



# Can regulation enhancing the shareholder franchise increase firm value?

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## Abstract

Prior research concludes that corporate governance regulation reduces shareholder wealth, or at best, has no impact. We explore this conclusion by examining how equity prices react to corporate governance regulation that enhances the shareholder franchise. Specifically, we focus on regulation repealing broker voting in board of director elections. The change permits computation of an approval rate that more accurately reflects shareholder opinion because the contaminating effect of broker-votes is eliminated. As a result, the shareholder franchise is strengthened. Contrary to prior research decrying corporate governance regulation as unnecessary, and possibly, value-reducing, we find that this regulation eliminating broker-voting increases firm value. This effect is stronger for firms with weaker corporate governance ratings, thereby linking equity value cross-sectionally to strengthening the shareholder franchise via regulation.

**Keywords** Shareholder franchise · Corporate governance · Broker voting

**JEL classification** G38

## 1 Introduction

Prior research (see Larcker et al., 2011, p. 433) questions the relevance of, and by extension, the need for corporate governance regulation. Specifically, the main thrust of their research is that corporate governance regulations generally reduce shareholder

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wealth. Additionally, where regulations do not reduce equity value, they find no reaction whatsoever. Importantly, none of the corporate governance regulatory events they examined were shown to *increase* equity value. The natural inference is that companies should be able to choose their own corporate governance mechanisms without any interference from regulatory bodies. Specifically, in an environment unfettered by regulation, corporate governance practices will evolve such that only optimal policies will survive in equilibrium. Consequently, any regulation involving corporate governance will perturb that purportedly optimal equilibrium, and thereby not create any additional firm value, and even possibly destroy value.<sup>1</sup> Therefore, corporate governance regulation is perceived as not beneficial for firm value.

We re-examine this issue by focusing on corporate governance regulation that increases the shareholder franchise. Specifically, we focus primarily on regulation that repealed discretionary broker voting for the election of board directors<sup>2</sup>. Eliminating broker voting permits computation of an approval rate for directors that more accurately reflects shareholder opinion because the contaminating effect of broker-votes is removed, thus strengthening the shareholder mandate. *Prima facie*, this regulation may not be expected to produce any value-change since board of director election results are not binding; they are merely advisory in nature (e.g., see Aggarwal et al., 2019).

The question that arises is—Does the knowledge regarding investor opinion of director candidates in uncontested elections really matter when the outcome is a foregone conclusion? In this context, the literature provides insights into how transparency in corporate voting is important. For example, low votes received by candidates may cause embarrassment and negative publicity for directors and companies involved (e.g., Grundfest, 2003; Masulis & Mobbs, 2011).

Fischer et al. (2009) document that low approval rates have negative implications for the firm following the outcome of elections. Ertimur et al. (2018) find that shareholders employ low approval rates to force firms to address specific problems identified by proxy advisors. Importantly, Aggarwal et al. (2019) report that while uncontested elections are a routine matter, the directors themselves are not immune from low voting results. Specifically, there are negative consequences for the directors who face a low approval rate, which include removal from important board committees, or from the board altogether, and reduced demand in the market for external directors.

Fischer et al. (2009), Ertimur et al. (2018) and Aggarwal et al. (2019) thus demonstrate strongly that the vote-approval rate is a uniquely meaningful measure for the firms themselves, and for the director candidates, respectively, even though the outcomes of those uncontested elections are a foregone conclusion. Since the approval rate

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<sup>1</sup> The literature contains some studies which show that corporate governance regulation may benefit firms, but the link with an increase in value, per se, arising from such regulation has not been conclusively established. For example: (a) Brick and Chidambaran (2008) show that board monitoring increases after external regulations, (b) Becker, Bergstresser, and Subramaniam (2013) show that revocation of proxy access regulation, thereby weakening the shareholder franchise, is detrimental to firm value.

<sup>2</sup> See section 6.4.1 where we delve into two other initiatives that the SEC considered which also strengthened the shareholder franchise. Additionally, see Akyol et al. (2017). We believe that the difference in the inferences between this paper and the Akyol et al. (2017) paper is due to different event windows, different samples, and our use of corporate governance metrics as a weighting mechanism in the empirical estimation models.

has informational value, it should ideally capture actual shareholder opinion on directors in an unambiguous fashion. However, prior to 2010, brokers could vote shares on behalf of shareholders who did not actually submit their proxy vote. Such discretionary broker voting can contaminate the “true” approval rate because it has been claimed that brokers typically vote in accordance with managements’ recommendation (see Dixon & Thomas, 1998; Bethel & Gillan, 2002).

In 2009, the SEC enacted regulations to eliminate discretionary broker voting for director elections held in 2010 and thereafter. The subsequent vote-approval rate should therefore more accurately capture true shareholder opinion without the contaminating effect of brokers voting for shareholders who do not tender their voting instructions. Given the results in Fischer et al. (2009), Ertimur et al. (2018) and Aggarwal et al. (2019), the heightened visibility of shareholder opinion via the elimination of broker voting should strengthen the shareholder franchise. In turn, strengthening the shareholder franchise should be associated with increased shareholder value. Specifically, when shareholders have greater “voice” in the firm in which they have invested, incumbent management will realize that they cannot slack off since their reputation and job security will be at peril. The reduced agency costs under this perspective should lead to more efforts by incumbent management to maximize shareholder value, leading to an increased stock price.

This regulatory change thus constitutes an ideal exogenous event to see whether corporate governance regulation strengthening the shareholder franchise increases firm value. Indeed, we find a strong positive stock price reaction to the passage of this regulatory rule eliminating discretionary broker voting on July 1st, 2009. This positive valuation effect unambiguously supports the view that enhancing the shareholder franchise via a transparent voter approval rate is beneficial to firm value. Our study, contrary to Larcker et al. (2011), thus demonstrates that corporate governance regulation can affect firm value positively.

Additionally, in this paper, we explore the importance of the shareholder vote approval rate reported by Fischer et al. (2009), Ertimur et al. (2018) and Aggarwal et al. (2019) via a different empirical approach. Specifically, we observe whether the market actually assigns economic value to the prospect of obtaining accurate approval rates from regulatory change, and not through any transaction initiated by the firm in question (Fischer et al., 2009), or by advice from proxy advisors (Ertimur et al., 2018) or to director-specific issues (Aggarwal et al., 2019) in the affected firm. Since these events are firm-specific or director-specific, respectively, our empirical setting which is based on an exogenous event provides relief from any self-selection issues that may have affected these prior studies. Specifically, the use of a regulatory event alleviates endogeneity concerns and self-selection bias which may affect inferences.

Further, we examine whether the economic value underlying enhancing the shareholder franchise is associated with firm-specific characteristics. We focus on corporate governance metrics to determine whether the regulation is differentially beneficial to firms with inferior corporate governance. The results also add to the evidence on the importance of transparency in corporate voting, and the relevance of corporate governance regulations in establishing that transparency. Our results show that strengthening the shareholder franchise is more beneficial for firms with inferior corporate governance. Ours is the first study to document this cross-sectional relationship.

## 2 Discretionary broker voting and reform

### 2.1 Rule 452 and reform

Discretionary broker voting, governed by NYSE Rule 452, arose in 1937 with the express purpose of helping corporations achieve quorum at meetings. This became more necessary as stock holdings transitioned to street name ownership.<sup>3</sup> If the beneficial owners of the stock held in street name do not submit their proxies in a timely manner, 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 if they did not receive specific voting instructions from beneficial owners ten days before a shareholder meeting.

NYSE Rule 452 has undergone changes over time. Prior to the reform we examine, 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.<sup>4</sup> Following this trend, the NYSE created *The Proxy Working Group* in April 2005 to review the NYSE rules on proxy voting for its member brokers, 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.<sup>5</sup> In their report, the first recommendation (p. 21) stated, “The NYSE should move to amend Rule 452 to make the election of directors a non-routine matter.” Arguably, from a 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 commission. Accordingly, an amendment as recommended by the NYSE Proxy Working Group, was formally filed 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.<sup>6</sup> 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 will revise its priors on the move to eliminate discretionary broker voting by NYSE broker members and react accordingly. Specifically, this event may have suggested to the market that the NYSE was not about to dismiss the working group’s recommendation offhand, 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

<sup>3</sup> 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.

<sup>4</sup> See SEC Release No. 34–48,108; File Nos. SR-NYSE-2002–46 and SR-NASD-2002–140.

<sup>5</sup> See [http://www.nyse.com/pdfs/REVISED\\_NYSE\\_Report\\_6\\_5\\_06.pdf](http://www.nyse.com/pdfs/REVISED_NYSE_Report_6_5_06.pdf).

<sup>6</sup> The fact that discretionary broker voting was eventually eliminated for shareholder meetings beginning only on January 1st, 2010, suggests that there was considerable uncertainty whether the rule change would even be enacted when it was originally filed in 2006.

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.<sup>7</sup> The filing date of this amendment to the original filing is the third event date in our examination of valuation effects. We believe that the exemption of investment companies could be a signal to the market that further exemptions might follow in due course and render toothless any actual rule-change, or that the rule-change would not be approved.

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 and as per SEC Release No. 34-60215; File No. SR-NYSE-2006-92, p. 1 states:

On June 28, 2007, the Exchange filed Amendment No. 2 to the proposed rule change, to codify two previously published interpretations that do not permit broker discretionary voting for material amendments to investment advisory contracts with an investment company.

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 impact of the rule-change was being diluted and could be further 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 (see SEC Release No. 34-59464; File No. SR-NYSE-2006-92, p. 3–4), 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.

Thus, the filing date of February 26th 2009 is the fifth event date for our empirical analysis. There might be a market reaction on this date because this version was probably the final one and removed any further uncertainty regarding changes from the NYSE. This version arising from the fourth amendment was published by the SEC

<sup>7</sup> We excluded all such investment companies from our sample.

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. The remainder of the 97 commenters recommended that the SEC should take no action at this time. Thus, given the majority view of “no-action recommended” from 97 commenters added to the 12 commenters which were against the motion, versus a paltry 28 comment letters in favor, there was considerable doubt whether the rule-change would even be approved by the SEC Commissioners.

During trading hours on the morning of July 1st, 2009, in a telecast Open Commission Meeting, the SEC Commissioners, by a 3–2 vote, approved the NYSE proposal to eliminate broker voting in director elections effective January 1st, 2010. Given the significant preponderance of comment letters recommending no action and opposing the proposal, the SEC Commissioners’ approval to eliminate discretionary broker voting came as a surprise to the markets. This SEC approval date becomes the sixth event date in our empirical analysis.

Given the very precise and clear timing of the decision during the morning trading hours of July 1st, 2009, we expect any market reaction to occur on that specific day.<sup>8</sup> The market reaction on this date represents the culmination of the elimination of discretionary broker voting on stock prices.<sup>9</sup> Table 1 summarizes the dates discussed above, which we believe are the key dates on which the markets would have reacted to information related to the regulation.

## 2.2 Broker voting effects and example

We next discuss how discretionary broker voting affects the approval rate. The approval rate,  $AR$ , for a director is defined as:

$$AR = \frac{\text{Votes For}}{\text{Votes For} + \text{Votes Withheld} + \text{Votes Abstained}} \quad (1)$$

Before the regulatory change, votes in each category of “For”, “Withheld”, and “Abstained” can be cast by either actual shareholders (denoted  $S$ ), or by brokers (denoted  $B$ ). Therefore, we denote those vote counts using the notation:  $S_f$ ,  $S_w$ ,  $S_a$ ,  $B_f$ ,  $B_w$ , and  $B_a$ , respectively. Equation (1) can now be rewritten to capture the approval rate *before* the regulatory change as:

$$AR_{\text{before}} = \frac{S_f + B_f}{(S_f + S_w + S_a) + (B_f + B_w + B_a)} \quad (2)$$

<sup>8</sup> One of the authors of this paper was at the SEC on that day when the decision was made. Due to the timing of the decision during the morning hours, we do not employ longer event windows around that date since the market is expected to react on that very day. Use of a longer event period would actually introduce noise into the results if there were other announcements unrelated to the passing of the rule change that preceded or followed the specific event.

<sup>9</sup> In the SEC’s Open Commission Meeting on July 1st, 2009, the Commissioners also considered two other proposals. We discuss these proposals in detail later where we consider alternate explanations for our results.

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On August 5, 2008, the record date of the Annual Meeting, we had 28,849,927 shares of common stock outstanding. At the Annual Meeting, holders of 27,500,640 shares of common stock were present in person or represented by proxy. The following sets forth information regarding the results of the voting at the Annual Meeting.

Proposal I – Election of Directors.

	Votes in Favor	Votes Against	Abstain
Ulysses L. Bridgeman, Jr.	23,690,007	3,792,537	18,093
Rodman L. Drake	23,648,492	3,833,684	18,461

The following directors also have terms in office that continue after the Annual Meeting: Margaret Milner Richardson, Louis P. Salvatore, James C. Spira and Michael C. Yerington.

**Fig. 1** Excerpt from 10-Q for Jackson Hewitt Tax Service filed on 12/10/2008 showing director election results

Prior to the regulatory change we examine, it was impossible for investors to decompose the votes in Eq. (1) into the components shown in Eq. (2). After the regulatory change, where broker votes are not considered, the approval rate becomes:

$$AR_{\text{after}} = \frac{S_f}{(S_f + S_w + S_a)} \quad (3)$$

The approval rate in Eq. (3) reflects only *bona fide* shareholder votes and is thus a more accurate measure of shareholder perception about the director compared to Eq. (2). Further, the difference in approval rates between Eqs. (2) and (3) may be positive, zero, or negative depending on the individual values of  $B_f$ ,  $B_w$ , and  $B_a$ . Hence, it is not a priori known whether the approval rate will decrease after the rule change.

We next discuss the distortions that broker voting can cause via an example where we compare the voting results for a sample firm, Jackson Hewitt Tax Service, at two points in time, namely before and after the elimination of discretionary broker voting.<sup>10</sup> First, consider the voting results in 2008 (i.e., before the regulatory reform) for the two director candidates as shown in Fig. 1.

There are three categories under which votes could appear: (a) Votes in favor, (b) Votes against/withheld, and (c) Abstain. It is important to note that discretionary broker votes are not separately reported from votes cast by the actual shareholders.<sup>11</sup> These broker votes could have been included in any or all three categories—votes for, votes against/withheld, or votes abstained. Thus, market participants have no idea about the number of broker votes versus those that were *bona fide* stockholder votes.

<sup>10</sup> This example is, admittedly, an extreme one and is specifically chosen to illustrate the distortions that broker voting causes.

<sup>11</sup> See previous discussion of the composition of the different vote counts implicit in Eq. (1) as shown in Eq. (2).



**ITEM 5.07. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS.**

On September 22, 2010, Jackson Hewitt Tax Service Inc. (the "Company") held its Annual Meeting of Stockholders in Whippany, New Jersey. On August 4, 2010, the record date of the Annual Meeting, the Company had 28,980,905 shares of common stock outstanding (net of treasury). At the Annual Meeting, 21,804,808 shares of common stock were present in person or represented by proxy. The following sets forth information regarding the results of the voting at the Annual Meeting.

1. The proposal to elect seven directors to the Company's Board of Directors was approved based upon the following votes:

Nominee	Broker			
	For	Against	Abstain	Non-Votes
Margaret Milner Richardson	9,006,080	904,642	115,182	11,778,904
Ulysses L. Bridgeman, Jr.	8,982,400	949,343	94,161	11,778,904
Harry W. Buckley	9,352,693	595,188	78,023	11,778,904
Rodman L. Drake	9,015,731	931,577	78,596	11,778,904
Peter F. Reilly	9,018,764	913,544	93,596	11,778,904
Louis P. Salvatore	9,016,407	917,351	92,146	11,778,904
James C. Spira	7,983,763	1,948,645	93,496	11,778,904

**Fig. 2** Excerpt from 8-K for Jackson Hewitt Tax Service filed on 9/23/2010 showing director election results

In Fig. 2, we provide 2010 election results for the same firm following the elimination of discretionary broker voting. The revised rules now require the disclosure of broker non-votes for director elections held after January 1st, 2010. These broker non-votes technically occur when the brokerage house holding shares in street name has not received instructions from the owner of those shares on how to vote and consequently, cannot vote those shares at the election. The number of such shares is defined as the number of broker non-votes in the extreme right-hand column.

We next consider how these 2010 approval rates compare to two different benchmarks. First, consider what the approval rate would have been if broker voting had been permitted and those votes were all cast for management's nominees (i.e.,  $B_w = B_a = 0$ ). Bridgeman and Drake would have received 95.2% and 95.4%, respectively with broker voting, but only 89.6% and 89.9%, respectively if broker voting is eliminated. Now, consider a different benchmark: one where passive shareholders who did not vote, as represented by the total number of broker non-votes, i.e.,  $(B_f + B_w + B_a)$ , could have been persuaded to vote against the two individuals. Under this scenario, the two nominees would only have received 41.19% and 41.35% of the total votes, thereby "losing" the elections in a "majority" voting election.<sup>12</sup> Further, if we modify the 2008 election results based on the percentage of broker non-votes from 2010, the two candidates would have received 69.9% and 69.5%, instead of 86.14% and 85.99%, respectively.<sup>13</sup>

<sup>12</sup> The 41.19% for Mr. Bridgeman is computed by including the 11,778,901 broker no-votes into the denominator shown in the previous footnote.

<sup>13</sup> The 69.9% for Mr. Bridgeman is determined as follows: First, the broker non-votes for 2010 as a percentage of the sum of votes for, votes against, votes abstained and broker non-votes in 2010 is computed. This percentage of broker non-votes is also assumed to hold in 2008. We then multiply this percentage by the total number of votes cast in 2008 and deduct the result from both the numerator and the denominator of the approval rate for 2008 to obtain the 69.9%.



Aside from providing a clearer indication of shareholder opinion of director candidates, the regulation also provides increased disclosure regarding the shareholder population who voted for directors. Specifically, it provides information on the proportion of shareholders who are passive investors in director elections versus those who participate actively. For example, the voting results in Fig. 2 indicate that 11,778,904 shares, or 40.6% were not voted (i.e., broker non-votes) versus 8,982,400 votes or 31% were cast in favor of Mr. Bridgeman.

We note that broker non-votes associated with other corporate proposals were available before the Rule 452 regulatory change. It may be argued that the broker non-votes from these other proposals could be used to impute the true shareholder opinion for director elections implying that the Rule 452 regulatory change is a trivial event from an informational perspective. We disagree with this interpretation on several grounds as discussed below.

First, broker non-votes arising from the same proxy may change depending on the specific proposal being voted upon. We provide an example of this in Fig. 3 which shows results of proxy voting for Microsoft from 2007. Specifically, the figure shows that the number of broker non-votes for ratifying the auditor is 1,225,751,130 whereas on the next proposal, it is 3,216,109,373. This, thus, raises the question of which broker non-vote number to use to impute shareholder opinion for directors! Additionally, even if broker non-votes were the same for all the other proposals, it is not clear how they would have been voted for individual directors. Thus, we maintain that the Rule 452

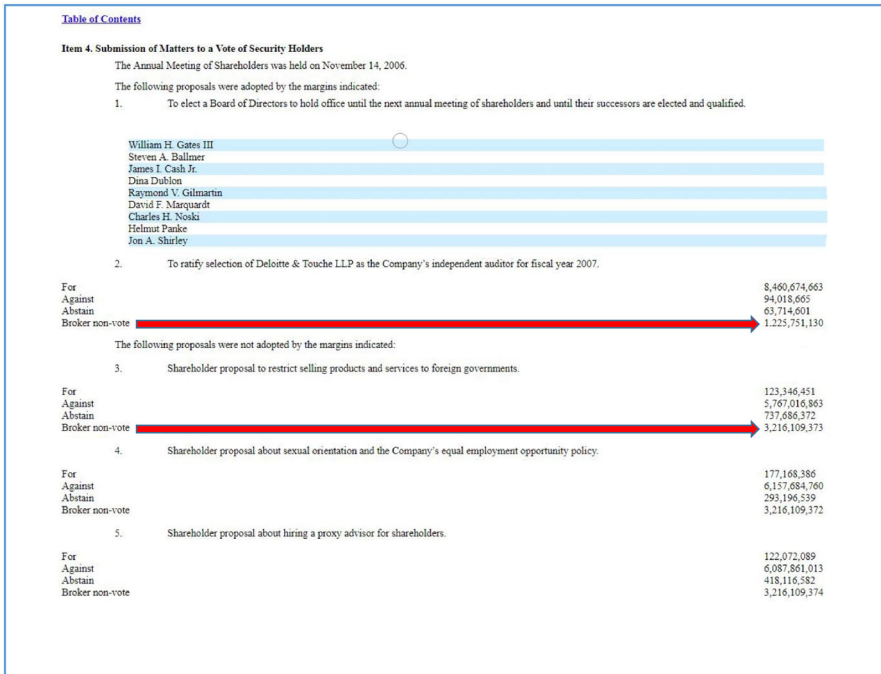


Fig. 3 Excerpt from 10-Q field on January 25th, 2007 by Microsoft to illustrate variation in broker non-votes

regulatory change causes new information to be available about shareholder sentiment on the directors of the firm, thereby strengthening the shareholder franchise.

This information on the magnitude of broker non-votes for director elections may be especially useful to activist investors. First, activists may exploit such information to swing votes in director elections and prevent incumbent directors from securing a majority. More importantly, activists might be able to get these uncommitted voters to vote on other more important proposals beyond mere director elections. These actions would be consistent with the voting power approach presented in Poulsen et al. (2010). Consequently, the attendant disclosure of broker non-votes occasioned by the rule change may serve a role in disciplining errant management, thereby increasing the value associated with transparency in corporate voting, as well as strengthening corporate governance.

### 2.3 Hypotheses

Fischer et al. (2009), Ertimur et al. (2018) and Aggarwal et al. (2019) have shown that the approval rate contains useful information with forward-looking implications but none of these papers examines the valuation effects associated with the approval rate. For example, low approval rates may indicate that the firm is going to experience selling by institutional investors, possibly leading to CEO turnover (Parrino et al., 2003), or to more sophisticated directors being brought onto the board (Aggarwal et al., 2019), etc. Further, it is not institutional investors alone that matter; recent evidence in Brav et al. (2022) shows that retail investors also exercise their voting power to communicate with management and boards. Given that these outcomes can affect valuation, more accurate vote-approval rates arising from the regulatory change to strengthen the shareholder franchise should reduce the informational risk premium in the discount rate used in valuation. Consequently, firm values should, on average, increase as more informative approval rates and enhanced shareholder franchise results from the regulatory change. This leads to our first hypothesis stated in the alternate form below:

**H1a** The regulatory change eliminating discretionary broker voting should be associated with increased equity value as corporate voting becomes more transparent, and the shareholder franchise is strengthened.

We next ask the question—For which kind of firms will this increased accuracy of investor sentiment and enhanced shareholder franchise be more relevant? In this context, we contend that firms with more effective corporate governance will *ex ante* manifest more optimal management practices and equity performance. Therefore, the vote-approval rate is less informationally relevant about management's performance for such well-governed firms.

Conversely, for poorly governed firms, the vote-approval rate and enhanced shareholder franchise become more relevant because it now better communicates the dissatisfaction of shareholders with the board in the face of inadequate shareholder defenses against inferior governance. Based on the above, we predict that the vote-approval rate is more value relevant for firms with inferior corporate governance. This leads to our second hypothesis stated in the alternate form below:

**H2a** The regulatory change eliminating discretionary broker voting, thereby enabling more accurate vote-approval rates, will produce a stock price reaction that is negatively related to corporate governance metrics, i.e., the worse the corporate governance, the more positive will be the stock price reaction to the elimination of discretionary broker voting.

Our examination in this respect connects the role of the board of directors in corporate governance and shareholder value. Adams et al. (2010) survey the literature exploring the role of the board of directors and raise concerns about endogeneity in empirical work that relates firm value to corporate boards. Our study addresses their concern using an exogenous regulatory change to investigate whether issues related to the board of directors are associated with corporate governance and, in turn, shareholder value. We employ event study methods, which are mentioned by Bhagat and Romano (2007) as helpful with endogeneity concerns. Specifically, they state (p. 946),

A further reason for emphasizing event study data is that they avoid the endogeneity concerns that can limit the results of other modes of empirical research in this area.

### 3 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 Services (ISS). We restrict our examination to NYSE listed firms because the proposal leading to the sequence of dates discussed in the previous section was originally initiated by the NYSE. Our justification for this restriction is discussed next.

The rule change initiated by the NYSE specifically affected its broker members. Since NYSE broker members trade Nasdaq stocks as well, the rule change affected more than NYSE listed firms. However, the market may have mistakenly inferred that only NYSE firms were affected when the NYSE rule change was first approved. It was only much later that clarification was disseminated by legal firms that the rule change affected all publicly listed firms, regardless of whether they were listed on the NYSE or not.<sup>14</sup> The need for such explicit clarification implies that the market may have believed that only NYSE firms were affected by the rule change. Consequently, we believe that Nasdaq firms may not exhibit any reaction to the regulatory change on July 1st, 2009.<sup>15</sup>

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

<sup>14</sup> For example, <https://www.mcguirewoods.com/client-resources/Alerts/2009/7/Elimination-of-Broker-Discretionary-Voting-in-Director-Elections> states, "The amendment of NYSE Rule 452 will affect virtually all public companies, not just companies listed on the NYSE."

<sup>15</sup> In unreported tests/results, we examined separately a sample of Nasdaq firms. Consistent with our interpretation, the results for the Nasdaq sample indicate no significant stock price reaction, on average, on the day that the SEC rule change was approved.

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 accounting 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 considers 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 percentage ownership under the 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 this study, we use the *CGQ* scores reported on May 1, 2007 (i.e., approximately in the center of the events described in Table 1).

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 defined as the ISS Sample consisting of 1239 firms.

## 4 Multivariate event study methods

### 4.1 Main tests

To analyze the stock price effects for firms in response to the regulatory reform, we use three different methods.<sup>16</sup> All methods are based on a variation of the Multivariate Regression Model (MVRM) originally proposed by Schipper and Thompson (1983) which is employed in regulation research, for example, see Zhang (2007). The MVRM uses the Seemingly Unrelated Regression (SUR) framework developed by Zellner (1962). In what follows, we describe the most general method first, and then provide details on two other variations.

#### 4.1.1 Method 1: Incorporating corporate governance scores into the event study

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

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<sup>16</sup> In what follows in this section, the first and third methods incorporate corporate governance measures thereby testing hypothesis **H2a** directly. The second method tests **H1a**.

in this study are the same for all firms, contemporaneous cross-sectional correlation is 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 corporate governance attributes may vary across firms. A modification of the original Schipper and Thompson (1983) method, proposed by Schipper et al. (1987), that adjusts for both cross-correlation 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. The following model is estimated using portfolio returns,  $R_{pt}$ , as shown below:

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

where  $R_{pt}$  is the return on the portfolio of firms,  $p$ , on day,  $t$ ;  $R_{mt}$  is the return on the CRSP Value Weighted Index on day  $t$ ,  $D_{it}$ ,  $i = 1, \dots, 6$  are dummy variables equal to 1 if day  $t$  is  $i$ th date among the six dates mentioned in Table 1, and  $\alpha_p$ ,  $\beta_p$ , and  $\gamma_i$ ,  $i = 1, \dots, 6$  are regression coefficients to be estimated.<sup>17</sup> We use the CRSP Value Weighted Index as the proxy for the overall market based on the work of Canina et al. (1998). The  $\gamma_i$  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. 4, 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. 4 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:

$$\mathbf{W} = (\Psi^T \mathbf{S}^{-1} \Psi)^{-1} \mathbf{S}^{-1} \Psi \quad (5)$$

where  $\Psi$ , is a vector where each element,  $\psi_j$ , for firm  $j$  is given by:

$$\psi_j = \frac{1}{CGQ_j} \quad (6)$$

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

<sup>17</sup> Several other studies have used a similar structure—see, for example, Brown, Cummins, Lewis, and Wei (2004), Chang and Nichols (1992), Espahbodi, Strock and Tehrani (1991), Foerster and Karolyi (1999), and Zhang (2007).

### 4.1.2 Method 2: Vector $\Psi$ is assumed to be the unit vector

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. Specifically, corporate governance scores are not used in a weighting scheme to compute portfolio return. However, cross-sectional correlation due to the same event dates is taken into account through the use of the weighting matrix,  $\mathbf{S}$  discussed previously.

### 4.1.3 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,  $\psi_j$ . 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.<sup>18</sup>

## 4.2 Robustness tests

### 4.2.1 Using a non-U.S. based market index

Zhang (2007) studies the effects of the adoption of the Sarbanes–Oxley regulation on U.S. firms. In her empirical methods, she employs a market index that is exclusively composed of foreign firms to examine wealth effects associated with an event that has widespread implications for all U.S. firms.<sup>19</sup> We also employ this approach as a robustness test, and the justification for our employing such a market index follows next. Foreign firms are unlikely to be affected by U.S. regulations eliminating discretionary broker voting. However, this index of foreign firms will reflect broad economic news that affect both U.S. and foreign markets. Thus, abnormal returns of U.S. firms relative to this foreign market index will capture the effect of the regulatory change that only affects U.S. firms after controlling for worldwide economic news. To operationalize this foreign market index in our tests, we employ daily returns for the Dow Jones Global ex-U.S. Composite Index which we obtain from Thomson Reuters instead of the CRSP Value Weighted Index. We use this market index in conjunction with the ISS sample to estimate Eq. 4.<sup>20</sup>

### 4.2.2 Using an alternate corporate governance metric

The empirical tests described previously employ data for firms for which we have the corporate governance measure from ISS. To demonstrate robustness to this choice, we use another commonly used governance metric, the Entrenchment Index, as described

<sup>18</sup> While corporate governance scores are used in the weighting scheme as in Method 1, it does not adjust for contemporaneous correlations in returns.

<sup>19</sup> This elegant modification is designed to capture abnormal returns that pertain to U.S. firms in excess of global economic news that affect firms across the globe.

<sup>20</sup> Similar results are obtained with the E-Index sample (see next section), and we omit them in the interests of brevity.

**Table 1** Event dates in broker voting reform

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

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

in Bebchuk et al. (2009). This robustness check draws from intuition expressed in Bhagat et al. (2008), where they state, “there is no one “best” measure of corporate governance.” The data are downloaded from Lucian Bebchuk’s website<sup>21</sup> and we employ firms with data in 2006, the last year for which the entrenchment index information is 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 the E-Index Sample.

For this set of robustness checks, we employ the same tests as described earlier for the ISS Sample, except that we now use the Entrenchment Index as our measure of corporate governance instead of the information from ISS. The sample of firms for which we have the Entrenchment Index is different from the sample employing ISS corporate governance scores. To that extent, this is an added robustness check on sample firm composition in addition to the corporate governance measure. 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,  $\psi_j$ , for firm,  $j$ . Accordingly, weaker governance firms are given greater weight in the empirical specifications using this measure, which is similar to the estimations using the ISS sample.

<sup>21</sup> <http://www.law.harvard.edu/faculty/bebchuk/data.shtml>.



## 5 Multivariate event study results

### 5.1 ISS sample: base case results

The results for the ISS sample are presented in Panels A and B of Table 2. Panel A results are for tests using the CRSP Value Weighted Index, while Panel B results are for tests using the foreign market index as the market proxy. In the first row (Panel A), the results for Method 1 indicate a statistically significant abnormal return on the sixth date (i.e., a significant  $\gamma_6$  coefficient). 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 increase firm-value.

The results for Methods 2 and 3 corroborate the previous finding. It should be noted that across all three methods, the only date on which the return is somewhat sizeable, and is *consistently statistically significant*, is the sixth event date. Consequently, we conclude that the only robust abnormal return is on the sixth event day. In terms of valuation impact, the abnormal return based on all three methods in Panel A ranges from 0.78% to 0.97% of equity value, which is economically meaningful and significant.

### 5.2 Robustness test: ISS sample using non-U.S. market index

For the robustness test where we employ a non-U.S. based market index (Panel B of Table 2), we note that each model has a lower adjusted R-squared compared to the analogous model in Panel A. This is not surprising since the returns of US firms are not expected to be as highly correlated to a foreign stock market index as they would be to a U.S. market index.

Next, similar to the results in Panel A, we observe that the stock market reaction on average is positive and consistently significant across all 3 models only for the sixth event day. However, the point estimate of the abnormal return is much higher than the results in Panel A. In particular, the mean point estimate for the abnormal return across the three models is about 2.84% in Panel B compared to 0.85% in Panel A.<sup>22</sup> Our tests thus far have robustly shown that the market reaction is positive, and both statistically and economically significant, to the advent of strengthening of the shareholder franchise via a more informative vote-approval rate from regulation eliminating discretionary broker voting.<sup>23</sup>

### 5.3 Robustness test: E-Index sample

Table 3 presents the results of estimating the three models employing the E-Index

<sup>22</sup> For Panel B, the 2.84% is obtained as the mean of 2.732%, 2.699% and 3.080% in the column titled  $\gamma_6$ . A similar computation applies to obtain the 0.85% for Panel A.

<sup>23</sup> In addition to using a global stock market index in our MVRM models for the market portfolio, we also employed a Canadian stock market index. While a global index diversifies away any specific country-based risk, a Canadian market index would reflect risk unique to the Canadian market. Untabulated results for this robustness test are consistent with the results for our global index in Panel B of Table 2 showing a positive and significant stock price reaction to the approval of the rule change.

**Table 2** Multivariate regression models for ISS sample

Method	Regression coefficients and t-statistics in parenthesis						Adjusted R <sup>2</sup> (F-statistic)		
	$\alpha$	$\beta$	$\gamma_1$	$\gamma_2$	$\gamma_3$	$\gamma_4$	$\gamma_5$	$\gamma_6$	
<i>Panel A: CRSP value weighted index as market proxy</i>									
1	0.0002 (2.09) <sup>b</sup>	1.1357 (150.22) <sup>d</sup>	0.0019 (0.47)	0.0017 (0.42)	-0.0029 (-0.73)	-0.0012 (-0.31)	-0.0052 (-1.28)	0.0079 (1.98) <sup>b</sup>	0.9516 (3232.81) <sup>d</sup>
2	0.0002 (2.09) <sup>b</sup>	1.1354 (151.36) <sup>d</sup>	0.0018 (0.45)	0.0017 (0.43)	-0.0029 (-0.72)	-0.0014 (-0.35)	-0.0052 (-1.30)	0.0078 (1.97) <sup>b</sup>	0.9523 (3282.06) <sup>d</sup>
3	0.0003 (10.55) <sup>d</sup>	1.2414 (722.92) <sup>d</sup>	0.0007 (0.73)	0.0019 (2.11) <sup>b</sup>	-0.0025 (-2.73) <sup>c</sup>	-0.0002 (-0.24)	-0.0035 (-3.79) <sup>d</sup>	0.0097 (10.58) <sup>d</sup>	0.2863 (74.865) <sup>d</sup>
<i>Panel B: Foreign market index as market proxy</i>									
1	0.0003 (0.62)	0.6564 (19.49) <sup>d</sup>	-0.0012 (-0.08)	-0.0003 (-0.02)	0.0013 (0.08)	-0.0041 (-0.25)	-0.0128 (-0.80)	0.02732 (1.72) <sup>a</sup>	0.2466 (54.81) <sup>d</sup>
2	0.0003 (0.60)	0.65531 (19.47) <sup>d</sup>	-0.0019 (-0.12)	-0.0000 (-0.00)	0.0013 (0.08)	-0.0054 (-0.34)	-0.0131 (-0.82)	0.02699 (1.70) <sup>a</sup>	0.2462 (54.70) <sup>d</sup>
3	0.0003 (10.73) <sup>d</sup>	0.7188 327.12 <sup>d</sup>	-0.0026 (-2.49) <sup>b</sup>	-0.0002 (-0.19)	0.0023 (2.25) <sup>b</sup>	-0.0046 (-4.41) <sup>d</sup>	-0.0129 (-12.41) <sup>d</sup>	0.0308 (29.67) <sup>d</sup>	0.0764 (15.446.2) <sup>d</sup>

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:

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

The  $\gamma_i, i = 1, \dots, 6$  represent abnormal return estimates on each of event days,  $i$ . The models are estimated over 1152 trading days. Method 1 adjusts the portfolio of event-firm returns for contemporaneous cross-correlation due to identical event dates and also gives greater weight to firms with inferior corporate governance as measured by ISS corporate governance score,  $CGQ$ . Method 2 controls for contemporaneous cross-correlation but returns of firms with inferior corporate governance are weighted higher. 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 in a two-tail test

**Table 3** Multivariate regression models for E-Index sample

Method	Regression coefficients and t-statistics in parenthesis						Adjusted R <sup>2</sup> (F-statistic)		
	$\alpha$	$\beta$	$\gamma_1$	$\gamma_2$	$\gamma_3$	$\gamma_4$		$\gamma_5$	$\gamma_6$
1	0.0003 (1.88) <sup>d</sup>	1.2504 (145.87) <sup>d</sup>	0.0000 (0.00)	0.0018 (0.37)	-0.0013 (-0.28)	0.0003 (0.06)	0.0002 (0.04)	0.0078 (1.66) <sup>a</sup>	0.9436 (3046.6) <sup>d</sup>
2	0.0003 (1.92) <sup>a</sup>	1.2553 (139.25) <sup>d</sup>	0.0001 (0.03)	0.0021 (0.43)	-0.0018 (-0.36)	-0.0002 (-0.04)	-0.0001 (-0.01)	0.0070 (1.41)	0.9384 (4903.6) <sup>d</sup>
3	0.0003 (9.74) <sup>d</sup>	1.2269 (685.27) <sup>d</sup>	0.0001 (0.13)	0.0021 (2.13) <sup>b</sup>	-0.0027 (-2.77) <sup>c</sup>	-0.0002 (0.16)	-0.0019 (-1.89) <sup>a</sup>	0.0087 (8.84) <sup>d</sup>	0.3201 (67,246.9) <sup>d</sup>

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:

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

The  $\gamma_i$ ,  $i = 1, \dots, 6$  represent abnormal return estimates on each of event days,  $i$ . The models are estimated over 1152 trading days. Method 1 adjusts the portfolio of event-firm returns for contemporaneous cross-correlation due to identical event dates and gives greater weight to firms with inferior corporate governance as measured by E-Index. Method 2 controls for contemporaneous cross-correlation due to identical event dates but does not account for differential corporate governance. Method 3 does not account for contemporaneous cross-correlation but returns of firms with inferior corporate governance are weighted higher. 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 in a two-tail test

sample.<sup>24</sup> The sixth event day abnormal return ( $\gamma_6$ ) 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,  $\gamma_6$  is not significant in a two-tail test but is significant in a one-tail test at the 0.1 level.<sup>25</sup> The coefficient,  $\gamma_6$ , 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%, and of the same order of magnitude as obtained using the ISS Sample. Thus, our results are robust to the choice of governance metric, whether employing the *CGQ* of ISS or Bebchuk *E-Index*. Consequently, the null version of our first hypothesis, **H1o** is rejected. Furthermore, the regressions provide more significant results when weighted by the corporate governance metric.

## 6 Further empirical tests

Our results have shown that the market reacts positively to the news of the elimination of discretionary broker voting which leads to a more accurate approval rate. These results also support the prediction in Cai et al. (2009) where they conjecture 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 the Prabhala (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.<sup>26</sup>

Our method is similar to that in Mikkelsen and Partch (1988). In our event study, we estimate the market model for each firm over a 255-day period ending on day -101 relative to the event date. As before, we use the CRSP value-weighted index as the proxy for the market. 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

<sup>24</sup> We use the CRSP value weighted index as our proxy for the market in this series of tests.

<sup>25</sup> Since hypothesis **H1** is in the alternate form, stating that the stock price will react **positively** to the repeal of broker voting, a one-tail test is actually *apropos*. Reporting results using a two-tail test biases against finding support for our hypothesis.

<sup>26</sup> We acknowledge that the test statistics in Table 4 are not theoretically appropriate for samples with the same event date for all firms. However, our MVRM tests, discussed previously, do take event date clustering into account.

**Table 4** Stock price reaction to SEC approval of elimination of discretionary broker voting

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 <sup>c</sup>
0	0.87	12.965 <sup>d</sup>	773:466	9.240 <sup>d</sup>
(+ 1, + 50)	0.92	1.636	599:640	- 0.648

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 1239 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 in a two-tail test

test of the null hypothesis that the mean standardized abnormal return over the event window is zero. The second statistic comes from a non-parametric 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 4. Recall that the event date (i.e., day 0) here is the date that the SEC commissioners voted to approve elimination of discretionary broker voting for director elections. As seen in the middle row of Table 4, the abnormal return on day 0 is positive and highly statistically significant using both the parametric 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 strongly corroborate the results using the MVRM tests reported on in Tables 2 and 3. Specifically, the market reacts positively, on average, to the elimination of discretionary broker voting in director elections, in effect rejecting the null version of our first hypothesis.

## 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 H2 again. 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. Basically, firms for which the market model is estimated with greater precision are given greater weight in the regression. For independent variables, we first employ each individual governance category score that ISS provides (i.e., Audit, Board, Bylaws, Compensation, Director Education, Ownership, Qualitative, and State). We then follow that up with their summary score, *CGQ*. Summary statistics on the independent variables for the 1239 firms used in our analysis are provided in Table 5.

**Table 5** Summary statistics for corporate governance variables from institutional shareholder service

Variable	Mean	SD	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

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 considers 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. The number of observations is 1239 firms

The results for the WLS regressions for the governance variables alone are shown in Panel A of Table 6. Univariate regressions are first estimated using each of the ISS category scores as independent variables (Models 1 through 8). Except for the Ownership variable, all 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 more positive the abnormal return to the news that the vote approval rate will become more meaningful. This evidence strongly rejects the null version of our second hypothesis, **H2o**.

In Model 9, we report results of a multiple WLS regression with all eight corporate governance components as independent variables. Surprisingly, only Compensation and State show up as being significantly associated with the abnormal return. We conjecture that the market 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.

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

**Table 6** Cross-sectional analysis of abnormal returns

Variables	Model (N = 1239 observations)	1	2	3	4	5	6	7	8	9	10
<i>Panel A: Regressions using ISS corporate governance variables</i>											
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) <sup>d</sup>	(5.26) <sup>d</sup>	(7.95) <sup>d</sup>	(6.58) <sup>d</sup>	(10.64) <sup>d</sup>	(5.90) <sup>d</sup>	(4.37) <sup>d</sup>	(5.00) <sup>d</sup>	(5.48) <sup>d</sup>	(5.80) <sup>d</sup>
Audit		-0.0009								-0.00050	
(t-statistic)		(-1.99) <sup>b</sup>								(-1.05)	
Board			-0.00030							-0.00013	
(t-statistic)			(-2.70) <sup>c</sup>							(-1.01)	
Bylaws				-0.00037						-0.00032	
(t-statistic)				(-1.90) <sup>a</sup>						(-1.61)	
Compensation					-0.00041					-0.00029	
(t-statistic)					(-3.43) <sup>c</sup>					(-2.12) <sup>b</sup>	
Director Education						-0.00450				-0.00222	
(t-statistic)						(-2.18) <sup>b</sup>				(-1.00)	
Ownership							0.00010			0.00044	
(t-statistic)							(0.40)			(1.64)	
Qualitative								-0.00089		-0.00040	
(t-statistic)								(-2.34) <sup>b</sup>		(-0.97)	
State									-0.00230	-0.00255	
(t-statistic)									(-2.11) <sup>b</sup>	(-2.35) <sup>b</sup>	



**Table 6** (continued)

Variables		Model (N = 1239 observations)									
		1	2	3	4	5	6	7	8	9	10
CGQ	(t-statistic)										- 0.00020 (- 3.85) <sup>d</sup>
Adjusted R <sup>2</sup>		0.0024	0.0050	0.0021	0.0086	0.0030	0.0036	0.0007	0.0028	0.0156	0.0110
F-Statistic		3.96 <sup>b</sup>	7.27 <sup>c</sup>	3.62 <sup>a</sup>	11.75 <sup>c</sup>	4.74 <sup>b</sup>	0.16	5.49 <sup>b</sup>	4.46 <sup>b</sup>	3.45 <sup>c</sup>	14.80 <sup>d</sup>
Variables		Model (N = 1046 observations)									
		1	2	3	4	5	6	7	8	9	10
<i>Panel B Regressions using control variables</i>											
Intercept	(t-statistic)	0.02115 (4.41) <sup>d</sup>	0.01256 (6.39) <sup>d</sup>	0.00749 (11.80) <sup>d</sup>	0.00650 (9.07) <sup>d</sup>	0.03526 (10.04) <sup>d</sup>	0.02356 (4.29) <sup>d</sup>	0.02457 (5.01) <sup>d</sup>			
CGQ	(t-statistic)	- 0.00017 (- 2.85) <sup>c</sup>									- 0.00012 (- 2.14) <sup>b</sup>
INST	(t-statistic)		- 0.00611 (- 2.67) <sup>c</sup>								- 0.00785 (- 3.50) <sup>c</sup>
ΔAR	(t-statistic)			- 0.01364 <sup>a</sup> (- 1.67)							- 0.00083 (- 1.04)
INSIDER	(t-statistic)				0.01983 (3.17) <sup>c</sup>						0.00177 (0.26)
LnTA	(t-statistic)										
LnTA residuals	(t-statistic)							- 0.00324 (- 8.00) <sup>d</sup>			- 0.00350 (- 7.76) <sup>d</sup>

Table 6 (continued)

Variables	Model (N = 1046 observations)						
	1	2	3	4	5	6	7
Adjusted R <sup>2</sup>	0.0068	0.0058	0.004	0.0086	0.0569	0.0642	0.0649
F-statistic	8.15 <sup>c</sup>	7.13 <sup>c</sup>	1.39	10.08 <sup>c</sup>	64.01 <sup>d</sup>	15.33 <sup>d</sup>	25.19 <sup>d</sup>

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 defined in Table 6. *INST* is the percentage held by institutions of the firm's shares outstanding immediately preceding the event date.  $\Delta AR_t$  is defined as the average vote approval rate in 2010 minus the average vote approval rate in 2008 for each firm. *INSIDER* is the percentage of shares held by officers and directors of the firm as mentioned in SEC filings preceding the event date. *LnTA* is the natural log of Total Assets as of the fiscal year end immediately preceding the event date. *LnTA residuals* are the residuals from an OLS regression of *LnTA* on *CGQ*, *INST*, and *INSIDER*, and are used to control for multicollinearity of *LnTA* with those explanatory variables. The superscripts, *a*, *b*, *c*, *d* represent significance at the 0.1, 0.05, 0.01 and 0.0001 levels, respectively in a two-tail test

and composite CGQ score. Essentially, the market reacts positively to the elimination of discretionary broker voting for director elections, but this reaction is stronger and more positive for firms with inferior corporate governance. Taken together, the evidence shows that both our null hypotheses, **H1o** and **H2o**, are rejected.

### 6.3 Robustness using control variables

The results in Panel A of Table 6 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 monitor firms they invest in. For example, Gillan and Starks (2000) suggest that institutional investors perform this monitoring since they cannot readily sell off their holdings in underperforming firms, i.e., cannot use “exit” as a tool.<sup>27</sup> 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 et al., 2016). The evidence on this issue suggests that the monitoring by institutional investors may be tied to the size of their holdings. For example, Aggarwal et al. (2011) find that firms with higher institutional ownership are more likely to fire poorly performing CEOs presumably because of monitoring by institutional investors. Therefore, the monitoring explanation would argue for a positive relation between institutional investor holdings and firm value (see McConnell & Servaes, 1990). Further, it is also important to understand that institutional investors are bound by fiduciary duties to vote their shares. Presumably, these investors do not blindly rubberstamp management’s recommendations but instead vote after appropriate due diligence. When discretionary broker voting is eliminated, this “institutional investor vote” becomes more transparent without the obfuscating view of broker votes.

When discretionary broker voting is eliminated, the stock price reaction should be more positive for firms that 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 the elimination of discretionary broker voting.

The data for institutional holdings was obtained from ThomsonOne through their web interface: [www.thomsonone.com](http://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.

<sup>27</sup> This inability/unwillingness to sell 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 (e.g., tracking the S&P 500 Index). 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.

The percent institutional holdings variable, *INST*, is simply the number of shares held by institutions divided by shares outstanding.

Apart from *INST*, we also employ: (i) the change in the vote approval rate,  $\Delta AR$  for the firms' directors between 2010 (after rule-change) and 2008 (before rule-change) and (ii) insider holdings as a percentage of total shares, *INSIDER*, and (iii) size of the firm as proxied by *LnTA*, the natural log of Total Assets as of the fiscal year-end immediately preceding the event date, as control variables. We next explain the rationale for these control variables.

Given that broker voting typically follows managements' recommendations, we speculate that  $\Delta AR$ , the change in the vote-approval rate 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 value increase 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  $\Delta AR$  is more negative, implying a negative relationship between the stock price reaction and  $\Delta AR$ .

For insider holdings, when insiders own more of a firm's shares, then discretionary broker voting becomes less important. This is because insiders' votes may overwhelm the votes of others including those from discretionary broker voting. We create the variable *INSIDER* as follows. Insider holding data 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 percent insider holdings variable, *INSIDER*, is computed as the number of shares held by insiders divided by shares outstanding.

Lastly, we include firm size because it is a measure of asymmetric information. Specifically, larger firms with less asymmetric information may not benefit from more stringent corporate governance measures. The concept that large firms have less asymmetric information is not new—for example, see Collins et al. (1987) and Cai et al. (2015). To measure firm size, we use *LnTA*, the natural log of Total Assets as of the fiscal year-end immediately preceding the event date. We did not employ any variant of market value of equity since it could be structurally related to corporate governance, insider holdings, and institutional holdings. We detected strong multicollinearity between *LnTA* and *CGQ*, *INST*, and *INSIDER*. Therefore, we created a new variable, *LnTA Residuals*, which is the residual from regressing *LnTA* against *CGQ*, *INST*, and *INSIDER* to use in regressions which include these control variables.

The results of the weighted least squares regressions appear in Panel B of Table 6. 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 ( $N = 1046$ ) 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 6 and 7 of Panel B in Table 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 the null version of our second hypothesis, **H2o**.

In Models 2, 6, and 7 of Panel B, we find that the institutional holdings level, *INST*, is negatively associated with the abnormal return, suggesting that the elimination of discretionary broker voting is not as valuable for firms with high institutional holdings. Presumably, this is because monitoring by institutions already prevents losses in value from inferior boards, thus reducing the need for an informative approval rate.

In Model 3, the change in the approval rate between 2008 and 2010,  $\Delta AR$ , is weakly related to the abnormal return (significant at the 0.1 level). Further, consistent with our prediction, the point estimate of the coefficient on  $\Delta AR$  is negative. We acknowledge that we are endowing the market with clairvoyance as to what the vote approval change will be. This is because the stock price reaction is measured on July 1st, 2009, when the voting results for 2010 are not yet known. In Model 6, this variable is not significant in the presence of the other control variables but has the expected negative sign on the coefficient.

In model 4, *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, which allows a clearer expression of dissatisfaction with directors via a more accurate approval rate, is more valuable in firms with higher insider ownership.

In models 5, 6, and 7, the abnormal returns are negatively associated with proxies for firm-size. Thus, large firms, which manifest lower asymmetric information, exhibit a lower stock price reaction to the elimination of broker voting. This result suggests that larger firms, which are more strongly monitored by external market participants (i.e., less asymmetric information), are less likely to benefit from any strengthening of the shareholder franchise via informative approval rates.

## 6.4 Alternate explanations for the positive market reaction

### 6.4.1 Concurrent information releases

Our first step is to determine whether there were any other concurrent information releases by the SEC. On July 1st, 2009, in addition to the final vote to approve the rule change to eliminate broker voting, the SEC commissioners also considered two other proposals for future rulemaking.<sup>28</sup> One proposal involved shareholder voting on executive compensation at firms that were recipients of TARP funding. The other proposed to enhance disclosure in proxy statements including relationship of compensation to risk, conflicts of interest of compensation consultants, qualifications of executives, etc.

From an empirical standpoint, one could argue that any abnormal stock price return on that date could be due to the market reacting to these two concurrent proposals

<sup>28</sup> These were: Proposed Rule Release No. 34–60,218, available at: <http://www.sec.gov/rules/proposed/2009/34-60218.pdf> and Proposed Rule Release 33–9052, available at: <http://www.sec.gov/rules/proposed/2009/33-9052.pdf>.

instead of the actual successful passing of the rule change eliminating discretionary broker voting. However, these two other items were merely proposals for future rule-making which would have to undergo the normal review process, normally several months in duration, including a comment period before coming up for a vote. On the other hand, the rule change on broker voting had already undergone the review process, and the commissioners indeed voted on its actual adoption despite the preponderance of comment letters recommending no action or opposing the proposal.

The finality of the surprising approval of the rule-change eliminating broker voting versus the extremely preliminary nature of the other two proposals suggests that the market reaction, if any, should be primarily due to the former. Lastly, notwithstanding the above, we argue that our paper's main point linking value increase to shareholder voting power is consistent with the overall view of all three initiatives as per the SEC Chairman's statement made on that July 1st, 2009. Specifically, she stated (see <https://www.sec.gov/news/press/2009/2009-147.htm>):

These three items considered today are all related to the fundamental goal of enhancing the quality of the system through which shareholders exercise their franchise.

This clearly indicates that shareholder-voting power is important and improving the shareholder franchise is value enhancing. Important evidence on the positive value of shareholder votes presented in Kalay et al. (2014) supports this view. Furthermore, our evidence is consistent with Brick and Chidambaran (2008), and Balsam et al. (2017) and supports the contention that prudent regulation is relevant for corporate governance.

#### 6.4.2 Possibility of further restrictions on broker voting

Above, we suggested that the elimination of broker voting for director elections was symbolic of the strengthening of the shareholder franchise and improvement in corporate governance via the regulatory route. It is also possible that the passage of this rule-change could have been a precursor of further strengthening of the shareholder franchise. Accordingly, the market may be reacting in response to the expected passage of those future rule changes. We searched for subsequent rule changes affecting NYSE Rule 452; specifically eliminating broker voting for other corporate actions and identified the following:

- On August 26th, 2010, the NYSE filed for accelerated approval to eliminate broker voting for executive compensation matters. The SEC passed this proposal on September 9th, 2010. Details appear in: <https://www.sec.gov/rules/sro/nyse/2010/34-62874.pdf>
- On January 25th, 2012, the NYSE further eliminated broker voting on a larger set of corporate proposals that were to be voted by shareholders. The NYSE proposal<sup>29</sup> states, Accordingly, proposals that the Exchange previously ruled as "Broker May Vote" including, for example, proposals to de-stagger the board of directors, majority

<sup>29</sup> <https://www.nyse.com/publicdocs/nyse/markets/nyse/rule-interpretations/2012/12-4.pdf>.

voting in the election of directors, eliminating supermajority voting requirements, providing for the use of consents, providing rights to call a special meeting, and certain types of anti-takeover provision overrides, that are included on proxy statements going forward will be treated as “Broker May Not Vote” matters.

These corporate actions will thus depend purely on actual shareholder votes and not on discretionary broker voting. We believe that the significantly positive stock price reaction on July 1st, 2009, reflected the market’s expectation of further strengthening of the stockholder franchise via elimination of discretionary broker voting to reflect true shareholder opinion.

## 7 Conclusion

We examine a regulation that eliminated discretionary broker voting in uncontested director elections for NYSE listed firms. Removing broker-voting leads to more informative vote-approval rates that results in greater transparency in corporate voting, and a strengthening of the shareholder franchise. This regulatory change is an exogenous event that helps us answer several questions related to the relevance of corporate governance regulation/disclosure, as well as the value from enhancing the shareholder franchise via more informative shareholder approval rates.

First, in empirical tests that control for heterogeneity and contemporaneous event dates across the sample, we show robust evidence that the market reaction to the final approval by the SEC of the regulation eliminating discretionary broker voting is positive and significant. Thus, the advent of more accurate approval rates, thereby strengthening the shareholder franchise, has positive implications for firm value. The positive abnormal return (which ranges from 0.78 to 2.84% depending on estimation technique/sample/market index used) is economically and statistically significant. This result confirms the intuition in Cai et al. (2009) wherein regulation eliminating discretionary broker voting augurs well for corporate governance.

Importantly, our evidence is contrary to the results in Larcker et al. (2011) who suggest that corporate governance regulation does not increase firm value. Our results support the views in Brick and Chidambaran (2008), Becker et al. (2013) and Balsam et al. (2017) that corporate governance regulation can yield benefits for firms. Within this latter group of studies, our study, is the first to show that prudent corporate governance regulation can indeed increase firm value.<sup>30</sup>

Second, our results support the relevance of approval rates in uncontested director elections. This evidence buttresses the results in Fischer et al. (2009), Ertimur et al. (2018) and Aggarwal et al. (2019) using a different empirical approach. Third, since our sample includes more firms than merely those in the S&P 500 index as in Fischer et al. (2009), our evidence supports the generalizability of the relevance of approval rates in uncontested director elections.

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<sup>30</sup> There is also literature related to cost and benefits of regulation. Specifically, does the benefit of the regulation exceed the costs of enforcing the regulation? We speculate that in this case of elimination of discretionary broker voting, the costs of implementation/enforcement are trivial and therefore, the benefits may manifest themselves at little to no cost. We thank an anonymous reviewer for this insight.



Lastly, we find that the abnormal return to obtaining more informative approval rates and strengthening the shareholder franchise is associated with governance metrics. Specifically, we find that while the average price reaction to the advent of more accurate approval rates is positive and significant, it is muted in firms with better corporate governance. This regulatory reform has more of a valuation effect on firms with inferior corporate governance. Future research should examine regulatory changes where broker voting was further restricted (see the rule changes on August 26th, 2010, and January 25th, 2012) to ascertain whether increased strengthening of the shareholder franchise resulted in increased equity value.

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