Management (of) Proposals*

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ABSTRACT

Using shareholder voting records on management proposals for the period 2003–2015, we study whether the voting process is unbiased. We find evidence of vote manipulation by management. Specifically, the frequency of proposals that receive votes just above the threshold for passage is significantly greater than the frequency of proposals that do not pass. The strategic behavior by management is more pronounced for firms with low institutional ownership and less independent boards and for proposals receiving a negative ISS recommendation. We identify new mechanisms by which executives use their access to real-time vote information to influence the outcome, such as by adjourning a meeting and selective campaigning. Finally, our empirical results indicate that passage of a marginal management proposal does not create shareholder value. Using the theoretical framework, we show that this result implies that managerial influence on the voting process is value-destroying.

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Corporate voting is one important way in which shareholders can voice their opinions and exert influence over the decisions of a firm's management (Edmans and Holderness (2017), McCahery, Sautner, and Starks (2016), and Appel, Gormley, and Keim (2016)). Most of the proposals on which shareholders vote are brought up by management at a time of their choosing. We consider what kinds of issues management proposals cover, and whether managers put forth proposals only when their firms are doing well and there is no shareholder discontent. Further, because the outcome of the vote on management proposals is binding, a natural question is whether management attempts to influence the voting process in its favor. In this paper, we address these questions by analyzing shareholder voting records on 26,981 management proposals during the period 2003–2015.

Our first finding is that managers choose to hold a shareholder vote following good firm performance. There are several reasons why high realized returns may shift the voting outcome in management's favor. First, firms with poor performance are subject to more frequent recall of shares by institutional investors, often with the goal to vote against management (Aggarwal, Saffi, and Sturgess (2015)). Second, Institutional Shareholder Services (ISS) is more likely to issue a positive recommendation if the shareholder return was high, which has a significant effect on shareholder support (see, e.g., Iliev and Lowry (2015), and Malenko and Shen (2016)). Third, investors pay less attention to voting issues in firms that perform well (Iliev, Kalodimos, and Lowry (2018)).

Because higher stock returns may also proxy for better investment opportunities and thus for a greater need to hold a vote on many issues, we also examine this issue in the context of the Regulation SHO experiment conducted by the Securities and Exchange Commission (SEC). In the experiment, short sales constraints were eased from May 2, 2005, to July 6, 2007, for a group of randomly selected firms in the Russell 3,000. We find that, during the experiment, management of pilot firms launched significantly fewer

proposals, particularly proposals related to compensation policies. This evidence suggests that management prefers not to put up new initiatives for a shareholder vote when negative information can be more easily impounded in a company's stock price (see, e.g., Miller (1977), Hong and Stein (2003)).

Our next line of inquiry is whether firm management influences the outcome of votes. Consistent with prior economics literature, we define any strategic attempt to influence the outcome of a vote as manipulation. Because a vote on most management proposals is binding, management has a clear incentive to ensure that its proposals pass. Further, in the United States, management has an exclusive right to see real-time voting information (Kahan and Rock (2008)).[1] This advantage allows management to use multiple tactics to affect the vote on proposals headed for a narrow defeat: management can adjourn the proposal to a later date, withdraw the proposal and bring it up later, lobby specific shareholders in the hope of influencing their votes,[2] solicit votes from retail investors who tend to vote pro-management, and ask institutional investors with business ties to the firm to vote favorably on a proposal (Cvijanovic, Dasgupta, and Zachariadis (2016)). In addition, managers can decide whether to employ the services of a professional proxy solicitation firm (Young, Millar, and Glezen (1993), Bethel and Gillan (2002)), how to deliver the proxy materials to registered owners (Geoffroy (2018)), when to close the voting, which tallying procedures to use, and how to reconcile discrepancies in vote counts.

To uncover evidence of manipulation, we focus on closely contested management proposals. If management does not influence the voting process, we would expect the density of proposals to be continuous around the threshold required to pass a proposal. This is

[1] In this sense, shareholder voting on management proposals is akin to a card game between two players, where one player (management) can perfectly see the cards of the other player (shareholders).

[2] For example, commonly used proxy solicitation firms, such as Morrow & Co. LLC and Georgeson, Inc., charge a flat fee to assist with the distribution of proxy materials plus a fee of $4.50 to $6.50 for each phone call made to a stockholder.

because the exact outcome is unknown when a proposal is initially put on the agenda, so management cannot choose to bring up only those proposals that will win by a small margin. Graphical evidence and formal econometric tests by McCrary (2008) and Cattaneo, Jansson, and Ma (2017) indicate, however, that there is a sharp increase in the density of proposals around the threshold for passage. In other words, more proposals than would be expected pass by a small margin and too few proposals fail by a small margin.

We next examine different categories of management proposals and find stronger evidence of manipulation in firms with less independent boards, lower institutional ownership, and lower analyst coverage, which suggests that lack of monitoring may increase the ability of management to influence vote outcomes. Further, we find that the discontinuity in proposal density is more pronounced in smaller firms, consistent with investors in such firms paying less attention to shareholder meetings (Iliev, Kalodimos, and Lowry (2018)). Finally, by comparing proposals with different agendas, we observe that the discontinuity is greater for proposals related to share issuance, executive compensation, and strategic initiatives, such as mergers and acquisitions (M&As).

While our evidence is consistent with managers being able to affect voting outcomes, one alternative explanation is that, after observing the preliminary vote information, managers withdraw proposals that seem unlikely to pass. Indeed, in our sample approximately 7.8% of all management proposals are withdrawn. However, withdrawals explain only a small part of the discontinuity. First, almost half of the withdrawn proposals are listed on the agenda as "Other Business" and are withdrawn simply because there is no other business to vote on. Second, the higher frequency of proposal withdrawals for particular agendas does not coincide with greater density discontinuities in the data. Finally, the discontinuity in proposal density around the passage threshold is also present for shareholder proposals that cannot be withdrawn by management (Bach and Metzger (2018)).[3]

[3]Our focus is on management proposals, for which, unlike shareholder proposals, the outcome of the

Third, we follow the public economics literature on bunching developed by Kleven and Waseem (2013) and Kleven (2016) and calculate the bunching and missing mass of proposals around the passage threshold relative to the smooth counterfactual distribution. We find that in the -5% to +5% range around the passage threshold, approximately 13.8% of proposals are bunched above the threshold and 20.7% of proposals represent the missing mass below the threshold. If unsuccessful proposals are withdrawn and management does not influence the voting outcome in any other way, we would expect to see only the missing mass, but no bunching. To the extent that we observe both, proposal withdrawals cannot explain the discontinuity.

We next examine the mechanisms by which management achieves its desired vote outcomes.[4] For example, management can influence the voting on a particular proposal by adjourning the meeting to a later date. This procedure is legal if shareholders approve a proposal that gives management the choice to adjourn the meeting. For example, when Jarden Corporation held its annual meeting on May 28, 2009, shareholders were asked to vote on director elections, ratification of auditors, approval of a new stock compensation plan, and meeting adjournment or postponement. While the first two proposals and meeting adjournment were passed on that date, voting on the new compensation plan was adjourned until June 4, which gave management more time to lobby shareholders. Notably, the compensation plan eventually passed on June 4 by a less than 0.3% margin. We find that this case is not isolated. In fact, the discontinuity in proposal density is approximately two times larger if there is a corresponding meeting adjournment on the ballot.

Another way in which executives can gain an edge in corporate voting is through selec-

vote is binding. We confirm that the results of Bach and Metzger (2018) also hold in our sample and discuss in detail the differences between the two papers in the literature review section.

[4]We consider only legal mechanisms, because they are more readily observable to researchers. If there were any illegal manipulation taking place, it is unlikely that the involved parties would want to leave any incriminating evidence.

tive campaigning and sending the additional solicitation material to shareholders shortly before the vote. For example, when NetApp, Inc. struggled to secure shareholder support for repricing its employee stock options in 2009, the company's management sent correspondence to all shareholders arguing in favor of repricing and was able to pass the plan narrowly. Indeed, many firms admit that they send the solicitation materials to shareholders after reviewing the preliminary voting information. We find that such solicitation is effective. Specifically, the discontinuity in proposal density is significantly sharper for firms that file an additional definite proxy document DEFA14A after the initial proxy filing date.[5] Interestingly, we also find that when one or several large shareholders directly communicate with all other shareholders by means of filing forms PX14A6G with the SEC, such communication significantly decreases managerial advantage in passing its proposals.[6]

As a final point, we argue it is highly unlikely that management selectively brings up only those proposals that will win by a small margin. First, proposals are put up on average 40 days before a meeting, and it is difficult to predict how shareholders will vote more than a month later. Second, the fact that management sometimes withdraws its own proposals and even creates an option to adjourn a meeting suggests that there is significant uncertainty about how shareholders will vote. Finally, anecdotal evidence that hired proxy solicitation firms go to great lengths to determine how shareholders will vote by analyzing how they voted on similar issues in the past is also suggestive that precise information is difficult to come by at the time a proposal is initiated.[7]

Given the high passage rate of management proposals and the ability of management to

[5]Note that we exclude any DEFA14A forms filed on the same day as the proxy statement itself because such forms are often used to indicate the proxy dissemination method (see Geoffroy (2018)).

[6]Nevertheless, perhaps because of onerous reporting requirements and risk of litigation, this type of communication is used very infrequently by shareholders (in 1% of proposals).

[7]See "Computershare's Georgeson unit resolves U.S. fraud probe for $4.5 million," Reuters, November 30, 2017.

manipulate the vote, a logical question is whether these proposals benefit the shareholders. For example, it could be that because management is better informed about the costs and benefits of a proposal, it influences the voting outcome to advance shareholder interests. An alternative view is that management pushes through mostly unpopular initiatives that involve self-dealing, expropriate certain groups of shareholders, or increase board entrenchment. We build a simple theoretical framework that incorporates these tradeoffs and links the market reaction to proposal votes, whether manipulation is value-creating or value-destroying, and the propensity of shareholders to vote in favor of proposals. For example, the model shows that if manipulation is value-destroying, we should expect to see a positive market reaction to proposal failure and a negative market reaction to proposal passage. The opposite market reactions should be observed if manipulation is value-creating.

We find that the news that a management proposal lost narrowly is associated with a positive abnormal return of 3.8%, while passage is associated with a small negative return. Given evidence of significant manipulation of the running variable in our sample, we cannot interpret narrow wins and losses as random. Nevertheless, when a proposal passes narrowly, this can only lead to a greater probability of passage. Therefore, the direction of the price reaction to narrow wins and losses is informative about the value of a proposal (see, e.g., Gerard, Rokkanen, and Rothe (2015) and Lee and Lemieux (2010) for identification with RDD with a manipulated running variable). Our empirical results suggest that, at least on the margin, management proposals do not create value for shareholders. Further, the model shows that when manipulation is value-destroying, shareholders vote in favor of proposals too often, sometimes even despite having negative information about their value. Therefore, a high passage rate of management proposals does not necessarily imply a high quality of the average proposal.

The remainder of this paper is organized as follows. Section I offers a brief literature

overview. Section II describes the sample construction and presents summary statistics. Section III reports findings on the determinants of the number and type of management proposals. Section IV presents evidence on the manipulation of the voting outcomes by firm management and discusses value implications. The theoretical model is provided in the Appendix. The last section concludes.

I. Literature Review

Our paper contributes to the literature on corporate governance. Many papers in this area focus on advisory shareholder proposals. By measuring the market reaction to votes on governance proposals that pass or fail by a small margin, Cũnat, Gíne, and Guadalupe (2012, 2016) show that shareholder proposals create firm value and can improve long-term profitability.[8] Gillan and Starks (2000) find that the stock market reaction to shareholder proposals varies systematically across sponsor identity.

Shareholder voting also has a significant effect on firm policies. For example, Cheng, Hong, and Shue (2016) document that firms with failed shareholder proposals, experience faster growth in spending on corporate social responsibility. Similarly, Ferri and Sandino (2009) and Ertimur, Ferri, and Oesch (2013) show that firms that were a target of shareholder proposals were more likely to adopt option expensing and to decrease CEO pay. In contrast, Armstrong, Gow, and Larcker (2013) argue that shareholder voting on compensation plans has little effect on firms' future compensation policies.

Our paper is also related to the literature on the value of corporate vote (see Adams and Ferreira (2008) for a review). Christoffersen, Geczy, Musto, and Reed (2007) were among the first to document an active market for corporate votes around a record date, but did

[8]However, Matsusaka, Ozbas, and Yi (2017) find that the market also reacts positively when the SEC permits a challenged proposal to be omitted from the proxy, suggesting that the challenged proposals are value-destroying.

not find significant changes in stock specialness. Aggarwal, Saffi, and Sturgess (2015) find that institutional investors frequently recall their shares before a record date to vote against management. In contrast, Cvijanovic, Dasgupta, and Zachariadis (2016) show that managers may use their firm's business ties with mutual funds to gain additional support on contested proposals. Using option prices, Kalay, Karakaş, and Pant (2014) estimate the market value of shareholders' voting rights and show that it is higher for special meetings and for proposals with higher-ranked agendas.

The two papers that are closest to ours are Listokin (2008) and Bach and Metzger (2018). In particular Listokin (2008), using data on management proposals between 1997 and 2004, documents that more proposals receive support just above the 50% threshold than just below. He concludes that the mechanism by which management influences voters is unclear and does not analyze heterogeneity in incentives and ability of management to manipulate the voting outcome. Further, as Listokin (2008) admits, the patterns he documents may be driven by the fact that registered brokers, who are easy targets for lobbying by managers, had the authority to vote uninstructed shares held in a "street name" on behalf of their clients. Before 2003, but not after, the broker voting authority applied to issuances of new equity up to a limit of 5% of outstanding shares, which frequently included the funding for equity-based compensation plans (Maug and Rydqvist (2009)). Our study is not affected by this issue since our sample is post-2003. Finally, unlike us, Listokin (2008) does not study factors that motivate management to put up proposals for a vote and does not examine value implications.

In a related paper, Bach and Metzger (2018) study 4,442 shareholder proposals and document significant "vote rigging" by management. In contrast, we focus on management proposals, which differ on several dimensions. First, unlike shareholder proposals, which do not have to be implemented after passing, most of management proposals that pass

are binding. For example, Ertimur, Ferri, and Stubben (2010) estimate that only 31% of passed shareholder proposals are implemented. From a theory perspective, shareholder votes may be less informative to management because proposals are nonbinding (Levit and Malenko (2011)). Second, to the extent that management proposals pursue different agendas (with much less focus on governance issues),[9] management may have a different incentive to manipulate the outcome. Third, management has discretion over when to put a proposal up for a vote and how to present it to shareholders, and can withdraw the proposal if preliminary results indicate that shareholder support is insufficient. The magnitude of density discontinuity we document for management proposals is more than three times greater than that for shareholder proposals, suggesting that management cares more about passing its own proposals than about rejecting shareholder proposals. Finally, we identify new mechanisms management uses to pass their proposals, such as meeting adjournment and selective campaigning by means of DEFA14A.

Our evidence on manipulation of corporate voting suggests that the outcomes of shareholder meetings may not always be viewed as reliable expressions of the general will by the shareholders. In fact, theory shows that when manipulation is value-destroying, shareholders are more likely to vote in favor of management proposals that entail more manipulation by the management. Thus our results suggest that "voice" may not always be an efficient way to implement corporate governance and give more prominence to other corporate governance mechanisms, such as the threat of "exit" (see, e.g., theoretical work by Admati and Pfleiderer (2009), Edmans (2009), Edmans and Manso (2011), and Dasgupta and Piacentino (2015)). Further, research in political science finds that voters' perceptions of electoral fairness have significant effects on their attitude toward elections and voting

[9]For example, Buchanan, Netter, and Yang (2015) find that 46% of shareholder proposals are related to firms' corporate governance practices, while we find that less than 12% of management proposals target similar agendas.

behavior (Blais (2000), Norris (2014)). For example, Birch (2010) and Norris (2014) document that individuals with reservations about the fairness of electoral procedures are less likely to vote than individuals who perceive elections to be fair. Thus our results can help to inform the debate on the quality of corporate voting more generally.

II. Sample and Summary Statistics

A. Sample

We start with all management-sponsored proposals in the ISS Voting Analytics database that were initiated by U.S. firms during the period 2003 to 2015.[10] Because we are interested in contested management proposals, we remove proposals with 0% and 1% vote requirements, as well as proposals with the following agenda items: elections of directors and committee members, appointments and ratification of auditors, acceptance of financial statements and statutory reports, and all proposals to adjourn meeting).[11] Because holding a vote on Say-on-Pay proposals was required by the Dodd-Frank Act of 2010 and therefore these proposals became non-discretionary, we further remove proposals related to advisory votes on Say-on-Pay policies starting from 2010 (i.e., agendas with "an advisory vote to ratify named executive officers' compensation", "an advisory vote on Say-on-Pay frequency", and "an advisory vote on golden parachutes"). We also exclude meetings classified as "Court," "Proxy Contest," and "Bondholder".

We focus on firms with a single class of shares because control-related issues may dominate voting dynamics for dual-class firms and also because in such cases it is difficult to obtain an accurate vote count.[12] Specifically, for firms covered by the ISS Governance

[10] From 2003 onward, ISS Voting Analytics collected data on Russell 3,000 firms; the data post-2013 also includes other companies.

[11] Not all proposals in these categories are uncontested, but we remove the whole category to keep our analysis consistent.

[12] Although Voting Analytics typically records votes by different classes of stock as separate data entries, it does not specify how many votes each share in a class is entitled to, and vote numbers are often missing

database, we remove all firm-years that are identified in the database as dual-class, and for firms not covered by ISS Governance we remove those firm-years that have a non-blank share class field (SHRCLS) in the Center for Research in Securities Prices (CRSP) monthly files (e.g., "A"). To make sure that we have not missed any dual-class firms, we also remove any firm-years where for any shareholder meeting we observe multiple entries for a vote on the same ballot item number. We merge the baseline sample with accounting variables from COMPUSTAT, stock returns from the CRSP, the information on the number of analysts following the stock from I/B/E/S, the institutional ownership data from the Thomson Reuters Institutional Holdings (13F), governance and board characteristics from the ISS Governance and ISS Directors databases, and a list of Regulation SHO pilot stocks from the SEC.

For each proposal with a recorded outcome of "Pass" or "Fail" and information on the number of votes, we calculate the official vote percentage ($Vote\ \%$). The voting base determines the denominator of this variable, with the distinction being made between shares that vote for, vote against, abstain from voting, are recorded as broker non-votes, and are not present at the meeting. The total number of shares outstanding, N, can be written as $F + A + AB + Nonvotes + Absentees$, where F is the number of shares that vote "For," A is the number of shares that vote "Against," AB is the number of shares that abstain, $Nonvotes$ is the number of shares that are present at the meeting but do not vote, and $Absentees$ is the number of shares that are not present at the meeting.[13] If the voting base is shares outstanding, i.e., "Outstanding" or "Capital Represented" then $Vote = \frac{F}{N}$, where N is the number of shares outstanding in Voting Analytics. If the base is "F+A" or "Votes Represented," then $Vote = \frac{F}{F+A}$, and if the base is "F+A+AB", then $Vote = \frac{F}{F+A+AB}$.

for at least one share class.

[13]In director elections, which we do not consider here, there is also another category "votes withheld."

For each shareholder meeting, a quorum requirement has to be met before any business takes place. For purposes of a quorum, broker non-votes and abstentions are typically counted as shares present, so that voter turnout is $Turnout = \frac{F+A+AB+Nonvotes}{N}$. In most states, a quorum constitutes the presence of a majority of the shares entitled to vote in person or by proxy ($Turnout > 50\%$), but some companies modify the default requirement in their charter documents.[14] Because Voting Analytics does not record the quorum requirement, we set it to 50% for all meetings.[15]

To determine whether a given proposal passes, we first check whether a quorum is met, then compare the official vote percentage with the vote requirement and assign "Pass" to those proposals with an official vote percentage above the vote requirement, and "Fail" otherwise. There are 50 cases in which the recorded outcome in Voting Analytics is "Fail" but our calculation yields "Pass" or in which the recorded outcome in Voting Analytics is "Pass" but our calculation yields "Fail." Because we want to minimize data errors, we hand collect information for these cases on the number of votes and voting base from 8-K filings following the shareholder vote. We are able to obtain reliable information for 30 cases, and the remaining 20 cases we treat as missing. Finally, there are 14 cases in which management recommends voting against its own proposal.[16] To ease the interpretation of results, we remove these cases from the analysis. Overall, our proposal-level sample contains 26,981 unique proposals initiated by the management of 5,316 unique firms.

Because we are interested in the various techniques management can use to influence the outcome of a vote, including selective proposal withdrawals, we also separately study

[14] Stock exchanges and state laws may also impose restrictions on the minimum quorum (e.g., 33.33% of the shares entitled to vote in Delaware).

[15] We also manually check that in a sample of proposals with close votes, less than 5% of proposals have a quorum requirement different from 50%.

[16] For example, management of Alaska Air Group brought up a proposal at the 2011 annual meeting to allow stockholders to act by written consent and recommended voting against the proposal. In 2010, a similar proposal brought up by shareholders was approved, and it appears that the board hoped that the revote would reduce the support for the proposal.

a sample of withdrawn management proposals. We define withdrawn proposals as those that have a recorded vote outcome in Voting Analytics of "Withdraw" or "Not Disclosed." For these proposals, it is not possible to calculate the official vote percentage. We have 2,281 such proposals launched by 1,258 firms.

In addition to the proposal-level sample, we also create a firm-level sample, in which we aggregate the information from different meetings and proposals for the same firm and year. When there is more than one shareholder meeting in a calendar year, we assume that the first meeting date is the reference meeting date. Further, if a firm is present in Voting Analytics in a given year, but does not have a single management proposal (outside of excluded agendas and vote requirements), we assign zero proposals to such a firm. Our firm-level sample consists of 31,163 firm-year observations.

B. Summary Statistics

Figure 1.A shows that the number of management proposals increased substantially over the sample period. For example, in 2003 there were only 1,661 management proposals, as compared with 2,770 in 2015.[17] This trend is also reflected in the number of closely contested management proposals (Figure 1.B). Further, it is evident that management wins the majority of closely contested proposals.

In Panel A of Table 1 we present the summary statistics for the proposal-level sample. Out of 26,981 proposals, 24.4% have the voting base defined by the shares outstanding, and these proposals have a lower average vote percentage in favor of the proposal of 74.4%. In contrast, the proposals with the voting base "F+A" or "F+A+AB" are supported, on average, by 86.8% of shareholders. Most proposals in our sample (93.8%) are decided using majority rule; i.e., they must receive more than 50% of the vote in order to pass.

[17] Since Voting Analytics covers Russell 3,000 firms for the period 2003–2013, the trend cannot be attributed solely to different sample composition over time.

The remaining 6.2% must receive a supermajority vote (66.7% of the vote or higher).

We also classify management proposals by agenda into five broad categories: compensation, governance, share issuance, strategic decisions, and other. Compensation proposals are mostly for the approval and modification of executive, employee, and director compensation plans, as well as for ratifying the executive compensation as part of the voluntary Say-on-Pay policies. Governance proposals relate to changes in firm governance, such as removal, addition, or modification of anti-takeover provisions, changes in the size of the board, or proxy access. Share issuance proposals cover the approval of issuance of common or preferred stock, equity-linked securities, conversion of shares, increases in authorized common stock, authorization of new classes of shares, and other related items. Finally, the strategic decisions category captures proposals that relate to mergers and acquisitions, reorganizations, liquidation, restructuring, spin-offs, and purchases or sales of assets. The three most common agenda items are voting on the firm's compensation plans, share issuance, and governance provisions. Notably, governance-related agenda items constitute only 11.7% of all agendas of management proposals, as compared with approximately half of shareholder proposals with similar agendas (Buchanan, Netter, and Yang (2015)).

Notably, ISS issues a negative recommendation for 18.5% of all management proposals, indicating that it does not consider many management to be beneficial. The average voter turnout is 87.6% of outstanding shares in our sample, which is similar to that documented by Bethel and Gillan (2002). We find that voter turnout exceeds 50% for 99.6% of all management proposals. In 8.8% of cases, there is a corresponding proposal to adjourn the meeting, which is useful should postponing a vote be necessary. The proposals to "Adjourn Meeting" are almost universally opposed by ISS because they may give the management an opportunity to game the system. We find that such proposals nevertheless pass in approximately half of the cases, so that for 3.8% of management proposals in our sample the

management has an option to adjourn the meeting to a later date. We also find that firms file the additional proxy documentation through DEFA14A forms for approximately 15.9% of shareholder meetings. Such filings often contain solicitation materials and additional information presented by the management about the merit of its proposals. In contrast, communication by large shareholders, as evidenced through filings of PX14A6G forms, is very rare and happens for only 1% of shareholder meetings.

The average passage rate of management-sponsored proposals is high, at 97.0%. However, this number is substantially lower than the previously reported 98.5% by Maug and Rydqvist (2009) for the earlier period of 1994 to 2003, which may indicate that voting on management proposals became more contested. The average passage rate is also considerably lower for management proposals in which the voting base is all shares outstanding (91.7%), for proposals that require a supermajority (82.2%), and for proposals with governance-related agendas (89.3%).

In Panel B, we present the statistics for 2,281 withdrawn management proposals, including their breakdown by agenda, voting base, and vote requirements. Approximately 9.3% of withdrawn proposals have a voting base of all shares outstanding, which is significantly lower than the fraction of these types of proposals in the overall sample. Notably, 45.9% of withdrawn proposals have agendas classified as "Other" (most of them classified as "Other Business"), which is more than ten times higher than the incidence of these types of proposals in the general sample. Overall, from the summary statistics it appears that proposal withdrawals are non-random and that management is strategic with respect to which kind of proposals to withdraw before shareholder voting takes place.

Table 2 shows the summary statistics for the firm-level sample. On average, firms launch 0.68 management proposals during a calendar year, out of which 0.03 proposals are withdrawn by the management and 0.60 are ultimately won. Approximately 0.13

management proposals are opposed by ISS per year. The frequency of shareholder proposals launched in the previous calendar year is low in comparison with management proposals, with an average of 0.10 shareholder proposals per year. Because ISS Voting Analytics reports data on Russell 3,000 firms, we observe that firms in our sample are large and profitable, with an average book value of assets of $6 billion. On average, these firms have 65.2% institutional ownership. We also observe that most firms in our sample are covered by security analysts, with the median firm having six analysts following its stock.

III. Determinants of Management Proposals

We start our analysis by examining the determinants of management proposals. In Table 3, we present the results of the OLS regressions with firm and year fixed effects, in which the dependent variable is the number of management proposals initiated during the year. The first specification presents estimates for the full sample. The results show that management launches more proposals following recent passage of a shareholder proposal and following good firm performance.[18] Specifically, a one standard deviation increase in the past year's stock return translates into a 7.3% increase in the number of management proposals.

One interpretation is that to increase the probability of shareholder approval, management opportunistically asks for a vote only when the firm is performing well. There are several reasons why such a strategy may pay off for firm management. First, following good firm performance shareholders may be content and consider management to be well qualified to develop new initiatives. Second, for many types of proposals, ISS is more likely to issue a "For" recommendation after a period of high stock returns. For example, Malenko and Shen (2016) show that for Say-on-Pay proposals, ISS uses a rule that is directly linked to the total shareholder return (TSR), but ISS policy for approving proposals following

[18] In the Appendix, we show that share issuance and compensation-related proposals are sensitive to past returns, but there is no relation to returns for governance-related proposals (see Table A2).

high TSR applies more widely than just to Say-on-Pay proposals. Third, Aggarwal, Saffi, and Sturgess (2015) examine the securities lending market and document that recalls of shares by institutional investors are more frequent after poor firm performance, and it is likely that institutional investors recall their shares to vote against management. Fourth, Iliev, Kalodimos, and Lowry (2018) find that investors conduct more research on firms with poor recent performance.

Our findings that management proposals are more likely to be presented to shareholders after good stock returns motivate us to examine whether launching of proposals is also affected by short-selling constraints. The less stringent restrictions on short-selling activities by investors could, for example, allow negative opinions to be more quickly reflected in stock prices (see, e.g., Miller (1977), Hong and Stein (2003), Allen, Morris, and Postlewaite (1993), and Harrison and Kreps (1978)).

On July 28, 2004, the SEC announced a new regulation governing short-selling activities in equities, Regulation SHO. Under this program, the Russell 3,000 index constituents were ranked by the trading volume within each stock exchange. Every third stock was then designated as a pilot stock. From May 2, 2005, to July 6, 2007, pilot stocks were exempted from short-sale price tests, including the "tick test" for exchange-listed stocks that was in effect since 1938 and the "bid test" for NASDAQ National Market Stocks. This allowed investors to place short-sale trades even when stock prices were declining. Several studies find that the regulation had a significant effect on short-selling activity and on overall stock market quality (see, e.g., Diether, Lee, and Werner (2009), Grullon, Michenaud, and Weston (2015)), although there is some disagreement over whether the regulation also affected the level of asset prices.

Since Regulation SHO effectively eased short-selling constraints for a randomly picked subset of stocks, it allows us to examine the causal effects of short-selling restrictions

on the likelihood of launching management proposals. We use similar empirical design to Grullon, Michenaud, and Weston (2015) and present the results of the difference-in-difference estimation. The indicator variable "Reg SHO treatment" is equal to one from May 2, 2005, to July 6, 2007, for firms listed in the Russell 3,000 index (as of June 25, 2004) that were in the pilot list of stocks for the Reg SHO experiment. This variable is also equal to one for all firms in the Russell 3,000 (as of June 25, 2004) after the end of experiment, and is equal to zero for all other Russell 3,000 firms.[19] The sample includes all shareholder meeting dates that take place from January 2003 through December 2009.

The results in Table 3 show that relaxing the short-selling constraints significantly reduced the number of proposals launched by firm management (columns 2 and 3). The economic magnitude of this effect is sizable and translates into an approximately 12.4% decrease in the number of proposals launched. We also examine what kinds of proposals are more affected by the regulation. Based on the results in columns 4 through 9, we see that the drop in the total number of proposals is primarily driven by compensation- and governance-related proposals.

IV. Manipulation of Voting Outcomes

Given our findings that management launches more proposals when external pressure is low, it appears that management cares about the outcome of the vote. We therefore next analyze whether management attempts to influence the outcome of the vote on its proposals.

Kahan and Rock (2008) provide a detailed overview of the complex shareholder voting process in the United States and outline several practical issues that can significantly affect

[19] In the Appendix, we also present the results where the variable "Reg SHO treatment" is defined based on the date of the initial announcement by the SEC on July 28, 2004, rather than on the actual start of the experiment. The results are presented in Table A3 and are very similar to those reported in Table 3.

vote outcomes: (1) registered owners do not receive proxy materials on time; (2) some votes are not counted because of coding errors and early closing of polls; (3) surprise securities lending, short-selling, overvoting, and more generally the wedge between being a beneficial owner and holding voting rights. In practice, a firm's management in the United States holds an advantage over other shareholders because it has access to the preliminary voting results (often before the day of the vote) and can therefore deploy different tactics to affect the outcome, if it wishes. There are several tools available to management, such as changing the record date, selectively withdrawing proposals that receive low shareholder support and bringing them up for a vote in the future (perhaps in more favorable conditions or slightly modified), extensively campaigning with the hope of swaying some shareholders, soliciting additional votes from retail investors who tend to vote pro-management, postponing a vote on proposals that do not have sufficient support, and asking institutional investors with business ties to the firm to vote favorably on a proposal. There are also other managerial decisions that can affect the vote outcome (see, e.g., Kahan and Rock (2008)), such as how and when to deliver the proxy materials to registered owners, when to close the polls, and how to reconcile discrepancies in vote counts (e.g., overvoting).

A. Density of Proposals Around the Threshold for Passage

Before examining the specific mechanisms that management can use to influence voting outcomes, we turn to an analysis of the density of management proposals around the threshold for passage. If management launches its proposals in more favorable market conditions, we should expect management proposals, on average, to be more likely to pass than not (e.g., as compared with shareholder proposals for which management cannot choose the timing or agenda). However, given that the meeting agenda is typically set weeks in advance of a vote (the average time between the record date and the shareholder meeting date is 53 days), it is unlikely that management has precise information on shareholder

support for a proposal when it initially decides whether to bring it up. Thus, if management does not influence the voting process once the proposal is on the ballot, we should expect to see a continuous density of proposals around the passage threshold.

Figure 2.A displays the histogram of the number of management proposals with an outcome of "Pass" or "Fail." For each proposal, we calculate the difference between the official vote percentage and the proposal-specific vote requirement needed to approve the proposal. We then allocate all proposals to 5% bins using the calculated difference and count the number of proposals in each bin. It is clear from the figure that management proposals have a significantly higher likelihood of passing than failing. More important, the density of proposals is not continuous around the passage threshold, as there are approximately 683 more proposals that pass by less than a 5% margin than proposals that fail by less than a 5% margin.

To further understand this gap in density, we use the econometric test by McCrary (2008). Figure 2.B displays fitted flexible polynomials to the probability density function of management proposals on each side of the passage threshold and also provides the corresponding confidence intervals. There is a sharp drop in proposal density around the passage threshold, with significantly more proposals just passing than just failing. It is also notable that the density of proposals is smooth at all other points of the distribution. Coupled with the fact that management recommends voting "For" on all proposals in our sample and thus has a clear incentive to manipulate only in one direction, this evidence indicates that management is able to influence the vote outcome around the passage threshold.

We next present a series of figures for different categories of management proposals, such as the type of shareholder meeting where the proposal is considered and voting recommendation by ISS (see Figures 3-4). In Table 4, we also report the size of the discontinuity in density for each category of proposals and provide the related statistics for manipula-

tion tests based on McCrary (2008). Table A4 in the Appendix reports similar statistics based on a newly developed nonparametric density estimator by Cattaneo, Jansson, and Ma (2017), which provides an automatic correction for the boundary bias and does not require any data pre-binning or tuning parameters (other than bandwidth) to estimate the local densities.

In all samples of data, there is systematic sorting of proposals around the cutoff point, with units non-randomly selecting into the group of proposals that pass by a small margin. The size of the discontinuity based on the test statistic by McCrary (2008), which is calculated as the logarithm of the ratio of the fitted densities on the right and the left of the passage threshold, is largest for special meetings, followed by proposals related to share issuance, proposals with executive and director compensation agendas, and those related to strategic firm decisions, including M&As.[20] Our result that managers tend to manipulate the outcome of proposals that are brought at special meetings is consistent with the empirical results in Kalay, Karakaş, and Pant (2014), who estimate that the value of a vote is higher in special meetings than in annual meetings. In addition, Kalay, Karakaş, and Pant (2014) also find that the vote premium increases around M&A decisions.

We also observe that the discontinuity is more pronounced for proposals with a voting base of all shares outstanding. This can likely be attributed to the fact that for such proposals any non-votes essentially count as votes against management, so boosting shareholder turnout can be an effective tool for influencing vote outcomes. In contrast, the lowest magnitude of discontinuity is observed for proposals that target removal of anti-takeover provisions, such as declassifying the corporate board or reducing the supermajority voting requirement. This may be attributed to a lower incentive of managers to manipulate such

[20]Note that because the discontinuity estimate is measured as log difference (i.e., the ratio of densities), it does not always coincide with a greater absolute difference in the probability density function in the figures.

proposals, as at least some of them are launched because of pressure from shareholders.

B. Covariate Balance Tests

To further assess the likelihood of manipulation of vote outcomes by managers, we examine whether the baseline covariates are balanced. If units are indeed randomized around the proposal passage threshold, then we should not expect proposals with certain characteristics to appear more or less frequently on either side of the passage threshold (other than by mere chance). However, the data reject the assumption of randomization of proposals at the boundary (see Table 5). For example, we find that proposals made by smaller firms and proposals that receive a negative ISS recommendation are more likely to just cross the passage threshold. In contrast, proposals made by firms with larger analyst coverage, more independent boards, and higher institutional ownership, and by firms that were a target of a shareholder proposal in the previous year, are less likely to cross the passage threshold by a small margin. Overall, this evidence indicates that the distribution of proposals around the passage threshold is non-random, which further suggests that management behaves strategically in trying to pass certain types of proposals.

Our finding that proposals that receive a negative recommendation by the proxy advisor are more likely to get pushed above the passage threshold by the firm's management suggests that proposal manipulation may be not completely benign and may not always be in the best interest of shareholders. This finding is reinforced by the fact that management manipulates significantly fewer proposals when external pressures are high (e.g., there are many analysts, high institutional ownership, shareholder activism).

C. Mechanisms

An important question is how management is able to affect the voting outcomes so precisely. While there are many potential mechanisms, here we analyze two: adjourning a meeting

and providing additional solicitation material to shareholders shortly before a vote. We also analyze whether communication by some shareholders with all fellow shareholders can decrease management's advantage in pushing its proposals through.

C.1. Meeting Adjournment

An interesting feature of shareholder voting is that in some circumstances the firm's management can choose to adjourn a meeting to a later date. There are sometimes perfectly good reasons for adjourning the meeting, such as not meeting the quorum requirements or allowing shareholders to gather more information about the prospective merger. What is perhaps peculiar is that a meeting can be adjourned with respect to some proposals and not others. For example, management can immediately pass the proposals that receive shareholder approval on the meeting date, and adjourn the meeting with respect to other proposals that do not have enough shareholder support.

In order for meeting adjournment to be legal, the firm's management has to put up a separate proposal for adjournment, and this proposal must be approved by a majority of shareholders.[21] Since our data allow us to observe the presence of "Adjourn Meeting" proposals on the shareholder meeting agenda, we investigate whether firms with such proposals show a greater discontinuity in the approval of other management proposals. More specifically, for all management proposals that are being voted on at a particular shareholder meeting, we create a dummy variable equal to one if there is an "Adjourn Meeting" proposal on the agenda, and set it to zero otherwise. We then create a similar dummy that turns on only if there is an "Adjourn Meeting" proposal on the agenda that is approved by shareholders. Finally, because there may be good reasons to put an "Adjourn Meeting" proposal in place when shareholders are to vote on a merger, because such proposals typically have a base of all shares outstanding and often require a larger threshold for passage,

[21] In almost all cases, ISS recommends voting against the proposal to adjourn a meeting.

we separately examine meeting adjournment only for annual meetings.

The results are reported in Table 6. Notably, the discontinuity in the density of management proposals around the passage threshold is almost twice as large when there is an accompanying proposal to "Adjourn Meeting" than in the sample of meetings that cannot be adjourned to a later date. The difference in proposal density in the two samples is also significantly different from zero at the 5% level. Further, this difference becomes even more pronounced if we consider only meetings in which an "Adjourn Meeting" proposal was passed or only annual meetings. Figure 8 also shows this last set of results graphically. Thus it appears that meeting adjournment and postponement of a vote can explain some discontinuity around the passage threshold.

C.2. Solicitation Material

Another way in which management can affect the voting outcome in their favor is selective campaigning for proposals that are closely contested. For example, management can employ the services of a professional proxy solicitation firm, and such firm may then contact the voting shareholders. The expected costs of such solicitation are sometimes voluntarily disclosed in the firm's proxy statements and are paid out of a corporate budget. In many cases, the firms explicitly mention that they are going to spend more on solicitation if the vote on a proposal becomes closely contested. Alternatively, management can send the additional correspondence about its proposals directly to the shareholders, in which case an additional definitive document DEFA14A has to be filed with the SEC. We leverage this regulatory requirement and gather information on all DEFA14A forms filed by firms in our sample after the proxy filing date and not more than 60 days before the shareholder meeting.[22] Figure 9 presents the graphical evidence on the density of proposals around the

[22]Our results are similar if we use 30 days instead of 60 days before the meeting as a cutoff. We exclude forms that are filed on the same day as the original proxy statement because these forms are often used to correct an error in the original proxy statement or to inform the shareholders about the proxy dissemination

passage threshold for firms that file DEFA14A forms before the shareholder meeting and for those that did not. The results of a McCrary (2008) manipulation test also reveal that there is indeed a significantly larger discontinuity in proposal density when management reaches out to its shareholders with additional information. Nevertheless, we observe that the discontinuity does not disappear when DEFA14A filing is not used and there is no meeting adjournment. Thus our results imply that management has a potentially larger arsenal of tools to manage the meeting outcome.

C.3. Communication by Shareholders

Can well-informed shareholders mitigate the bias in favor of management by reaching out to all fellow shareholders? In principle, they can, but the incentive to do so may be low because of free-rider problems and lack of precise information on how closely contested the proposal actually is. Unlike firm management, shareholders cannot see the real-time voting information and have little information about the likelihood of a proposal's passage. Shareholders can press their case to stockholders by sending written material and urging them to vote a particular way. If an interested shareholder chooses to do so and owns at least $5 million in company stock, the shareholder must file a Notice of Exempt Solicitation (form PX14A6G) with the SEC no later than three days after a written solicitation is sent to security holders. We therefore collect all such forms filed with the SEC for firms in our sample and examine whether the ability of management to push its proposals through by a small margin is hindered by shareholder communication. We find that this is indeed the case. In fact, when there is a PX14A6G form filed by shareholders, there is no discontinuity around the passage threshold, suggesting that shareholders are effective at making the voting process less biased (see Figure 10 and Table 6). However, we also observe that this form of communication is used very infrequently by shareholders, perhaps because of lack

method.

of information, litigation risk, or onerous reporting requirements.

D. Counterfactual Density Function Estimation

We next evaluate the magnitude of proposal manipulation in the full sample by estimating how many proposals actually pass relative to a counterfactual smooth distribution. Specifically, we follow the bunching method for notches developed by Kleven and Waseem (2013) and summarized in Kleven (2016). In general, bunching design applies when the assignment variable is a direct choice of agents who face a jump in incentives at the specific threshold. By using bunching, we can elicit behavioral responses and estimate structural parameters. As applied to our setting, the underlying assumption is the smoothness of the counterfactual distribution of the vote tally around the passing vote requirement (i.e., the distribution has to be smooth in the absence of any selective campaigning, manipulation, or other actions taken by management to affect the vote outcome).[23]

We fit a flexible polynomial to the observed distribution outside the area around the threshold. In particular, we first group proposals by the official vote tally in 1% bins indexed by i (e.g., bin 1 refers to proposals with the vote percentage from 0% to 0.99%, bin 2 to those from 1% to 1.99%, etc.). Using the whole sample, we then estimate the following regressions model

$$n_i = \sum_{j=0}^{p} \beta v_j z_i^j + \sum_{j=z_-}^{z_+} \gamma_j 1_{z_i=j} + \varepsilon_i, \tag{1}$$

where z_i are bin values, n_i is the number of proposals in bin i, p is the order of the polynomial (we use $p = 5$ and check the sensitivity of our estimates for other values of p from 3 to 7), and $[z_-, z_+]$ refers to the excluded area around the vote requirement. In the

[23] As discussed in Kleven (2016), the two common threats to applying the bunching designs are: (1) the use of reference points by agents; and (2) the possibility that other policies change at the same threshold. Both of these situations seem unlikely in our setting. For example, the use of reference points by shareholders would imply that whenever shareholders see a closely contested vote, they for behavioral or other reasons prefer to vote with management. This seems unlikely, given that many investors recall their shares around record dates with the goal to vote against management (Aggarwal, Saffi, and Sturgess (2015)).

base estimation, we exclude area in the range -10% to +10% of the vote requirement (e.g., 40% to 60% if vote requirement is 50%).[24] To generate the counterfactual distribution, we then calculate the fitted values from (1), but omit the second term with indicator variables (i.e., $\widehat{n}_i = \sum_{j=0}^{p} \widehat{\beta}_j z_i^j$). Finally, we obtain the standard errors for estimates using a bootstrap procedure, in which we generate 500 distributions of the vote percentage by random resampling of the residuals from (1).

Figure 11 shows the counterfactual proposal distribution, and Table 7 reports the results of the estimation along with the degree of polynomials used and the excluded range. In the figure, there is clearly visible excess bunching and a missing mass (hole) around the passage threshold. The excess bunching is estimated as the difference between the observed and counterfactual bin counts in the excluded range above the passage threshold, $\Sigma_0^{z_+} (n_i - \widehat{n}_i)$. Likewise, missing mass is the difference between the observed and counterfactual bin counts in the excluded range below the passage threshold, $-\Sigma_{z_-}^0 (n_i - \widehat{n}_i)$.

It is notable that, outside of the excluded range, the counterfactual density function fits the actual distribution quite well, indicating that the estimation of the counterfactual density is reasonable. In the excluded range, there are approximately 266 bunching proposals (10.6%) and 379 missing proposals (15.2%) when we use the 5th degree polynomial to fit the data and the excluded range of (-10%, +10%) around the passage threshold. The percentage of manipulated proposals becomes even higher (13.8% bunching and 20.7% missing mass) if we focus on the narrower excluded range of (-5%,+5%). Overall, our evidence indicates that management is able to influence the vote outcome on a significant fraction of proposals around the threshold. Without management manipulation, many passed proposals in the closely contested range would have failed. The difference between missing mass and excess bunching that we observe can be attributed to proposal withdrawals by

[24] We check the robustness of our results to -5% to +5% across polynomials from 3 to 7.

management. At the same time, the presence of significant bunching mass suggests that withdrawals alone cannot explain the density discontinuity of management proposals.

E. Shareholder Proposals

One clear way in which management can affect the outcome of the vote is to selectively withdraw proposals that are headed for a defeat, which gives management an opportunity to bring them up for a vote at a later date. To understand whether withdrawals can fully explain the discontinuity around the passage threshold, we compare management and shareholder proposals. Since management cannot withdraw proposals sponsored by firm shareholders, but may still be able to affect the voting outcome by other means such as selective campaigning, a discontinuity in the density of shareholder proposals would indicate that withdrawals cannot be the sole mechanism through which management affects the vote outcome.

We therefore use information in ISS Voting Analytics on all shareholder-sponsored proposals with non-missing vote information and the passage threshold requirements over the period 2003 to 2015. We find 8,048 such shareholder proposals and estimate the manipulation test statistics of McCrary (2008) around the passage threshold. The results are reported in Table 8. Consistent with evidence in Bach and Metzger (2018) for a sample of 3,822 governance-related shareholder proposals, we find that there is a significant discontinuity in the density of shareholder proposals, with substantially fewer shareholder proposals passing by a small margin, than failing. One implication of these results is that withdrawing a proposal is not the only way management can affect the vote outcome.

At the same time, we observe that the discontinuity in density is more than three times larger for management proposals. In part, this may be attributed to an additional lever management can use to affect the outcome of its proposals—i.e., withdrawals. But it may also stem from other differences between the two types of proposals. Since shareholder

proposals are advisory, management may have a weaker incentive to manipulate the outcome of such proposals. The incentive to manipulate may also differ because management and shareholder proposals target different issues. Our results for management proposals in Table 4 show that the type of issue matters significantly for the degree of manipulation. To see whether this is also the case for shareholder proposals, we split them into three broad categories: (i) governance/proxy access; (ii) compensation; and (iii) social, environmental, political, and other similar types of proposals. We single out governance-related shareholder proposals because they are typically viewed as more important by the existing literature. Indeed, we find that the density discontinuity is only present for shareholder proposals that target governance issues, but not for other types of shareholder proposals.

F. Value Implications

From a policy perspective, an important question is whether the ability of management to influence the voting outcome creates or destroys shareholder value. For example, if management is better informed about the costs and benefits of a proposal, or if shareholders are passive and their approval is a mere formality needed to satisfy a regulatory requirement, manipulation of vote outcomes by management can be value-creating. However, it is also possible that management proposals involve self-dealing, are structured to expropriate certain groups of shareholders, or increase board entrenchment.

In the Appendix, we build a simple theoretical model that captures these tradeoffs. The firm manager is better informed about the value of the project than are her shareholders, but the manager's interests are only partly aligned with those of her shareholders. The manager can first decide which projects to propose for a shareholder vote and, after observing the shareholders' inclination to vote in favor of the project, can decide whether to manipulate the vote. We consider two alternative settings, one in which vote manipulation is value-creating for shareholders and another one in which manipulation is value-destroying,

and derive the market reactions to proposal passage and failure. Importantly, the model shows that when manipulation is value-destroying we should expect to see a positive market reaction to proposal failure and a negative market reaction to proposal passage. The opposite market reactions should be observed when manipulation is value-creating.

To analyze the value implications of management proposals, we focus on the returns to narrow passage or failure of these proposals. We keep only meeting dates with one close proposal since the interpretation of return reactions with multiple close proposals is ambiguous. Passage or failure of a proposal by a wide margin should have been anticipated, and those outcomes are excluded from the analysis. Manipulation of the proposal outcomes also affects the anticipated probability of a proposal's passage. Nevertheless, when a proposal actually passes, this leads to the updating of the probability of passing in only one direction–upward. Similarly, when a proposal fails, it represents an update of the probability of passing in a downward direction. Therefore, if the voting outcome is not perfectly anticipated by the market, we expect prices to react. While the extent of the price reaction may be muted owing to partial anticipation, the direction of the price reaction is informative.

Our results show that a narrow failure is associated with a sizable positive abnormal return, whereas passage is associated with a small negative return. This could be because, unconditionally, a close proposal has a high probability of passing. Therefore, passage of a proposal is not a big surprise. We obtain the same qualitative results for the 1% and 2% bands around the threshold. These results are presented in Table 9. The difference in reactions to narrow passage and narrow failure is statistically significant. Figure 12 shows the cumulative abnormal returns profile for a two-week window around the meeting date for proposals that passed or failed with a margin of 1% or less. Our results have the following interpretation. When a proposal fails narrowly and the market reacts positively,

it indicates that the manipulation techniques of the managers are not perfect and the market reacts to the failure to manipulate. When manipulation is value-destroying, failure to manipulate and make the proposal pass is good news.

V. Conclusion

In this paper, we examine factors that motivate executives to put up their proposals in shareholder meetings and analyze whether management systematically manipulates the voting outcomes of these proposals. Firms tend to ask for a shareholder vote following good recent performance and when it is more difficult for negative information to be impounded in stock prices because of tighter short-selling constraints.

We find evidence of significant manipulation of voting outcomes by management, particularly for firms with low institutional ownership and less independent boards and for proposals opposed by ISS. Based on bunching methods and an analysis of proposal agendas, we conclude that the gap in proposal density cannot be explained by the withdrawal of unsuccessful proposals. We identify new mechanisms that executives use to get their proposals passed, such as adjourning a meeting to a later date and selective campaigning.

Overall, our evidence indicates that the high observed passage rate of management proposals does not imply that the vast majority of management proposals are beneficial for shareholders. Management opportunistically pushes through many bad proposals when firm performance is good and influences voting outcomes in its favor.

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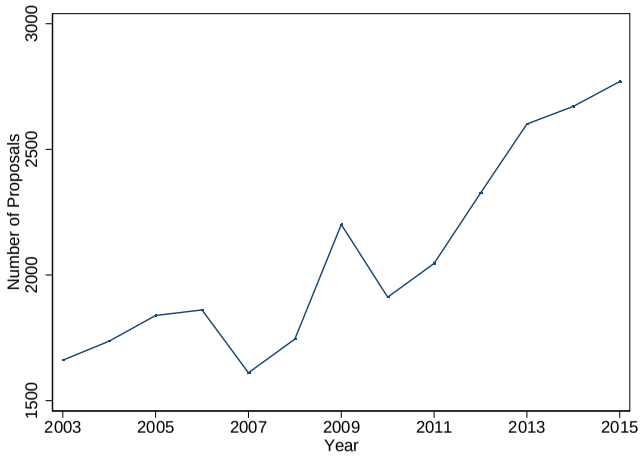
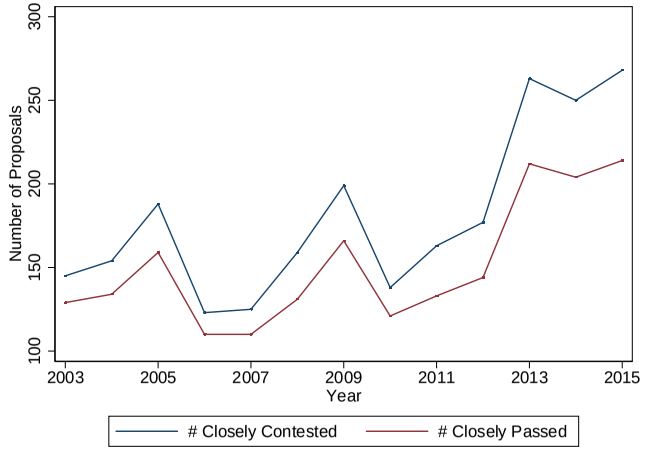
Figure 1. Management Proposals Launched and Won Over Time

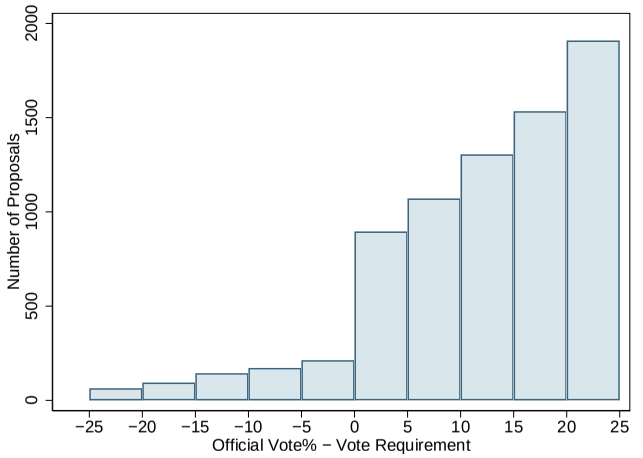


Panel A: Number of Proposals Over Time

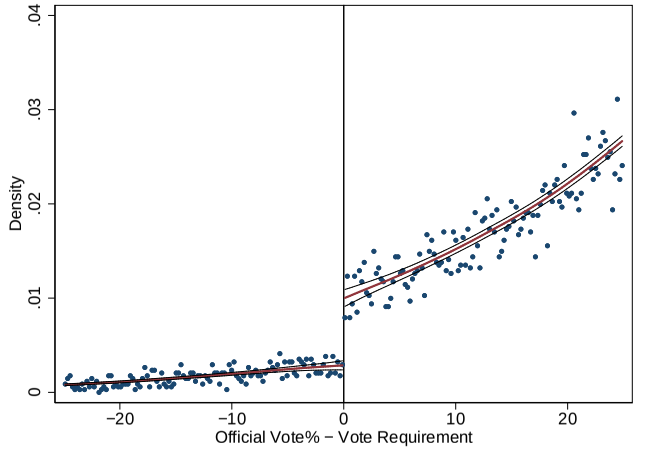


Panel B: Closely Contested (± 10%) Proposals Over Time

Figure 2. Density of Proposals Around the Passage Threshold

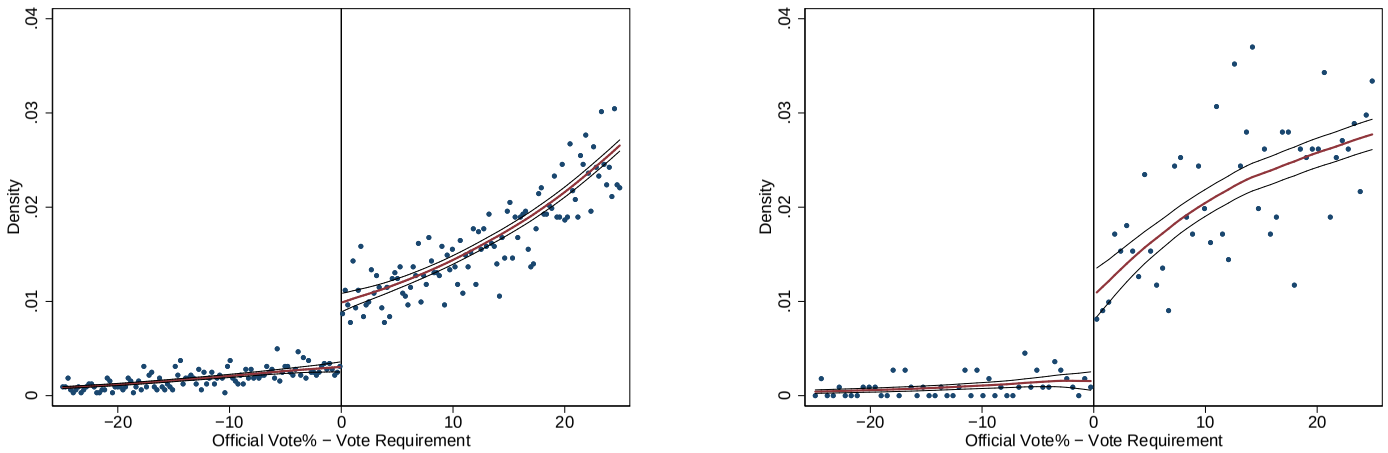


Panel A: Histogram of All Proposals



Panel B: Fitted Density of All Proposals

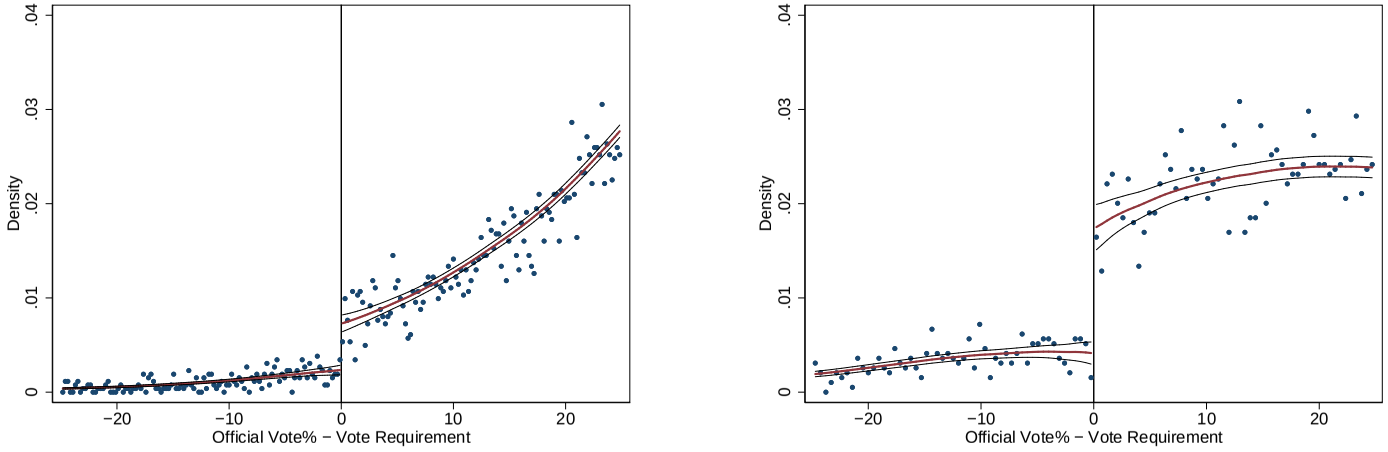
Figure 3. Type of Shareholder Meeting



Panel A: Annual Meeting

Panel B: Special Meeting

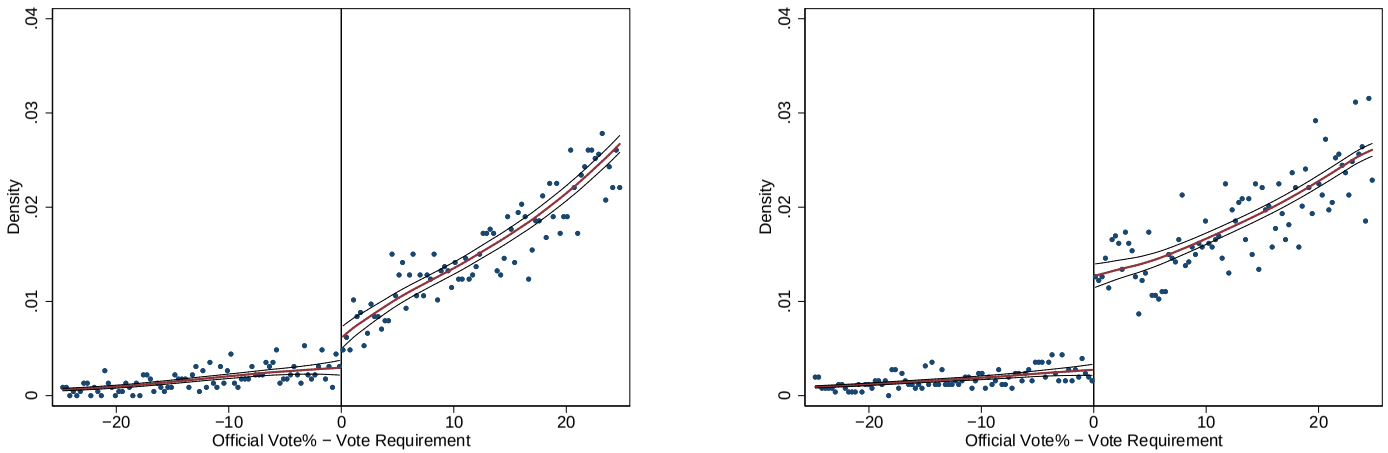
Figure 4. ISS Recommendation



Panel A: ISS "For" Recommendation

Panel B: ISS "Against" Recommendation

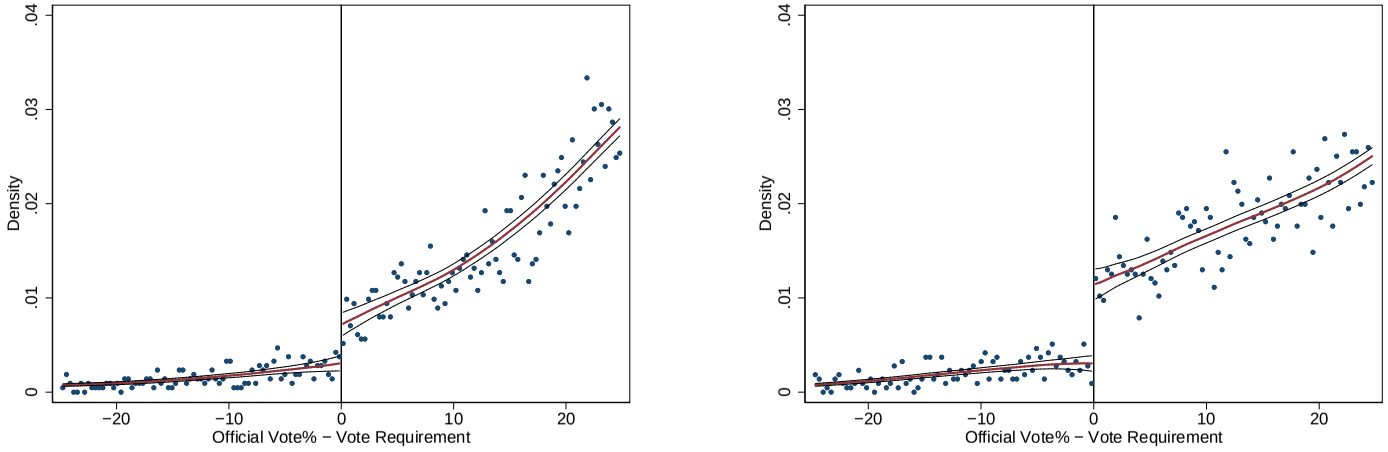
Figure 5. Number of Analysts



Panel A: Many Analysts

Panel B: Few Analysts

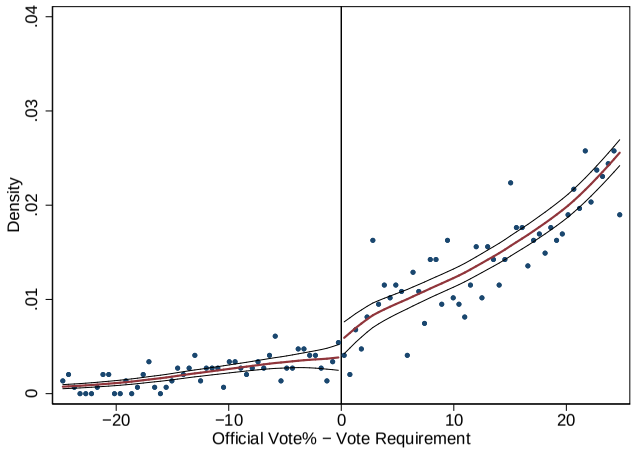
Figure 6. Institutional Ownership



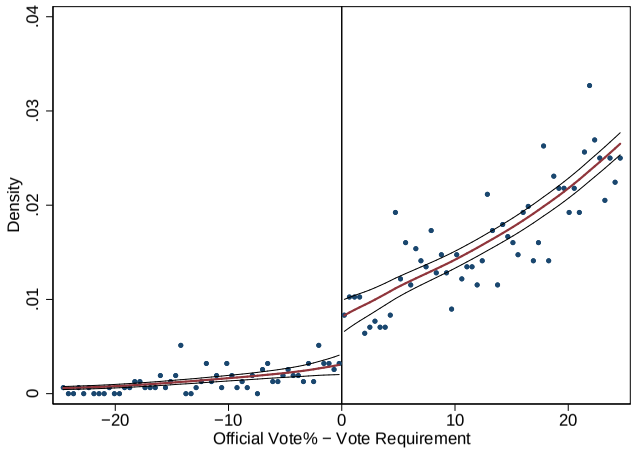
Panel A: High Institutional Ownership

Panel B: Low Institutional Ownership

Figure 7. Board Independence

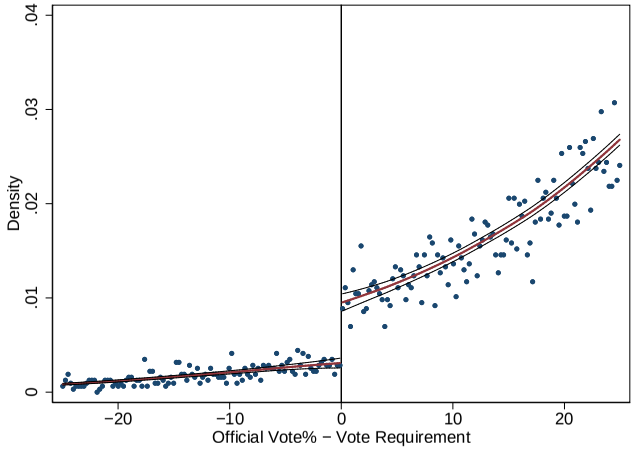


Panel A: High Board Independence

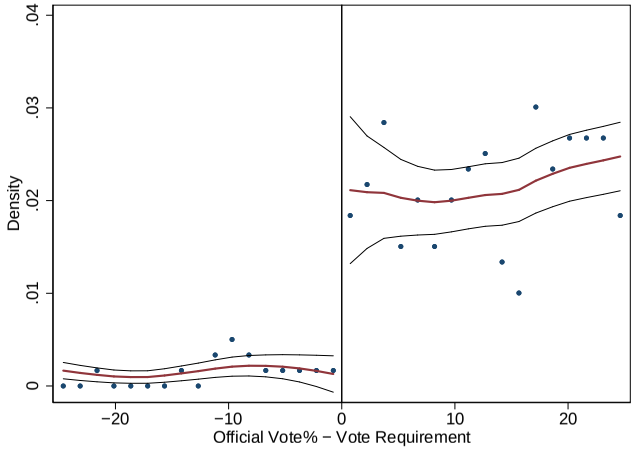


Panel B: Low Board Independence

Figure 8. Mechanisms: Annual Meeting Adjournment

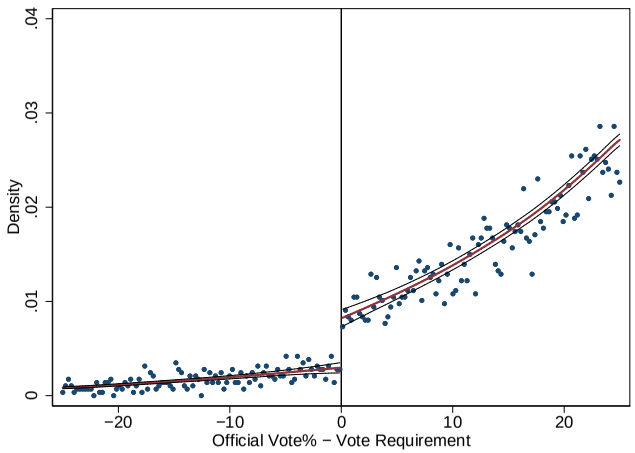


Panel A: No "Adjourn Annual Meeting" on Agenda

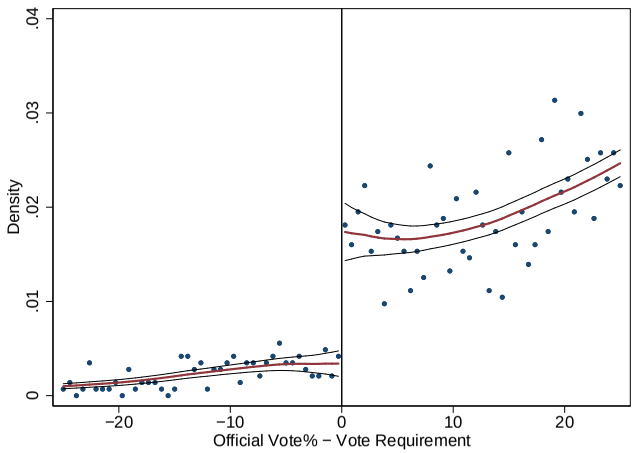


Panel B: "Adjourn Annual Meeting" on Agenda

Figure 9. Mechanisms: Firm Providing Additional Materials through DEFA14A

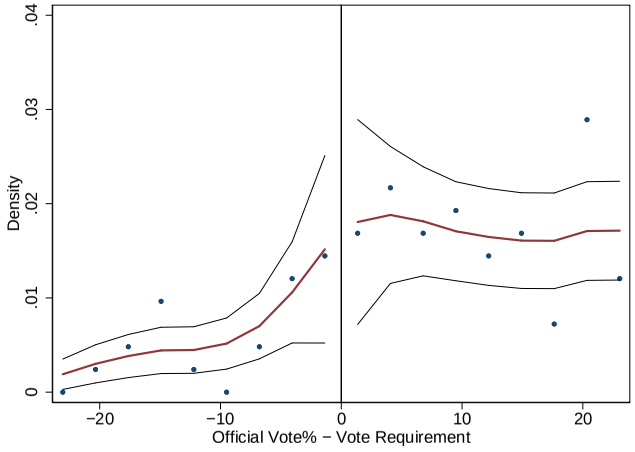


Panel A: No DEFA14A Filed After the Proxy Date

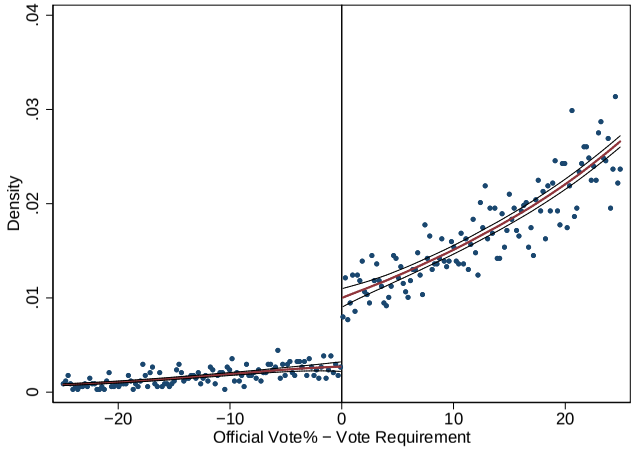


Panel B: DEFA14A Filed After the Proxy Date

Figure 10. Mechanisms: Shareholders Providing Additional Materials through PX14A6G

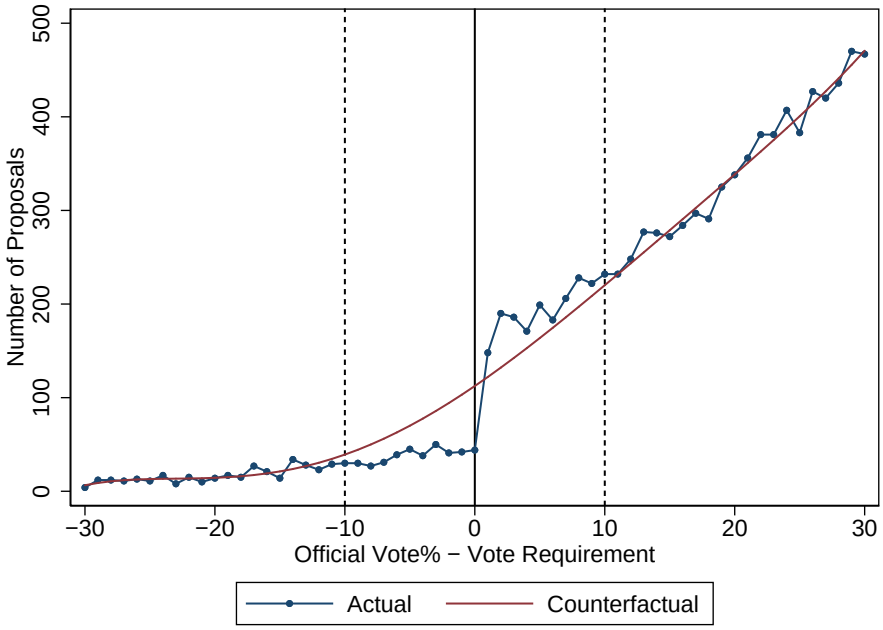


Panel A: PX14A6G Filed After the Proxy Date



Panel B: No PX14A6G Filed After the Proxy Date

Figure 11. Counterfactual Density



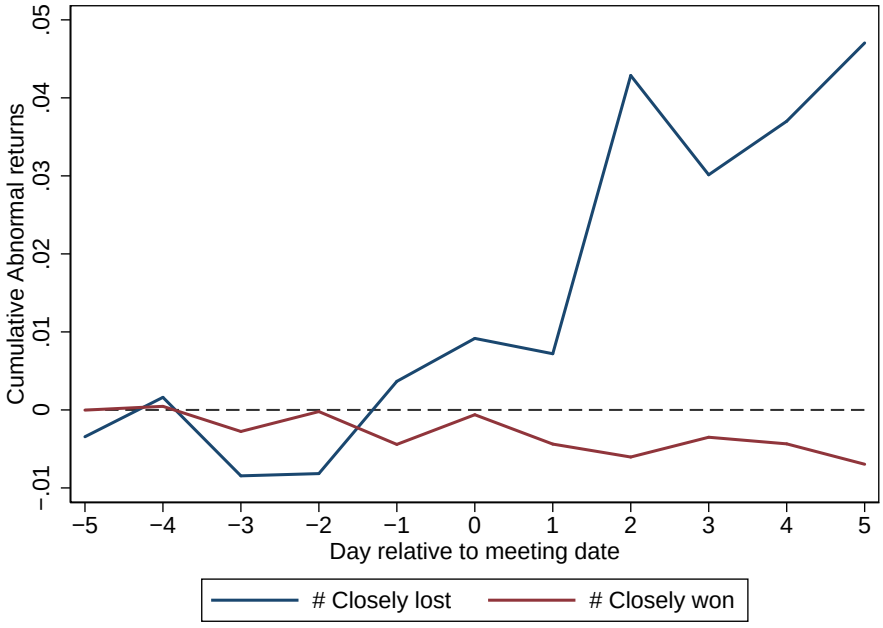


Figure 12. Market Reaction to Narrow Win/Loss on Management Proposals

Table 1. Summary Statistics for Proposal-Level Sample

Panel A reports summary statistics for 26,981 management proposals that were initiated during the period 2003–2015 and have a vote outcome of "Pass" or "Fail" and non-missing information on the number of votes. Panel B reports summary statistics for 2,281 management proposals with a recorded vote outcome of "Withdraw" or "Not Disclosed" during the period 2003–2015. All variable definitions are provided in the Appendix.

Panel A: Proposals with outcome (N=26,981)	*Obs.*	*Mean*	*Std.Dev.*
Vote percentage in favor (*Vote %*)	26,981	83.8	17.5
Vote base: Shares outstanding	6,573	74.4	24.9
Vote base: "F+A" or "F+A+AB"	20,408	86.8	12.8
Vote requirement: Majority	25,304	83.9	16.1
Vote requirement: Supermajority	1,677	81.4	31.3
Meeting type: Annual	23,934	84.0	15.8
Meeting type: Special	3,047	81.8	27.3
Agenda: Compensation	17,464	85.7	12.9
Employee compensation	13,900	84.3	13.3
Executive/director compensation	3,564	90.9	9.8
Agenda: Share issuance	3,805	78.4	25.9
Agenda: Governance	3,170	82.3	24.2
ATP removal	1,277	83.6	23.7
Other than ATP removal	1,893	81.4	24.5
Agenda: Strategic decisions	1,428	82.0	15.1
M&As	1,305	82.4	15.0
Restructuring, asset sales/purchases, spinoffs, etc.	123	78.5	15.3
Agenda: Other	1,114	79.0	18.2
ISS "Against" recommendation	26,981	18.5	38.8
Voter turnout (*Turnout*)	26,950	87.6	51.8
Quorum is established (*Turnout*>50%)	26,950	99.6	0.1
Adjourn meeting	26,981	8.8	28.3
Passed adjourn meeting	26,981	3.8	19.1
Adjourn annual meeting	23,934	2.5	15.6
DEFA after proxy date	23,934	15.9	36.6
PX14A6G by shareholders	26,981	1.0	10.0

Panel A (Continued)	*Obs.*	*Mean*	*Std.Dev.*
Passage rate (*Pass%*)	26,981	97.0	17.1
Base: Shares outstanding	6,573	91.7	27.5
Base: "F+A" or "F+A+AB"	20,408	98.7	11.4
Vote requirement: Majority	25,304	98.0	14.1
Vote requirement: Supermajority	1,677	82.2	38.2
Meeting type: Annual	23,934	96.9	17.5
Meeting type: Special	3,047	98.0	14.0
Agenda: Compensation	17,464	98.7	11.2
Agenda: Share issuance	3,805	95.9	19.8
Agenda: Governance	3,170	89.3	30.9
Agenda: Strategic decisions	1,428	99.0	9.9
Agenda: Other	1,114	92.5	26.4

Panel B: Withdrawn proposals (N=2,281)	*Obs.*	*% Withdrawn*	*% Launched*
Vote outcome: "Withdraw"	576	25.3	2.0
Vote outcome: "Not disclosed"	1,705	74.8	5.8
Base: Shares outstanding	213	9.3	3.1
Base: "F+A" or "F+A+AB"	2,068	90.7	9.2
Vote requirement: Majority	1,095	48.0	4.1
Vote requirement: Supermajority	39	1.7	2.3
Meeting type: Annual	1,737	76.2	6.8
Meeting type: Special	544	23.9	15.1
Agenda: Compensation	444	19.5	2.5
Agenda: Share issuance	208	9.1	5.2
Agenda: Governance	345	15.1	9.8
Agenda: Strategic decisions	237	10.4	14.2
Agenda: Other	1,047	45.9	48.5

Table 2. Summary Statistics for Firm-Level Sample

The table reports summary statistics for firms in our sample for the period 2003–2015. Firms that are present in Voting Analytics during a given year but do not launch any qualifying management proposals are assigned zero proposals. Withdrawn proposals are those with vote outcome "Withdraw" and "Not Disclosed." All other variable definitions are provided in the Appendix.

	Obs.	*Mean*	*Std.Dev.*	*p25*	*p50*	*p75*
Number of management proposals	31,163	0.680	0.934	0	0	1
Number of compensation proposals	31,163	0.451	0.688	0	0	1
Number of governance proposals	31,163	0.076	0.383	0	0	0
Number of share issuance proposals	31,163	0.068	0.296	0	0	0
Number of strategic decisions proposals	31,163	0.043	0.213	0	0	0
Won management proposals	31,163	0.604	0.882	0	0	1
Withdrawn management proposals	31,163	0.031	0.202	0	0	0
ISS "Against "recommendation	31,139	0.125	0.405	0	0	0
Recent shareholder proposal	31,163	0.096	0.294	0	0	0
Passed shareholder proposal	31,163	0.031	0.175	0	0	0
Proxy access shareholder proposal	31,163	0.004	0.064	0	0	0
Governance shareholder proposal	31,163	0.057	0.232	0	0	0
Compensation shareholder proposal	31,163	0.027	0.163	0	0	0
Social shareholder proposal	31,163	0.023	0.151	0	0	0
Other shareholder proposal	31,163	0.028	0.164	0	0	0
Number of analysts	31,163	7.551	6.908	2	6	11
Institutional ownership	31,163	0.652	0.268	0.469	0.712	0.869
Board size	14,548	9.292	2.261	8	9	11
Board independence	14,548	0.774	0.118	0.700	0.800	0.875
Past stock return	31,163	0.157	0.505	-0.134	0.098	0.345
Stock return volatility	31,163	0.387	0.23	0.223	0.329	0.483
Tobin's Q	31,163	1.942	1.452	1.087	1.439	2.167
Leverage	31,163	0.214	0.212	0.025	0.164	0.332
Book assets ($ billion)	31,163	5.962	17.667	0.285	0.943	3.339
R&D/assets	31,163	0.041	0.093	0	0	0.038
Capex/assets	31,163	0.042	0.055	0.006	0.024	0.053
Reg SHO treatment	10,444	0.428	0.495	0	0	1

Table 3. SEC Short-Selling Regulation SHO Experiment

The table reports the OLS estimates, where the dependent variable is the number of management proposals (total or for a particular category) launched during the year. All variable definitions are provided in the appendix. The standard errors clustered by firm are in parentheses. ***, **, and * refer to significance at the 1%, 5%, and 10% level.

	All proposals			Compensation		Governance		Share issuance	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Reg SHO treatment		-0.084*	-0.155***	-0.057*	-0.075*	-0.023	-0.049**	-0.011	-0.029*
		(0.044)	(0.057)	(0.031)	(0.044)	(0.020)	(0.024)	(0.012)	(0.015)
Shareholder proposal	0.019	-0.015	-0.063	-0.039	-0.042	0.029	-0.004	0.000	-0.006
	(0.033)	(0.059)	(0.061)	(0.047)	(0.053)	(0.028)	(0.024)	(0.015)	(0.015)
Passed shareholder proposal	0.500***	0.354***	0.430***	-0.052	-0.033	0.353***	0.388***	0.029	0.038*
	(0.050)	(0.081)	(0.088)	(0.056)	(0.061)	(0.051)	(0.055)	(0.019)	(0.021)
Board size			0.014		0.011		0.005		-0.001
			(0.017)		(0.013)		(0.008)		(0.005)
Board independence			-0.278		-0.064		-0.080		-0.064
			(0.202)		(0.157)		(0.080)		(0.058)
Past stock return	0.096***	0.111***	0.131***	0.062***	0.071*	-0.001	0.010	0.037***	0.053***
	(0.014)	(0.029)	(0.047)	(0.022)	(0.036)	(0.010)	(0.015)	(0.009)	(0.015)
Stock return volatility	0.222***	0.345***	0.375***	0.185***	0.237**	0.043	0.028	0.113***	0.113***
	(0.045)	(0.078)	(0.124)	(0.060)	(0.098)	(0.029)	(0.038)	(0.027)	(0.038)
Analyst coverage	0.011	-0.016	-0.066	-0.015	-0.038	-0.022	-0.038	0.011	-0.003
	(0.018)	(0.037)	(0.054)	(0.026)	(0.040)	(0.018)	(0.030)	(0.011)	(0.013)
Institutional ownership	0.088	0.390***	0.136	0.308***	0.246	-0.021	-0.133	0.072	0.009
	(0.070)	(0.135)	(0.361)	(0.092)	(0.180)	(0.045)	(0.149)	(0.046)	(0.073)
Firm size	-0.031	-0.052	-0.062	0.019	0.044	-0.018	-0.042	-0.016	-0.030
	(0.023)	(0.050)	(0.074)	(0.035)	(0.051)	(0.019)	(0.031)	(0.018)	(0.025)
Tobin's Q	-0.005	0.005	0.032	-0.007	0.008	-0.011**	-0.018**	0.020***	0.038***
	(0.008)	(0.015)	(0.026)	(0.012)	(0.021)	(0.004)	(0.009)	(0.006)	(0.010)
Leverage	0.098	-0.175	-0.355*	-0.111	-0.263*	-0.061	-0.084	-0.024	-0.020
	(0.067)	(0.126)	(0.205)	(0.090)	(0.146)	(0.041)	(0.074)	(0.052)	(0.060)
R&D/assets	0.137	0.276	0.919	0.247	0.892*	-0.012	0.088	0.108	0.047
	(0.189)	(0.368)	(0.692)	(0.252)	(0.521)	(0.102)	(0.186)	(0.176)	(0.297)
Capex/assets	-0.213	0.185	-0.064	0.093	0.119	-0.226	-0.355	0.305	0.157
	(0.233)	(0.472)	(0.629)	(0.320)	(0.446)	(0.150)	(0.230)	(0.222)	(0.237)
Observations	31,163	10,444	6,186	10,444	6,186	10,444	6,186	10,444	6,186
R-squared	0.268	0.263	0.279	0.283	0.282	0.239	0.290	0.229	0.258
Firm FE/Year FE	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes

Table 4. Manipulation of Proposal Outcomes

The table shows the results of manipulation tests based on the discontinuity in the density of management proposals around the passage threshold for different sub-samples of data. In column 2, we report the density discontinuity estimate based on the estimation method by McCrary (2008), which is calculated as the logarithm of the ratio of the fitted proposal densities on the right and on the left of the passage threshold; the corresponding t-statistics for the difference of the discontinuity from zero are provided in column 3. The last column provides z-statistic for the difference in discontinuities in two samples.

	Discontinuity	z-stat	*Difference b/w groups* (z-stat)
All proposals	1.245	12.65	
Meeting type:			
Special meeting	1.931	5.36	
Annual meeting	1.173	11.31	Special - Annual (2.02)
Agenda:			
Compensation	1.075	6.24	
Executive compensation	1.662	2.11	
Employee compensation	1.018	5.91	Executive - Employee (0.80)
Share issuance	1.846	8.73	
Governance	0.977	6.33	
ATP removal	0.727	3.82	
Other than ATP removal	1.396	5.29	ATP Removal - Other (-2.06)
Strategic decisions	1.625	2.05	

Table 5. Regression Discontinuity Balance Tests

The table reports the results of the covariate balance tests around the proposal passage threshold. All variable definitions are provided in the Appendix. Columns 2-3 and 4-5 are for observations, for which the difference between the official vote percentage and the vote requirement is between (-5%,+5%) and (-10%,+10%), respectively.

	(-5%, +5%)		(-10%, +10%)	
	Discontinuity	p-value	Discontinuity	p-value
Shareholder proposal	-0.236*	0.072	-0.197**	0.033
Passed shareholder proposal	-0.174**	0.012	-0.164**	0.043
ISS "Against" recommendation	0.283**	0.043	0.226**	0.035
Board size	-1.657*	0.069	-1.318*	0.100
Board independence	-0.082*	0.062	-0.074**	0.039
Analyst coverage	-1.201***	0.001	-0.716**	0.016
Institutional ownership	-0.282***	0.002	-0.161**	0.037
Past stock return	0.168	0.290	0.096	0.356
Stock return volatility	0.102	0.303	0.096	0.218
Tobin's Q	1.667***	0.001	0.603	0.138
Leverage	0.015	0.803	0.014	0.638
Firm size	-3.362***	0.002	-2.679***	0.002
R&D/assets	0.046	0.280	0.028	0.259
Capex/assets	0.012	0.346	0.003	0.648

Table 6. Manipulation Mechanisms

The table shows the results of manipulation tests based on the discontinuity in the density of management proposals around the passage threshold for different sub-samples of data. In column 2, we report the density discontinuity estimate based on the estimation method by McCrary (2008), which is calculated as the logarithm of the ratio of the fitted proposal densities on the right and on the left of the passage threshold; the corresponding t-statistics for the difference of the discontinuity from zero are provided in column 3. The last column provides z-statistic for the difference in discontinuities in two samples.

	Discontinuity	z-stat	*Difference b/w groups* (z-stat)
Adjourn meeting	2.139	4.48	
No adjourn meeting	1.169	11.97	Adjourn - No adjourn (1.99)
Passed adjourn meeting	3.477	2.79	
No passed adjourn meeting	1.193	11.98	Passed adjourn - No adjourn (1.83)
Adjourn annual meeting	2.900	3.01	
No adjourn annual meeting	1.118	11.18	Adjourn annual - No adjourn (1.84)
No PX14A6G by shareholders	1.303	11.98	
PX14A6G by shareholders	0.014	0.02	No PX14A6G - PX14A6G (2.17)
DEFA14A after proxy date	1.639	7.05	
No DEFA14A after proxy date	1.015	9.19	DEFA14A - No DEFA14A (2.42)

Table 7. Counterfactual Proposal Density Estimation

The table reports the results of the counterfactual proposal density estimation following the bunching method for notches of Kleven and Waseem (2013). We first group proposals in the 1% bins indexed by i and then estimate the following model $n_i = \sum_{j=0}^{p} \beta_j z_i^j + \sum_{j=z_-}^{z_+} \gamma_j 1_{z_i=j} + \varepsilon_i$, where z_i are bin values, n_i is the number of proposals in bin i, p is the order of the polynomial, and $[z_-, z_+]$ refers to the excluded area around zero difference between the official vote percentage and vote requirement. To generate the counterfactual distribution, we then calculate the fitted values from the above equation, but omit the term with indicator variables for the excluded area. The standard errors are obtained using a bootstrap procedure, in which we generate 500 distributions of the vote percentage by random resampling of the residuals from (1).

Degree p, range $[z_-, z_+]$	# in range $\Sigma_{z_-}^{z_+} n_i$	Excess bunching $\Sigma_0^{z_+} (n_i - \widehat{n}_i)$	Missing mass $\Sigma_{z_-}^{0} (\widehat{n}_i - n_i)$	Bunching responses $\widehat{B} = \Sigma_{z_-}^{z_+} (n_i - \widehat{n}_i)$	% bunching $\frac{\Sigma_0^{z_+}(n_i - \widehat{n}_i)}{\Sigma_{z_-}^{z_+} \widehat{n}_i}$	% missing $\frac{\Sigma_{z_-}^{0}(\widehat{n}_i - n_i)}{\Sigma_{z_-}^{z_+} \widehat{n}_i}$	$\widehat{b} = \frac{\widehat{B}}{\Sigma_{z_-}^{z_+} \widehat{n}_i/(2z+1)}$	$SE\left(\widehat{b}\right)$
5, $[-10\%, 10\%]$	2,382	266	379	-113	10.6%	15.2%	-0.95	0.677
4, $[-10\%, 10\%]$	2,382	296	411	-115	11.9%	16.5%	-0.96	0.751
5, $[-5\%, 5\%]$	1,154	171	257	-86	13.8%	20.7%	-0.77	0.396
4, $[-5\%, 5\%]$	1,154	188	278	-90	15.1%	22.4%	-0.79	0.476

Table 8. Manipulation of Outcomes on Shareholder Proposals

The table shows the results of manipulation tests based on the discontinuity in the density of shareholder proposals around the passage threshold. In column 3, we report the density discontinuity estimate based on the estimation method by McCrary (2008), which is calculated as the logarithm of the ratio of the fitted proposal densities on the right and on the left of the passage threshold; the corresponding t-statistics for the difference of the discontinuity from zero are provided in column 4. The last column provides z-statistic for the difference in discontinuities in two samples.

	Obs.	Discont.	z-stat	*Difference b/w groups* (z-stat)
Shareholder proposals	8,048	-0.338	-2.96	
Management proposals	26,981	1.245	12.65	Shareholder-Management (-6.01)
Shareholder proposals:				
Governance, proxy access	3,822	-0.461	-3.52	
Compensation	1,470	-0.228	-1.20	
Social, environment, etc.	2,756	-0.040	-0.10	

Table 9. Market Reaction to Narrow Passage/Failure of Proposals

The table shows the average stock market reaction to a narrow passage or failure of a management proposal during the five-day period around the shareholder meeting date; the corresponding t-statistics are provided below the estimates.

		Mean CAR $[-1,+3]$ (%)	
		Market adjusted model	Market model
1%	Win	-0.33	-0.37
		(-0.40)	(-0.45)
	Loss	3.83	3.78
		(1.35)	(1.31)
	Difference	4.16**	4.15**
		(1.93)	(1.91)
2%	Win	-0.44	-0.69
		(-0.90)	(-1.37)
	Loss	2.45	2.27
		(1.56)	(1.43)
	Difference	2.90***	2.96***
		(2.30)	(2.31)

VI. Appendix: Model

Here we provide a theoretical framework that helps to interpret our empirical analysis.

Projects: Suppose projects arrive stochastically and are privately observed by a firm's manager, who can decide whether to bring them up for a shareholder vote.[25] Positive shareholder vote is required for project implementation. If a project is not presented to the firm's shareholders, the payoff to all parties is 0.

The manager has perfect information about the value of each project to her shareholders; the value is drawn from the binary distribution $V \in \{L, H\}$, $H > 0$, $L < 0$, $Pr(V = H) = \lambda_H$. We assume the interests of the manager are partially aligned with those of her shareholders. Specifically, she values taking positive NPV projects to the extent α, where $0 < \alpha < 1$ (e.g., because of compensation structure, share ownership, or the possibility of dismissal for implementing bad projects), but she also cares about the private benefits associated with each project. The private benefits are drawn from the binary distribution $b \in \{0, B\}$, $B > 0$, $Pr(b = B) = \lambda_B$. At the project arrival stage, the distribution of private benefits is independent of the distribution of project values. In sum, the payoff to the manager if the project is accepted is

$$M = \alpha V + b. \tag{2}$$

Shareholders: There is a single blockholder who represents all shareholders; i.e., there are no coordination or information sharing problems among shareholders. The blockholder cannot observe the realized private benefits associated with the project, but he has an imperfect signal about the project's value. In particular, the blockholder observes a binary public signal $s \in \{l, h\}$, such that $\Pr(s = h|V = H) = \delta > \frac{1}{2}$ and $\Pr(s = h|V = L) = 1-\delta$. The parameter δ measures the precision of the blockholder's information. We can calculate the conditional probabilities of high- and low-value project arrival as

$$p_{H|h} = \frac{\lambda_H \delta}{\lambda_H \delta + (1 - \lambda_H)(1 - \delta)}, \tag{3}$$

$$p_{L|l} = \frac{(1 - \lambda_H)\delta}{(1 - \lambda_H)\delta + \lambda_H (1 - \delta)}. \tag{4}$$

Project selection: Since there is no cost to the manager in presenting a project to shareholders, she brings up all projects that have positive value to her ($M > 0$). We further assume that the private benefits are sufficiently high, so that $\alpha L + B > 0$. Thus the manager brings up all types of projects, except when she observes low value and no private benefits ($V = L$, $b = 0$). Note that because of project selection by the manager, in the sample of projects up for a vote, private benefits are more likely to be associated with

[25] Here we implicitly assume there are no conflicts of interest among the members of the firm's executive team (e.g., between the board of directors and the CEO).

low-value projects. In fact, when project value is L, the manager has private benefits B with probability one.

Voting and manipulation: As is typically the case in practice, we assume the shareholder vote on management proposals is binding. However, the vote outcome can be manipulated by the manager, and whether manipulation took place cannot be determined by courts. For illustrative purposes, we assume that shareholders indicate that they will *Accept* or *Reject* a project.[26] If they plan to *Accept*, the manager has no incentive to manipulate because all proposed projects are beneficial to her. If shareholders plan to *Reject,* the manager can choose to manipulate the vote if the benefits of doing so outweigh the costs. Specifically, we assume that manipulation results in a personal cost C to the manager and changes the outcome of the vote with probability θ. If shareholders plan to *Reject* the project, it is optimal for the manager to manipulate the outcome if

$$\theta\left(\alpha V + b\right) > C. \tag{5}$$

Assumption 1. The pool of projects is such that $\alpha L + B > \frac{C}{\theta} > \alpha H$.

The motivation for focusing on this case is that it allows us to capture both value-creating and value-reducing manipulation by the manager. In particular, there is manipulation of projects with $V = H, b = B$ and $V = L, b = B$.

Shareholder voting strategies: We next determine the optimal shareholder voting strategies. When a public signal is high, the payoffs to shareholders when they *Reject* or *Accept* a proposed project are, respectively,

$$E\left(V|s = h, \textit{Reject}\right) = \frac{p_{H|h}\lambda_B\theta H + \left(1 - p_{H|h}\right)\lambda_B\theta L}{p_{H|h} + \left(1 - p_{H|h}\right)\lambda_B}. \tag{6}$$

$$E\left(V|s = h, \textit{Accept}\right) = \frac{p_{H|h}H + \left(1 - p_{H|h}\right)\lambda_B L}{p_{H|h} + \left(1 - p_{H|h}\right)\lambda_B}. \tag{7}$$

Note that in case of an *Accept* decision, the manager never manipulates the outcome. By comparing the payoffs, we observe that shareholders *Accept* the project if

$$\frac{p_{H|h}}{1 - p_{H|h}}\frac{1 - \lambda_B\theta}{\lambda_B\left(1 - \theta\right)}H > -L. \tag{8}$$

Similarly, if $s = l$, then the shareholders' payoffs are

$$E\left(V|s = l, \textit{Reject}\right) = \frac{\left(1 - p_{L|l}\right)\lambda_B\theta H + p_{L|l}\lambda_B\theta L}{1 - p_{L|l}\left(1 - \lambda_B\right)}, \tag{9}$$

$$E\left(V|s = l, \textit{Accept}\right) = \frac{\left(1 - p_{L|l}\right)H + p_{L|l}\lambda_B L}{1 - p_{L|l}\left(1 - \lambda_B\right)}. \tag{10}$$

[26]This is equivalent to the manager privately observing the outcome of a vote in the absence of any manipulation. In reality, managers in the United States have access to the real-time voting information by their shareholders.

Shareholders *Reject* the project if

$$\frac{1-p_{L|l}}{p_{L|l}}\frac{1-\theta\lambda_B}{\lambda_B(1-\theta)}H < -L. \tag{11}$$

It is straightforward to verify

$$\frac{p_{H|h}}{1-p_{H|h}} > \frac{1-p_{L|l}}{p_{L|l}}, \tag{12}$$

which implies that if shareholders *Accept* a proposed project when $s = l$, they will also do so when $s = h$. Likewise, if shareholders *Reject* a proposed project when $s = h$, they will also reject it when $s = l$.

Lemma 1. *Suppose Assumption 1 is satisfied. Then the region of project acceptance by the firm shareholders (weakly) increases with the higher precision of the manager's manipulation technology, θ.*

Proof. The proof follows directly from (8) and (11). □

The intuition is that when manipulation is highly efficient, the bad project always gets passed even if shareholders vote it down because the manager manipulates the outcome (recall that the bad project has high private benefits). However, some good projects with no private benefits fail if shareholders *Reject*. Since it does not benefit shareholders to rule out only good projects, they are better off with an *Accept* decision.

Overall, three types of equilibria are possible: (1) the *pooling equilibrium*, in which shareholders accept all projects and hence all projects pass; (2) the *pooling equilibrium*, in which shareholders reject all projects, some projects are manipulated and pass; and (3) the *separating equilibrium*, in which shareholders accept projects when $s = h$ and reject them when $s = l$; some rejected projects are manipulated and pass.

Proposition 1. *Suppose Assumption 1 is satisfied. Then project passage rate is higher in the economy with manipulation, and shareholders are worse off.*

Proof. When manipulation is impossible, a *Reject* decision guarantees a zero payoff. Shareholders vote to *Accept* a project for $s = h$ if

$$\frac{p_{H|h}}{1-p_{H|h}}\frac{1}{\lambda_B}H > -L. \tag{13}$$

When $s = l$ shareholders vote to *Accept* the project if

$$\frac{1-p_{L|l}}{p_{L|l}}\frac{1}{\lambda_B}H > -L. \tag{14}$$

Comparing these inequalities to (8) and (11) and noting $\frac{1-\lambda_B\theta}{1-\theta} > 1$, we see that shareholders are more likely to *Accept* projects in the economy with vote manipulation. In

addition, manipulation of rejected projects by the manager further increases the passage rate. Thus passage rate is higher in the economy with manipulation. The expected payoff to shareholders is

$$\begin{aligned} V^{\text{no manip.}} &= p_h \max\{0, \frac{p_{H|h}H + \left(1-p_{H|h}\right)\lambda_B L}{p_{H|h} + \left(1-p_{H|h}\right)\lambda_B}\} \\ &\quad + (1-p_h)\max\{0, \frac{\left(1-p_{L|l}\right)H + p_{L|l}\lambda_B L}{1-p_{L|l}\left(1-\lambda_B\right)}\}, \end{aligned} \tag{15}$$

where $p_h = \lambda_H \delta + (1-\lambda_H)(1-\delta)$. Because three equilibria are possible in the economy with manipulation, we will analyze them separately.

Suppose that (8) and (11) are satisfied; i.e., the *separating Accept/Reject equilibrium* is sustained with manipulation. The shareholders' expected payoff with manipulation is

$$V = p_h \frac{p_{H|h}H + \left(1-p_{H|h}\right)\lambda_B L}{p_{H|h} + \left(1-p_{H|h}\right)\lambda_B} + (1-p_h)\lambda_B\theta\frac{\left(1-p_{L|l}\right)H + p_{L|l}L}{1-p_{L|l}\left(1-\lambda_B\right)}, \tag{16}$$

The first term in (16) is less than or equal to the first term in (15). To prove that manipulation is value-destroying, it is then sufficient to show

$$\left(1-p_{L|l}\right)\lambda_B\theta H + p_{L|l}\lambda_B\theta L < \max\{0, \left(1-p_{L|l}\right)H + p_{L|l}\lambda_B L\}, \tag{17}$$

which is true if

$$\frac{1-p_{L|l}}{p_{L|l}}H < -L. \tag{18}$$

From (11) and $\frac{1-\theta\lambda_B}{\lambda_B-\lambda_B\theta} > 1$, it follows that (18) is always satisfied.

Suppose now that (8) is satisfied, whereas (11) is not; i.e., the *pooling Accept/Accept equilibrium* is sustained. The shareholders' equilibrium expected payoff with manipulation is

$$V = p_h \frac{p_{H|h}H + \left(1-p_{H|h}\right)\lambda_B L}{p_{H|h} + \left(1-p_{H|h}\right)\lambda_B} + (1-p_h)\frac{\left(1-p_{L|l}\right)H + p_{L|l}\lambda_B L}{1-p_{L|l}\left(1-\lambda_B\right)}, \tag{19}$$

By comparing this expression to (15), we observe that $V^{\text{no manip.}} \geq V$.

Finally, suppose (11) is satisfied and (8) is not, which means the *pooling Reject/Reject equilibrium* takes place with manipulation. The shareholders' expected payoff with manipulation is

$$V = p_h\lambda_B\theta\frac{p_{H|h}H + \left(1-p_{H|h}\right)L}{p_{H|h} + \left(1-p_{H|h}\right)\lambda_B} + (1-p_h)\lambda_B\theta\frac{\left(1-p_{L|l}\right)H + p_{L|l}L}{1-p_{L|l}\left(1-\lambda_B\right)}, \tag{20}$$

Compare the last expression to (15). To establish that manipulation is value-destroying, it is sufficient to show

$$\begin{aligned} p_{H|h}\lambda_B\theta H + \left(1-p_{H|h}\right)\lambda_B\theta L &< \max\{0, p_{H|h}H + \left(1-p_{H|h}\right)\lambda_B L\}, \quad (21) \\ \left(1-p_{L|l}\right)\lambda_B\theta H + p_{L|l}\lambda_B\theta L &< \max\{0, \left(1-p_{L|l}\right)H + p_{L|l}\lambda_B L\}, \quad (22) \end{aligned}$$

The first condition follows because (8) is violated and $\frac{1-\theta\lambda_B}{\lambda_B-\lambda_B\theta} > 1$. The second condition follows because of (11) and $\frac{1-\theta\lambda_B}{\lambda_B-\lambda_B\theta} > 1$. Thus shareholders always obtain a lower expected payoff when a manager has the ability to manipulate the vote outcome. □

In general, manipulation can have both positive and negative effects. On one hand, if shareholders receive a low signal when the true value of a project is high and the manager manipulates the vote so that the project passes, this action benefits the shareholders. However, this only happens when the private benefits to the manager are also high. On the other hand, the manager will always manipulate the low-value projects to pass (since they will always have high private benefits to the manager). It is the tradeoff between these two factors that determines whether manipulation is net beneficial to shareholders. Manipulation can potentially be beneficial when the signal is uninformative and $H >> -L$. However, this case does not arise in equilibrium because under these conditions shareholders would vote to accept the project and manipulation would not take place.

We next analyze the market reaction to passage and failure of management proposals in the economy with vote manipulation. From the outcome of the vote, the market can potentially learn about the realized private benefits b, project value V, and the success of manipulation by the manager.

Proposition 2. *Suppose Assumption 1 is satisfied. Then the average market reaction to the proposal's passage is non-positive, $R_P \leq 0$, and the average market reaction to the proposal's failure is non-negative, $R_F \geq 0$.*

Proof. Again, we consider different types of equilibria. In the *pooling Accept/Accept equilibrium*, the market reaction on passage is always zero since no new information is generated, $R_{P,h} = R_{P,l} = R_P = 0$. Proposal failure never happens.

Consider now the *separating Accept/Reject equilibrium*. When $s = h$, the manager passes all projects prescribed by the shareholders. Since no new information is revealed upon passage, the market reaction is zero, $R_{P,h} = 0$. If a proposal passes when $s = l$, it means that the manager successfully manipulated the project, which can arise when either $V = L$, $b = B$ or $V = H$, $b = B$ (Assumption 1). The expected payoff to shareholders when a proposal passes is

$$V_{P,l} = \left(1-p_{L|l}\right)H + p_{L|l}L < 0, \quad (23)$$

which is negative because of (18). The expected payoff when a proposal fails is 0 since no project is implemented, $V_{F,l} = 0$. The price before observing whether a proposal passes or fails, but after observing $s = l$, is

$$V_l = p_{P|l}\left(\left(1 - p_{L|l}\right) H + p_{L|l} L\right), \tag{24}$$

where $p_{P|l}$ is the probability of project passage conditional on $s = l$. Therefore, the price reaction on observing that a proposal fails given $s = l$ is

$$R_{F,l} = V_{F,l} - V_l = -p_{P|l}\left(\left(1 - p_{L|l}\right) H + p_{L|l} L\right) > 0. \tag{25}$$

The average reaction across all proposals that fail is $R_{F,l}$ since no proposals fail when $s = h$

$$R_F = R_{F,l} > 0. \tag{26}$$

The price reaction on observing that a proposal passes given $s = l$ is

$$R_{P,l} = V_{P,l} - V_l = \left(\left(1 - p_{L|l}\right) H + p_{L|l} L\right)\left(1 - p_{P|l}\right) < 0. \tag{27}$$

The average reaction across all proposals that pass can be obtained by taking a weighted average of $R_{P,l} < 0$ and $R_{P,h} = 0$, which is negative

$$R_P = R_{P,l} \frac{p_{P|l}\left(1 - p_h\right)}{p_{P|l}\left(1 - p_h\right) + p_h} < 0. \tag{28}$$

The payoffs and market reactions in the *separating Accept/Reject equilibrium* are summarized in the table below.

	$Pass$	$Fail$	V_s
h	$V_{P,h} = p_{H\|h} H + \left(1 - p_{H\|h}\right) L > 0$ $R_{P,h} = 0$	$V_{F,h} = N/A$ $R_{F,h} = N/A$	$p_{H\|h} H + \left(1 - p_{H\|h}\right) L$
l	$V_{P,l} = \left(1 - p_{L\|l}\right) H + p_{L\|l} L < 0$ $R_{P,l} = \left(1 - p_{P\|l}\right) V_{P,l} < 0$	$V_{F,l} = 0$ $R_{F,l} = -p_{P\|l} V_{P,l} > 0$	$p_{P\|l}\left(\left(1 - p_{L\|l}\right) H + p_{L\|l} L\right)$
	$R_P < 0$	$R_F > 0$	

Finally, consider the *pooling Reject/Reject equilibrium*. Following similar steps, we obtain the payoffs and market reactions listed below.

	$Pass$	$Fail$	V_s
h	$V_{P,h} = p_{H\|h} H + \left(1 - p_{H\|h}\right) L < 0$ $R_{P,h} = \left(1 - p_{P\|h}\right) V_{P,h} < 0$	$V_{F,h} = 0$ $R_{F,h} = -p_{P\|h} V_{P,h} > 0$	$p_{P\|h}\left(p_{H\|h} H + \left(1 - p_{H\|h}\right) L\right)$
l	$V_{P,l} = \left(1 - p_{L\|l}\right) H + p_{L\|l} L < 0$ $R_{P,l} = \left(1 - p_{P\|l}\right) V_{P,l} < 0$	$V_{F,l} = 0$ $R_{F,l} = -p_{P\|l} V_{P,l} > 0$	$p_{P\|l}\left(\left(1 - p_{L\|l}\right) H + p_{L\|l} L\right)$
	$R_P < 0$	$R_F > 0$	

Here $p_{P|l}$ and $p_{P|h}$ are the probabilities of project passage conditional on $s = l$ and $s = h$, respectively, and are given by

$$p_{P|l} = \frac{\theta\lambda_B}{1 - p_{L|l} + p_{L|l}\lambda_B}, \quad p_{P|h} = \frac{\theta\lambda_B}{p_{H|h} + \left(1 - p_{H|h}\right)\lambda_B}. \tag{29}$$

□

Assumption 2. The pool of projects is such that $\alpha H + B > \frac{C}{\theta} > \max\{\alpha H, \alpha L + B\}$.

Under this alternative assumption of high costs of vote manipulation, the manager will only manipulate the outcome when the project's value is high ($V = H, b = B$). Hence all manipulation that takes place benefits the shareholders. We derive this result formally and show that market reactions to proposal passage and failure reverse signs.

When $s = h$, the payoffs to shareholders when they *Reject* or *Accept* a project are

$$E\left(V|s = h, Reject\right) = \frac{p_{H|h}\lambda_B\theta H}{p_{H|h} + \left(1 - p_{H|h}\right)\lambda_B}, \tag{30}$$

$$E\left(V|s = h, Accept\right) = \frac{p_{H|h}H + \left(1 - p_{H|h}\right)\lambda_B L}{p_{H|h} + \left(1 - p_{H|h}\right)\lambda_B}. \tag{31}$$

Shareholders *Accept* the project if

$$\frac{p_{H|h}}{1 - p_{H|h}}\frac{1 - \lambda_B\theta}{\lambda_B}H > -L. \tag{32}$$

When $s = l$, the shareholders' payoffs are

$$E\left(V|s = l, Reject\right) = \frac{\left(1 - p_{L|l}\right)\lambda_B\theta H}{1 - p_{L|l}\left(1 - \lambda_B\right)}, \tag{33}$$

$$E\left(V|s = l, Accept\right) = \frac{\left(1 - p_{L|l}\right)H + p_{L|l}\lambda_B L}{1 - p_{L|l}\left(1 - \lambda_B\right)}. \tag{34}$$

Shareholders *Reject* the project if

$$\frac{1 - p_{L|l}}{p_{L|l}}\frac{1 - \theta\lambda_B}{\lambda_B}H < -L. \tag{35}$$

Lemma 2. *Suppose Assumption 1 is satisfied. Then the region of project acceptance by the firm shareholders (weakly) decreases with the higher precision of the manager's manipulation technology, θ.*

Proof. The proof follows directly from a comparative statics analysis of (32) and (35) with respect to θ. □

Proposition 3. *Suppose Assumption 2 is satisfied. Then shareholders are better off in the economy with manipulation.*

Proof. In the economy with no manipulation, the expected shareholder payoff is given by (15). We analyze three types of equilibria separately. Assume first that (32) and (35) are satisfied; i.e., the *separating Accept/Reject equilibrium* is sustained with manipulation. The shareholders' equilibrium expected payoff with manipulation is

$$V = p_h \frac{p_{H|h} H + \left(1 - p_{H|h}\right) \lambda_B L}{p_{H|h} + \left(1 - p_{H|h}\right) \lambda_B} + \left(1 - p_h\right) \frac{\left(1 - p_{L|l}\right) \lambda_B \theta H}{1 - p_{L|l} \left(1 - \lambda_B\right)}, \tag{36}$$

Note that $E\left(V|s = h, Accept\right) > 0$ because it is greater than $E\left(V|s = h, Reject\right)$. Hence the first term in (36) is equal to the first term in (15). To prove that manipulation is value-creating, it is thus sufficient to show

$$\left(1 - p_{L|l}\right) \lambda_B \theta H > \max\{0, \left(1 - p_{L|l}\right) H + p_{L|l} \lambda_B L\}. \tag{37}$$

The first part of inequality follows trivially because $H > 0$; the second part follows because (32) holds in this equilibrium.

Suppose now (32) is satisfied, whereas (35) is not; i.e., the *pooling Accept/Accept equilibrium* takes place with manipulation. It is straightforward to show $V^{\text{no manip.}} = V$.

Finally, suppose (35) is satisfied, whereas (32) is not; i.e., the *pooling Reject/Reject equilibrium* takes place with manipulation. The shareholders' equilibrium expected payoff with manipulation is

$$V = p_h \frac{p_{H|h} \lambda_B \theta H}{p_{H|h} + \left(1 - p_{H|h}\right) \lambda_B} + \left(1 - p_h\right) \frac{\left(1 - p_{L|l}\right) \lambda_B \theta H}{1 - p_{L|l} \left(1 - \lambda_B\right)}, \tag{38}$$

By comparing the last expression to (15), we see that manipulation is value-creating if

$$p_{H|h} \lambda_B \theta H > \max\{0, p_{H|h} H + \left(1 - p_{H|h}\right) \lambda_B L\}, \tag{39}$$

$$\left(1 - p_{L|l}\right) \lambda_B \theta H > \max\{0, \left(1 - p_{L|l}\right) H + p_{L|l} \lambda_B L\}, \tag{40}$$

which again follows from the equilibrium conditions. □

Proposition 4. *Suppose Assumption 2 is satisfied. Then the average market reaction to the proposal's passage is non-negative, $R_P \geq 0$, and the average market reaction to the proposal's failure is non-positive, $R_F \leq 0$.*

Proof. The proof follows essentially the same steps as the proof of Proposition 2. The payoffs and market reactions in the *pooling Accept/Accept equilibrium* are below.

	$Pass$	$Fail$	V_s
h	$V_{P,h} = p_{H\|h}H + \left(1 - p_{H\|h}\right) L > 0$ $R_{P,h} = 0$	$V_{F,h} = n/a$ $R_{F,h} = n/a$	$p_{H\|h}H + \left(1 - p_{H\|h}\right) L$
l	$V_{P,l} = \left(1 - p_{L\|l}\right) H + p_{L\|l}L > 0$ $R_{P,l} = 0$	$V_{F,l} = n/a$ $R_{F,l} = n/a$	$\left(1 - p_{L\|l}\right) H + p_{L\|l}L$
	$R_P = 0$	$R_F = n/a$	

The payoffs and market reactions in the *separating Accept/Reject equilibrium* are below.

	$Pass$	$Fail$	V_s
h	$V_{P,h} = p_{H\|h}H + \left(1 - p_{H\|h}\right) L > 0$ $R_{P,h} = 0$	$V_{F,h} = n/a$ $R_{F,h} = n/a$	$p_{H\|h}H + \left(1 - p_{H\|h}\right) L$
l	$V_{P,l} = H > 0$ $R_{P,l} = \left(1 - p_{P\|l}\right) H > 0$	$V_{F,l} = 0$ $R_{F,l} = -p_{P\|l}H < 0$	$p_{P\|l}H$
	$R_P > 0$	$R_F < 0$	

Finally, the payoffs and reactions in the *pooling Reject/Reject equilibrium* are given below.

	$Pass$	$Fail$	V_s
h	$V_{P,h} = H > 0$ $R_{P,h} = \left(1 - p_{P\|h}\right) H > 0$	$V_{F,h} = 0$ $R_{F,h} = -p_{P\|h}H < 0$	$p_{P\|h}H$
l	$V_{P,l} = H > 0$ $R_{P,l} = \left(1 - p_{P\|l}\right) H > 0$	$V_{F,l} = 0$ $R_{F,l} = -p_{P\|l}H < 0$	$p_{P\|l}H$
	$R_P > 0$	$R_F < 0$	

Here $p_{P|l}$ and $p_{P|h}$ are the probabilities of project passage conditional on $s = l$ and $s = h$, respectively, and are given by

$$p_{P|l} = \frac{\left(1 - p_{L|l}\right) \lambda_B \theta}{1 - p_{L|l} + p_{L|l}\lambda_B}, \;\; p_{P|h} = \frac{p_{H|h}\lambda_B \theta}{p_{H|h} + \left(1 - p_{H|h}\right) \lambda_B}. \tag{41}$$

□

VII. Appendix: Additional Tables and Figures

Table A1. Variable Definitions

Variable name	Definition
Official vote percentage (*Vote %*)	Vote percentage in favor, calculated for proposals with the vote outcome of "Pass" or "Fail" and non-missing information on the number of votes (see Section I.A for details).
Passage rate (*Pass %*)	The number of passed proposals—i.e., with vote %> vote requirement, divided by the number of proposals with outcome, and multiplied by 100.
Withdrawn proposals	The number of proposals with the vote result "Withdrawn" or "Not Disclosed."
Win	A dummy variable equal to 1 if a proposal is passed.
ISS "Against" recommendation	A dummy variable equal to 1 if ISS recommends voting "Against."
Voter turnout (*Turnout %*)	Voter turnout, calculated as $Turnout = \frac{F+A+AB+Nonvotes}{N}$, where F is votes "For," A is votes "Against," AB is votes abstained, and $Nonvotes$ is votes cast as broker non-votes.
Quorum is established	A dummy variable equal to 1 for all proposals that are voted on the shareholder meeting with $Turnout > 50\%$.
Number of management proposals	The number of all management-sponsored proposals after removing certain types of proposals (see section I.A. for details).
Number of (Category) management proposals	The number of management-sponsored proposals related to (Category) (see section II. B. for details).
Shareholder proposal	A dummy variable equal to 1 if any shareholder-sponsored proposal was launched in the previous year.
Passed shareholder proposal	A dummy variable equal to 1 if any shareholder-sponsored proposal was passed in the previous year.
(Category) shareholder proposal	A dummy variable equal to 1 if any shareholder-sponsored proposal related to (category) was launched in the previous year.
Analyst coverage	Log of the number of analysts covering the firm during the fiscal year.
Institutional ownership	The number of shares held by institutions (Thomson Reuters 13F), divided by the total number of shares outstanding.
Board size	The number of members of the board of directors.
Board independence	The fraction of the board members who are classified as independent directors.
Past stock return	The firm stock return over the past 12 months.
Stock return volatility	The annualized standard deviation of monthly log returns over the past 12 months.
Firm size	Log of the book value of assets (AT).

Tobin's Q	Market value of assets (AT - CEQ + PRCC_C*CSHO), divided by the book value of assets (AT).
Leverage	Sum of long-term debt (DLTT) and current debt (DLC), divided by the book value of assets (AT).
R&D/assets	Research and development expenses (XRD), divided by the book value of assets (AT). Variable set to zero if missing.
Capex/assets	Capital expenditures (CAPX), divided by the book value of assets (AT).
Reg SHO treatment	A dummy variable equal to 1 for firms listed in the Russell 3,000 as of June 25, 2004, that were in the pilot list for the Reg SHO experiment during the experiment and for all firms listed in the Russell 3,000 as of June 25, 2004, after the experiment.
Special meeting	A dummy variable equal to 1 if meeting type is "Special."
Majority requirement	A dummy variable equal to 1 if vote requirement is equal to 50%.
Shares outstanding base	A dummy variable equal to 1 if voting base is "Outstanding" or "Capital Represented."
Adjourn meeting	A dummy variable equal to 1 for a management proposal that is on the agenda of a shareholder meeting that also has a proposal to "Adjourn Meeting."
Passed adjourn meeting	A dummy variable equal to 1 for a management proposal that is on the agenda of a shareholder meeting that also has a proposal to "Adjourn Meeting" and that proposal passes.
Adjourn annual meeting	A dummy variable equal to 1 for a management proposal that is on the agenda of the annual shareholder meeting that also has a proposal to "Adjourn Meeting."
DEFA14A after proxy date	A dummy variable equal to 1 for a management proposal if there is a DEFA14A form filed by the firm before the annual shareholder meeting (within 60 days) and after the proxy statement date.
PX14A6G by shareholders	A dummy variable equal to 1 for a management proposal if there is a PX14A6G form filed by firm shareholders before the shareholder meeting (within 60 days).

Table A2. Determinants of Agenda of Management Proposals

The table reports the OLS estimates, where the dependent variable is the number of management proposals with particular agenda launched during the year. All variables are described in the Appendix. The standard errors clustered by firm are in parentheses. ***, **, and * refer to significance at the 1%, 5%, and 10% level.

	Compensation prop.		Governance prop.		Share issuance	
	(1)	(2)	(3)	(4)	(5)	(6)
Shareholder proposal	0.012		0.027		-0.011	
	(0.025)		(0.017)		(0.008)	
Passed shareholder proposal	-0.030		0.472***		0.025**	
	(0.032)		(0.035)		(0.011)	
Proxy access shareholder prop.		-0.103		0.167		0.047
		(0.085)		(0.105)		(0.036)
Govern. shareholder proposal		-0.025		0.331***		0.002
		(0.025)		(0.028)		(0.009)
Comp. shareholder proposal		-0.034		-0.006		0.000
		(0.033)		(0.029)		(0.011)
Social shareholder proposal		-0.012		0.012		0.001
		(0.038)		(0.030)		(0.012)
Other shareholder proposal		-0.011		-0.004		-0.008
		(0.033)		(0.028)		(0.010)
Board size		0.010		0.008*		0.002
		(0.006)		(0.004)		(0.003)
Board independence		-0.058		-0.109*		-0.052
		(0.091)		(0.058)		(0.038)
Past stock return	0.053***	0.053***	0.001	0.007	0.020***	0.044***
	(0.010)	(0.020)	(0.005)	(0.009)	(0.005)	(0.008)
Stock return volatility	0.052*	0.142**	0.032*	0.030	0.104***	0.085***
	(0.030)	(0.059)	(0.018)	(0.028)	(0.018)	(0.023)
Analyst coverage	0.012	-0.010	-0.004	-0.015	-0.006	-0.013
	(0.012)	(0.021)	(0.008)	(0.015)	(0.007)	(0.008)
Institutional ownership	0.088**	0.003	-0.060**	-0.128	0.043*	0.043
	(0.044)	(0.090)	(0.028)	(0.089)	(0.025)	(0.040)
Firm size	0.022	0.023	0.012	0.030**	-0.023**	-0.008
	(0.014)	(0.024)	(0.009)	(0.014)	(0.009)	(0.011)
Tobin's Q	-0.003	-0.007	-0.002	-0.004	0.005	0.028***
	(0.006)	(0.011)	(0.002)	(0.005)	(0.003)	(0.005)
Leverage	0.001	-0.078	-0.009	-0.014	0.072***	0.021
	(0.045)	(0.079)	(0.024)	(0.048)	(0.027)	(0.031)
R&D/assets	0.152	0.429	0.016	-0.038	0.062	-0.043
	(0.127)	(0.406)	(0.049)	(0.177)	(0.088)	(0.172)
Capex/assets	-0.101	0.119	-0.086	-0.013	0.022	0.254**
	(0.164)	(0.286)	(0.081)	(0.154)	(0.096)	(0.124)
Observations	31,163	14,548	31,163	14,548	31,163	14,548
R-squared	0.253	0.216	0.246	0.208	0.280	0.185
Firm FE/Year FE	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes

Table A3. SEC Short-Selling Regulation SHO Experiment

The table reports the OLS estimates, where the dependent variable is the number of management proposals (total or for a particular category) launched during the year. All variable definitions are provided in the Appendix. The standard errors clustered by firm are in parentheses. ***, **, and * refer to significance at the 1%, 5%, and 10% level.

	All proposals		Compensation		Governance		Share issuance	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Reg SHO treatment	-0.081*	-0.183***	-0.066**	-0.110***	-0.025	-0.055**	-0.001	-0.016
(announcement)	(0.042)	(0.056)	(0.032)	(0.042)	(0.018)	(0.024)	(0.012)	(0.016)
Shareholder proposal	-0.014	-0.062	-0.039	-0.042	0.030	-0.003	0.001	-0.006
	(0.059)	(0.061)	(0.047)	(0.053)	(0.028)	(0.024)	(0.015)	(0.015)
Passed shareholder proposal	0.354***	0.430***	-0.052	-0.033	0.353***	0.388***	0.029	0.038*
	(0.081)	(0.088)	(0.056)	(0.061)	(0.051)	(0.055)	(0.019)	(0.021)
Board size		0.014		0.011		0.005		-0.001
		(0.017)		(0.013)		(0.008)		(0.005)
Board independence		-0.286		-0.070		-0.082		-0.064
		(0.202)		(0.157)		(0.080)		(0.058)
Past stock return	0.110***	0.128***	0.061***	0.069*	-0.001	0.009	0.037***	0.053***
	(0.029)	(0.047)	(0.022)	(0.036)	(0.010)	(0.015)	(0.009)	(0.015)
Stock return volatility	0.347***	0.377***	0.187***	0.239**	0.044	0.029	0.112***	0.113***
	(0.078)	(0.124)	(0.060)	(0.098)	(0.028)	(0.037)	(0.027)	(0.038)
Analyst coverage	-0.016	-0.067	-0.015	-0.038	-0.022	-0.038	0.011	-0.003
	(0.037)	(0.054)	(0.026)	(0.040)	(0.018)	(0.030)	(0.011)	(0.013)
Institutional ownership	0.389***	0.135	0.308***	0.246	-0.021	-0.134	0.071	0.008
	(0.135)	(0.361)	(0.092)	(0.180)	(0.045)	(0.149)	(0.046)	(0.073)
Firm size	-0.051	-0.060	0.020	0.045	-0.018	-0.042	-0.017	-0.030
	(0.050)	(0.074)	(0.035)	(0.051)	(0.019)	(0.031)	(0.018)	(0.025)
Tobin's Q	0.006	0.033	-0.006	0.009	-0.011**	-0.018**	0.020***	0.038***
	(0.015)	(0.026)	(0.012)	(0.021)	(0.004)	(0.009)	(0.006)	(0.010)
Leverage	-0.174	-0.350*	-0.110	-0.260*	-0.060	-0.082	-0.025	-0.020
	(0.126)	(0.204)	(0.090)	(0.145)	(0.041)	(0.074)	(0.052)	(0.060)
R&D/assets	0.281	0.942	0.253	0.912*	-0.011	0.094	0.107	0.044
	(0.368)	(0.691)	(0.252)	(0.519)	(0.102)	(0.186)	(0.176)	(0.297)
Capex/assets	0.182	-0.061	0.090	0.123	-0.227	-0.354	0.306	0.155
	(0.472)	(0.632)	(0.321)	(0.449)	(0.150)	(0.230)	(0.222)	(0.237)
Observations	10,444	6,186	10,444	6,186	10,444	6,186	10,444	6,186
R-squared	0.263	0.280	0.283	0.283	0.239	0.290	0.229	0.258
Firm FE/Year FE	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes

Table A4. Manipulation Test of Cattaneo, Jansson, and Ma (2017)

The table shows the results of manipulation tests based on the discontinuity in the density of management proposals around the passage threshold based on the non-parametric estimation method developed by Cattaneo, Jansson, and Ma (2017). In column 2 we report CJM test statistics for manipulation, which are calculated as the difference in the local polynomial density estimators on the right and on the left of the passage threshold, divided by the standard error of the estimator, $T_p(h) = \frac{\widehat{f}_{+,p}(h) - \widehat{f}_{-,p}(h)}{\widehat{V}_p(h)}$; the corresponding p-values are provided in column 3.

	CJM test statistic	*CJM* p-value
All proposals	7.15***	0.000
Meeting type:		
Special meeting	4.30***	0.000
Annual meeting	7.40***	0.000
Meeting agenda:		
Compensation	1.85*	0.064
Share issuance	5.43***	0.000
Governance	4.89***	0.000
Strategic decisions	0.49	0.631