(-0.82)	
INSIDER				0.01983	0.01339	0.01278
(t-statistic)				$(3.17)^c$	$(1.97)^b$	$(1.89)^a$
Adjusted R^2	0.0068	0.0058	0.004	0.0086	0.014	0.0143
F-statistic	8.15^c	7.13^c	1.39	10.08^c	4.70^b	6.04^c