

EUR Research Information Portal

Firing the Wrong Workers: Financing Constraints and Labor Misallocation

Published in:

Journal of Financial Economics

Publication status and date:

Published: 01/01/2019

DOI (link to publisher):

[10.1016/j.jfineco.2017.10.008](https://doi.org/10.1016/j.jfineco.2017.10.008)

Document Version

Publisher's PDF, also known as Version of record

Document License/Available under:

Article 25fa Dutch Copyright Act

Citation for the published version (APA):

Caggese, A., Cunat, V., & Metzger, D. (2019). Firing the Wrong Workers: Financing Constraints and Labor Misallocation. *Journal of Financial Economics*, 133(3), 589-607. <https://doi.org/10.1016/j.jfineco.2017.10.008>

[Link to publication on the EUR Research Information Portal](#)

Terms and Conditions of Use

Except as permitted by the applicable copyright law, you may not reproduce or make this material available to any third party without the prior written permission from the copyright holder(s). Copyright law allows the following uses of this material without prior permission:

- you may download, save and print a copy of this material for your personal use only;
- you may share the EUR portal link to this material.

In case the material is published with an open access license (e.g. a Creative Commons (CC) license), other uses may be allowed. Please check the terms and conditions of the specific license.

Take-down policy

If you believe that this material infringes your copyright and/or any other intellectual property rights, you may request its removal by contacting us at the following email address: openaccess.library@eur.nl. Please provide us with all the relevant information, including the reasons why you believe any of your rights have been infringed. In case of a legitimate complaint, we will make the material inaccessible and/or remove it from the website.

How Close Are Close Shareholder Votes?

Laurent Bach

ESSEC Business School

Daniel Metzger

Stockholm School of Economics and Swedish House of Finance

We show that close votes on shareholder proposals are disproportionately more likely to be won by management than by shareholder activists. Using a sample of shareholder proposals from 2003 to 2016, we uncover a large and discontinuous drop in the density of voting results at the 50% threshold. We document similar patterns for say on pay votes and director elections. Our findings imply that shareholder influence through voting is limited by managerial opposition. It also follows that one cannot routinely use an RDD to identify the causal effects of changes in corporate governance generated by shareholder votes. (*JEL* G34, G38)

Received May 29, 2017; editorial decision August 21, 2018 by Editor Itay Goldstein. Authors have furnished an Internet Appendix, which is available on the Oxford University Press Web site next to the link to the final published paper online.

Voting has become an essential means of making decisions about controversial corporate governance issues. Its popularity as a governance tool rests on the premise that the general assembly is the only arena in which both management and their critics can seek shareholder support in a competitive fashion, whereas the alternative decision-making process, board representation, is biased toward the views of management. An essential prerequisite to support this view is that corporate elections are a fair process that is not systematically biased in favor of the interests of those with the greatest campaigning resources. In practice, this may not be the case in U.S. corporations; indeed, unlike in political elections, interested parties may be able to focus their resources on reaching a very specific final voting outcome thanks to widespread access to precise information about preliminary voting results. In this paper, we

We thank the editor, Itay Goldstein, and two anonymous reviewers for their constructive comments, which helped us to improve the manuscript. We thank Matthew Cain, Maxime Couvert, Rüdiger Fahlenbrach, Daniel Ferreira, Slava Fos, Dirk Jenter, Nadya Malenko, Eva Micheler, and Moqi Xu and seminar participants at the EFA 2017, WFA 2017, the Rheinland Finance meetup, TU Munich, ESSEC, U Mannheim, LSE, and NYU for very helpful comments. We thank Alberto Allegrucci and Erik Fredriksen for outstanding research assistance. An earlier version of this paper was called "Are Shareholder Votes Rigged?" [Supplementary data](#) can be found on *Review of Financial Studies*. Send correspondence to Daniel Metzger, Stockholm School of Economics and Swedish House of Finance, Drottninggatan 98, Stockholm, Sweden; telephone: +46 (0)8-736 9141. E-mail: daniel.metzger@hhs.se.

© The Author(s) 2018. Published by Oxford University Press on behalf of The Society for Financial Studies. All rights reserved. For permissions, please e-mail: journals.permissions@oup.com.
doi:10.1093/rfs/hhy126

investigate whether this feature of corporate voting allows management to shape voting results in their favor.

Analyzing the voting results on shareholder proposals regarding corporate governance in large U.S. companies between 2003 and 2016, we find that an abnormal share of shareholder proposals is won by a small margin by management. Since 2003, there have been approximately 75% more shareholder proposals rejected by a margin of one percent of shares outstanding than proposals that were approved by a similarly narrow margin. As a result, the density of voting results on these proposals experience a large and discontinuous drop exactly where the majority threshold of each proposal is located. These anomalies in the distribution of voting results reveal substantial effects of manager-friendly attempts to obtain very specific voting outcomes on the success rate of shareholder proposals: using counterfactual distributions, we estimate that approximately 11% of the proposals were rejected by a margin of less than 10% of the votes because management and their allies could alter the voting results. This estimate is a lower bound as the ex-ante effects, for example, on the submission of potentially successful proposals, may be large. We also show that these rejections are almost permanent as the likelihood that these marginally defeated proposals eventually pass in the next 5 years is very slim.

Such abnormal voting results would bear few consequences if the affected proposals generally have little impact. We provide substantial evidence that this is not the case. First, we show that the likelihood of voting results exhibiting an abnormal distribution is higher when proposals have greater potential to lead to changes in corporate governance provisions. Moreover, we find that the discontinuity in voting results is only discernible when the proposal is on a topic that is largely supported by proxy advisors but typically opposed by management, such as the removal of poison pills, classified boards, proxy access, and majority voting. Second, we show that proposals that narrowly pass generate more positive stock market reactions than proposals that are narrowly defeated; this last result is however subject to the caveat that defeated proposals are not randomly drawn, which may be a source of substantial bias. Third, we establish that the predictability of the outcome of close votes extends to other very relevant contexts, such as say on pay (SOP) votes and uncontested director elections.

Our results suggest that when management strongly opposes a shareholder proposal, it takes meticulous actions to make sure it does not pass. However, before one can judge whether these practices should be prevented, it is important to reach a better understanding of how management distorts voting outcomes in practice. The abnormal number of elections that are narrowly won by management could come from two sources: an unusual turnout rate favoring management or, conditional on the number of voters, an abnormal propensity of voters to take the side of management. We find a much stronger systematic bias in voting results in favor of management when turnout is high. To encourage turnout, managers may be inclined to boost the participation of outside retail

shareholders who are known to favor management by campaigning more aggressively, for instance. Consistently, we show that managers are more likely to send written material to shareholders, which are recorded in PX14A6G filings with the SEC. This is consistent with anecdotal evidence that companies directly call shareholders who have not yet voted and provide detailed step-by-step instructions on online vote submissions. Moreover, managers or other insiders may simply try to acquire additional voting rights themselves. A direct test of this hypothesis has been suggested by Fos and Jiang (2015) in the context of proxy contests. They document that CEOs are more likely exercise their stock options before proxy contests to maintain or even strengthen their voting rights. We borrow their framework and show that managers are also more likely to exercise their option packages to obtain additional votes when they expect to face contested shareholder proposals.

These findings raise the question of how corporate elections could be made more competitive. The distribution of voting results that we identify has two potential sources. Managers may have a greater ability than activists to shift votes in their preferred direction. Moreover, they may be able to obtain a more precise signal of the final outcome of corporate elections. Neither of these two hypotheses is unrealistic. First, the management teams of listed companies are officially in charge of elections, so it is much easier for them to influence voters. Less known is that interested parties can, through proxy services firms that gather proxies and tabulate votes, gain access to preliminary voting results in close to real time before the final voting outcome is revealed. This is usually motivated by the will to ensure that a quorum of voters is reached at an annual general meeting (AGM) so that decisions can be validated. Yet, this is precisely the signal that management and activists can seize to influence the outcome very precisely in their favor. Access to preliminary vote tallies has been substantial debated by policy makers. Several shareholder proposals on this topic have been offered in the recent past.¹ It has also been the subject of discussions between the SEC and representatives of institutional investors.² One particularly contentious issue is that in 2013, management was given exclusivity over preliminary voting information.³ Calls to remove this recent privilege and to make sure that interim vote tallies are accessible to everyone have been made. However, the data analyzed in this paper show that voting results were abnormally distributed before 2013 as well. This suggests that it is not enough to provide de jure access to real-time results to all interested parties.

Our results shed new light on the voting processes of U.S. corporations, a topic that has received much attention in recent years. Most papers focus on the impact of proxy advisors and on the voting decisions made by mutual

¹ This was the case at Amazon, Home Depot, and Verizon in the 2014 proxy season.

² See the Council of Institutional Investors's (2014, 2015) correspondence with the SEC between 2013 and 2015.

³ See Craig and Silver-Greenberg (2013).

funds.⁴ Our results, however, are more closely related to research examining how management aims to influence voting outcomes through various means, such as requests to exclude proposals for proxy access (Bhandari et al. 2017), recommendations to shareholders (Ferri and Oesch 2016), or proxy bundling, that is, the joinder of separate items into a single proxy proposal (Cox et al. 2016). The paper is also an important addition to a small body of corporate law literature documenting the imperfections of the corporate voting system when compared with political elections. Kahan and Rock (2011) note that the complexity of the underlying custodial ownership structure interests can lead to pathological situations, such as votes that are not counted and overvoting. In a more recent contribution, Kahan and Rock (2011) mention the existence of asymmetries in access to preliminary voting information when activists do not directly solicitate voters. Our paper is the first to document that many managers take advantage of these departures from a fair election system.

The paper closest to ours is by Listokin (2008) who shows that management is overwhelmingly more likely to win than to lose close votes on proposals that are submitted by management itself. His results are methodologically similar to our findings on shareholder proposals, but their relevance to today's corporate elections is limited in comparison with what we uncover in this paper. First, shareholder representatives and proxy advisors rarely seize management proposals to voice their opposition to management; instead, they choose director elections, say-on-pay proposals and shareholder proposals to do so. According to our own data, since the time Listokin (2008) was published, of all elections (management proposals, shareholder proposals, SOP votes, and director elections) in which management lost a vote, in the sense that the final voting outcome contradicted its recommendation, only slightly more than 20% correspond to a proposal submitted by management. Second, voters overwhelmingly adopt management proposals. We find that the average voting support for management proposals is above 90%, and only a very small fraction of management proposals is contested (3.24%) or won by shareholders (1.68%). In comparison, shareholder proposals are heavily contested (27.87%) and often won by shareholders (40.39%). Listokin (2008) himself admits that those management proposals that are closely contested address a very narrow set of topics, typically amendments to stock option plans. One last major point of departure from that piece of research is that while it also tests for the presence of a discontinuity in the density of votes on shareholder proposals, contrary to us, it does not find any evidence of such a discontinuity.

For these reasons, scholars in empirical corporate governance have exploited close votes on shareholder proposals in order to identify the impact of governance features, such as poison pills or classified boards (e.g.,

⁴ See, for instance, Matvos and Ostrovsky (2010), Iliev and Lowry (2014), Cvijanovic, Dasgupta, and Zachariadis (2016), and Cvijanovic, Groen-Xu, and Zachariadis (2017), Malenko and Shen (2016), or Malenko and Malenko (2017).

Cuñat, Giné, and Guadalupe 2012, 2013, 2016; Cheng, Hong, and Shue 2013; Popadak 2013). Our findings also have some implications for this strand of research as our results cast some doubts on the internal validity of these approaches, at least for the period after 2003.

1. Institutional Context and Data Description

Given that a change from 49.9% to 50.1% of votes can result in the approval or rejection of a proposal, some parties may be interested in trying to influence the vote and make sure that a proposal is narrowly rejected or approved. In this section, we shed light on key aspects of the voting process that may leave room for extensive and meticulous pre-determination of voting results.

1.1 The voting process of shareholder proposals

Shareholders of U.S. publicly held corporations have the right to vote during AGMs or special meetings that may be called between two AGMs by management or a substantial portion of the shareholder base. We focus on explaining how voting takes place for general meetings.⁵

Our study focuses on shareholder-sponsored governance proposals. Shareholder proposals have been shown to successfully change corporate policies. For instance, in approximately 40% of all AGMs, at least one shareholder proposal receives majority support; that is, the shareholder activist wins the vote. This is in stark contrast to SOP votes or management-sponsored proposals: in less than 2% of AGMs does management *not* win one of these elections.

The process from the submission of shareholder proposals to voting is as follows. By SEC rule 14a-8, any shareholder with a holding in a company worth at least \$2,000 or 1% of outstanding shares can submit proposals. A company may seek to omit a proposal from its proxy materials by requesting a “no-action” letter from the SEC indicating that the SEC will not take an action against the company. The SEC has created criteria that allow a firm to exclude proposals from its proxy materials, such as the form of the proposal, duplication of other proposals, or previously implemented proposals, and whether the proposal is a matter of ordinary business operation.⁶ In our study, we focus on shareholder proposals that were not omitted from the proxy. Once on the proxy, shareholder proposals cannot be removed by management; only the sponsor of a proposal can withdraw it. This is, in contrast to management-sponsored proposals, which can be removed at any time by management, but not by shareholders. Shareholder-sponsored proposals are not usually binding for management (see

⁵ The process is regulated and codified at several levels of government and may, in theory, considerably vary from state to state and from one trading venue to another. However, we focus on the biggest firms, which tend to be listed on the New York Stock Exchange and incorporated in a tight set of states, with little loss of generality.

⁶ See Soltes, Srinivasan, and Vijayaraghavan (2017) and Matsusaka, Ozbas, and Yi (2018).

Levit and Malenko 2011). This means that even when the approval threshold set by the corporate charter has been passed, the board of directors has discretion over whether or not to implement the proposal. However, some proposals are by nature easier to implement than others, and we will consider whether the structure of voting results differs for these. Furthermore, we will also look at SOP votes and director elections, which are binding proxy items.

Like in any election, it must first be decided which shareholders are eligible to vote at the meeting. Because shares trade on a continuous basis, the precise date by which a shareholder must own the share in order to be eligible to vote must be decided by the company. This is the record date, generally set about eight weeks before the actual meeting takes place.⁷ Once this date is set, the company must notify the shareholders listed in its share register and provide proxy materials. Once shareholders are informed, they may send back their marked proxy card so that votes can be tabulated and announced on the day of the general meeting.

What makes the process complex is that only a few economic owners of the shares are registered under their own names in the company books (approximately 15% of shares, on average in 2010, according to the SEC 2012), since nowadays shares are bought and sold through intermediaries, such as brokers. Other shareholders, which constitute a very large majority, are recorded under the “street name” and are called “beneficial” owners. The Depository Trust Corporation (DTC) keeps track of all the brokers that own shares in a company at any point in time. Figure A1 illustrates the U.S. system of custodial ownership. The DTC must promptly provide the issuer with a list of brokers when notified. The brokers may then provide a list of economic owners of the company’s shares (so-called beneficial owners), or they may act as intermediaries during the entire communication process, depending on whether the beneficial owner has opted to reveal its identity to the issuing company (the former owners are called nonobjecting beneficial owners (NOBOs) and the latter are called objecting beneficial owners (OBOs)).

The complexity of the process is caused by a huge amount of trading in listed shares together with a willingness to preserve the anonymity of brokers and shareowners. However, a system with so many intermediaries incurs huge costs to compiling lists of potential voters, organizing the communication of voting materials and, finally, tabulating the completed proxy cards sent by voters. In practice, a single entity, Broadridge (formerly, ADP), essentially has a monopoly on these tasks, which it performs in exchange for fees paid by issuing companies and any third parties willing to communicate with shareholders. This private company acts as a quasi-unique intermediary in charge of communicating materials to voters and tabulating their votes. Figure A2 illustrates how beneficial owners usually vote.

⁷ Our own calculations show that 50 days and 60 days correspond to the 10% and 90% percentiles of days between the record date and AGM.

1.2 Data

Since we contradict previous findings in the literature, it is important that we explain how our way of looking at the data leads to these new findings.

1.2.1 Voting results. The voting data come from ISS Voting Analytics. ISS Voting Analytics is particularly convenient because it allows for the computation of voter turnout rates and specifies the position that ISS took on each proposal as a proxy advisor. Both kinds of information will be useful in determining when vote management is most likely to happen. Our baseline sample includes all shareholder proposals addressing governance issues in that data set, that is, a total of 4,442 ballot items from 2003 to 2016, as seen in Table 1, panel A.

To judge whether a shareholder proposal has garnered a majority of votes, management may use a more demanding metric than that followed by shareholder representatives. In particular, management can treat abstentions or nonparticipating shares as de facto votes against the shareholder proposal. The reason is that the company's state of incorporation may suggest such a voting metric in its corporate code or that the firm's corporate charter specifies this way of counting votes. To identify whether management biases voting results in its favor, one must take into account the voting measure that managers use to determine their victory or defeat. This information is available from the ISS Voting Results data set until 2006 and from the ISS Voting Analytics database starting in 2003.

We also make use of a subset of the ISS data drawn from [Bach and Metzger \(2017\)](#). This sample includes the ten most supported proposal types over the period 1997–2011, where shareholder support is defined by the number of times a proposal type obtained a majority of votes “for” or “against.”⁸ The purpose of these data is twofold. First, we make use of early data to investigate the time series pattern of potential discontinuities in the vote distribution. Second, these data contain hand-collected information on the implementation of these shareholder proposals as well as information on the identity of the sponsors for the period between 1997 and 2011. Table 1, panel B, shows the corresponding time-series evidence.⁹

1.2.2 Other firm variables. We collect information on written materials sent to investors through SEC Form PX14A6G. We search the SEC Edgar database

⁸ This leaves us with the following proposal topics (in order of popularity): repeal classified board, eliminate or vote on poison pills, eliminate supermajority requirements, require majority vote for director elections, the right to call special meetings, the right to act by written consent, vote on golden parachutes, option expensing, say on pay, and separation between the CEO and the chair positions.

⁹ The main reason for higher passing rates in the [Bach and Metzger \(2017\)](#) data compared to the ISS data between 2003 and 2016 is the specific subsample of proposals considered in [Bach and Metzger \(2017\)](#), who focus on the ten most supported proposals.

Table 1
Shareholder proposals (ISS sample, 2003–2016)

A. Shareholder proposals, voting outcomes, and passing rates

	Year												Total		
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014		2015	2016
# Proposals	346	252	307	340	317	392	479	333	270	328	320	284	376	98	4,442
Avg. vote (%)	40	41	39	45	40	41	45	42	44	46	40	39	41	33	42
Passing rate (%)	38	37	31	36	30	28	35	35	34	38	26	23	29	15	32

B. Proposal types

Type of Proposals	Freq.	%	Vote share (%)	Passing rate (%)
Antitakeover related	721	16	16%	54
Directors related	1,978	45	61%	46
Executive compensation	1,049	24	84%	7
Maximize value	52	1	86%	6
Routine/business	566	13	98%	6
Other	76	2	100%	17
All	4,442			

C. Other characteristics

	Mean (%)	SD (%)	N
Vote share	41.70	22.81	4,442
Passing rate	31.97	46.64	4,442
Passing rate (next 1 year)	32.97	47.01	4,344
Passing rate (next 3 years)	34.64	47.59	3,684
Passing rate (next 5 years)	35.34	47.81	3,036
Participation	75.14	13.16	4,438
High participation	50.00	50.01	4,438
ISS support	82.54	19.27	3,946
High ISS support	49.09	50.00	3,946
Written material	10.58	30.76	4,442

Panel A shows the distribution of proposals, the average rates of support for proposals, and the passing rate over time for shareholder proposals using ISS data from 2003 to 2016. A proposal has *passed* if the share voting in favor of the proposal reaches 50% according to the voting rule in the corporate charter. Panel B shows the distribution, vote share, and passing rate for different types of proposals across all years. Panel C shows the summary statistics for other characteristics related to a shareholder proposal. Table A1 defines the variables. *Sources*. ISS (2003–2016) and SEC filings.

to determine whether there has been at least one PX14A6G filing before the annual meeting.

We obtain return data from CRSP. Abnormal returns on the day of the meeting are measured using Fama-French and momentum return factors.

1.2.3 CEO option package exercises. CEOs and other insiders often hold stock or stock options in their own companies. These ownership stakes allow insiders to directly vote on shareholder proposals themselves. While stockholders can directly vote on proposals, the owners of options need to exercise these options before the record date to obtain voting rights based on the underlying stocks. We test whether insiders in contested shareholder proposals are more likely to exercise their option packages to increase their voting rights. We follow [Fos and Jiang \(2015\)](#) in constructing data on the exercise of options. Information on options and their exercise comes from Thomson Reuters Insider Filings. We collect information on the record date from N-PX filings through SEC Edgar and details on option packages and their exercise from Thomson Insider Filings through WRDS. Internet Appendix Section 1 provides details on the construction of the sample and comparisons with [Fos and Jiang \(2015\)](#).

2. Is the Outcome of Close Shareholder Votes Random?

In this section, we provide evidence that close votes disproportionately favor management. To show this more formally, we rely on statistical identification, which starts from the assumption that voting results should follow a well-behaved distribution in the absence of options to reach a specific voting result.

2.1 A simple test of the randomness of close votes

Considering that U.S. public firms have several thousand shareholders at least, the central limit theorem predicts that if shareholders make their decisions independently from each other, the distribution of votes for shareholder proposals should follow a normal distribution across general meetings. Even when voters' decisions are correlated but the degree of voter correlation is itself independent of the final result, one should expect that the density of voting results follows a continuous function.

As [McCrary \(2008\)](#) shows analytically, the case in which an agent has the power to influence vote shares very accurately (making some of these votes perfectly correlated with each other) and where this agent has a specific interest in making sure that the vote share does not cross a specific threshold (here, 50%) will generate a very specific density of voting results with a large discontinuity precisely around the target threshold of 50%. This prediction leads to a simple statistical test of the predictability of close votes. It consists of estimating a polynomial fit of the density separately to the left and to the right of the 50% threshold and then measuring the distance between the two polynomial functions right at 50%. This test is now routinely conducted in any econometric

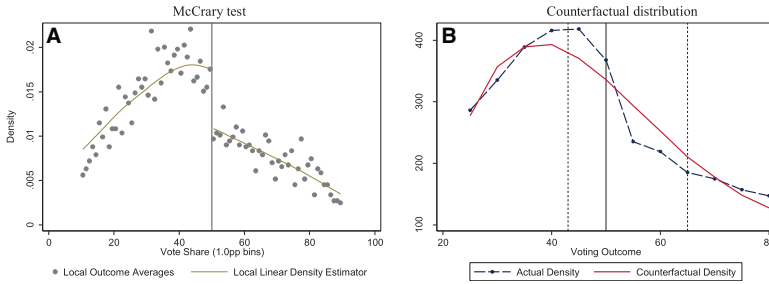


Figure 1
Distribution of voting shares around the approval thresholds

Panel A shows the results of the McCrary (2008) test for shareholder proposals between 2003 and 2016. Proposals are grouped into 1-percentage-point bins: proposals that passed by 0% to 1% are assigned to the bin to the right of the vertical line, and those that failed by similar margins are assigned to the bin to the left of that line. The local linear regression is estimated using the bandwidth suggested by McCrary (2008). Panel B shows an estimate of the counterfactual distribution in the absence of manipulation using the methodology proposed by Best and Kleven (2018). The omitted area is between 40% and 60%. The number of observations is 4,442. *Source:* ISS (2003–2016).

study involving a regression discontinuity design. The difference here is that we are expecting the presence of substantial predictability of voting outcomes and the rejection of the null hypothesis that voting results are locally random.

To get a sense of how the method works, we provide an introductory analysis of the density of voting results for shareholder proposals on governance topics from 2003 to 2016 in Figure 1, panel A. Each data point represents the frequency of proposals reaching between n and $n+1\%$ of the vote in their favor, where n is an integer ranging from 10 to 90. What one can readily see is that approximately 75% more shareholder proposals reach a level of support between 49% and 49.99% than reach a level of support between 50% and 50.99%. We also display the polynomial fit of the density to the left and right of the 50% threshold in this figure. At this threshold, the difference between the two polynomial functions represents a downward jump in the density of about -47% . The McCrary test provides a standard error for the size of the jump, which is equal to 7.9% in this example, meaning that the discontinuity is highly significant in both economic and statistical terms.^{10, 11}

¹⁰ To examine the robustness of this result, one can run placebo tests, which consist of checking whether the McCrary test detects voting manipulation in other parts of the density of voting results. We do so in Figure A6; this test very clearly shows that the only level of vote shares with significant manipulation is precisely the 50% threshold.

¹¹ The econometric literature dedicated to estimating discontinuities using nonparametric techniques has to our knowledge not provided a standard error estimator that accounts for the existence of correlated shocks to the vote share within the same meeting. We have addressed the issue of clustering in two ways, by running parametric regressions with clustered standard errors and by block bootstrapping. All these alternative cases generated standard errors that were smaller than the standard errors generated by the routine of McCrary (2008). For this reason, we decided to report the traditional McCrary standard errors throughout the paper.

2.2 Quantifying the number of proposals that should have passed

The methodology proposed by McCrary (2008) is meant to be a local estimation of the abnormality of voting results; that is, it will identify the degree to which the election outcome is predictable right around the 50% threshold, but not how many additional proposals are won by management relative to a scenario in which winning or losing the election has no benefit. For instance, looking at Figure 1, panel A, it is very clear that due to management incentives to make sure that proposals do not reach 50%, too many proposals are at 49% and too few are at 50, but there also too many proposals at 48%, 47%, and 46% and too few at 51%, 52%, and 53%, and so on. To document the economic importance of vote manipulation, one needs to add all the proposals below 50% that should have been above 50%, which may be called missing shareholder successes.

To estimate the total number of proposals that would have passed in the absence of manipulation by management, one needs to estimate not just a counterfactual density at the 50% threshold but a counterfactual distribution over a larger support of voting results. An active literature explores how to proceed with such an estimation in public finance.¹² This literature is concerned with estimating the number of taxpayers induced to move into lower income brackets when differences in the *average* tax rates from one bracket to another are discontinuous.¹³ This kind of tax schedule generates strong incentives to avoid earning incomes just above the threshold. As a result, taxpayers cluster in an excess mass just before tax rates change (the notch) but are underrepresented just after the notch. This idea easily translates to our case, where management generates an excess mass of voting results just before 50%, with too few proposals reaching levels of support just above 50%.

The method of estimating the counterfactual distribution of votes in the absence of manipulation relies on the assumption that the movement of votes due to vote management is restricted to a tight interval of voting results, which we will call the treated vote interval. In our case, managers may want to change the natural result of an election when it is slightly above 50%, but not when the proposal has a natural support base of 90% of the electorate; similarly, they may move voting results on a given proposal slightly below 50% but will not be interested in making sure the shareholder proposal obtains less than 20% of the vote. As a result, for a large part of the potential voting results, the possibility of manipulation should not affect the density of voting results. We will call these intervals of voting results the control vote intervals. One can then use the shape of the vote density in the control vote intervals to produce a polynomial fit of the

¹² See Best and Kleven (2018) for an example and Kleven (2016) for a review of this literature. We thank Michael Best for making his programs available to us.

¹³ Such features of tax systems are called tax notches. Instances in which *marginal* tax rates change discontinuously from one income bracket to another are called tax kinks, and they require slightly different methods in order to identify movers.

density and extrapolate the density of votes in the treated zone of voting results if there were no possibility of systematically influencing the voting results.¹⁴

This is what we do in Figure 1, panel B. As a baseline, we assume that the treated interval of voting result (i.e., the zone in between the dashed lines) lies between 40% and 60% of the total number of valid votes. Outside the dashed lines, we estimate a polynomial regression (of order 5) of the density of voting results; the resultant fitted density (i.e., the counterfactual density) is the solid curve, which we project in and outside the treatment zone. One can clearly see from the graph a negligible distance between the counterfactual and the true density outside the treated zone, which suggests that the polynomial fit produces little estimation error. On the contrary, within the treated zone, a large gap occurring between the two curves should be interpreted as the treatment effect of active vote management. According to this estimation, approximately 7% of all proposals in the 40% to 60% range changed from a victory for shareholder activists to a defeat due to active vote management by companies.

To make sense of the magnitudes of these numbers, one can compare the number of missing successful proposals with the total number of proposals that are narrowly rejected by, for example, a margin of less than 10%. Figure 1, panel B, implies that more than 11% of contested yet rejected proposals would have passed if elections had not been systematically biased in favor of management. These numbers likely understate the relevance of the voting patterns we document, considering that proposals failed by management are likely to be more important (see Section 3 for more details). Moreover, if management control over the voting results discourages shareholders from engaging and submitting valuable proposals, large ex ante effects can occur.

3. Is Management Influence on Voting Results Costly for Shareholders?

In this section, we provide evidence that the influence of management over the voting process that we document is costly for shareholders. First, we show that even a closely defeated proposal is unlikely to ever reach majority support. Second, we find that the types of proposals that are targeted by management are more important. These proposals are more likely to be supported by ISS and are more likely to be implemented if they reach majority support. Finally, we show that shareholder proposals that narrowly pass despite management actions are associated with positive abnormal stock returns.

3.1 Are narrowly defeated proposals eventually passed?

The systematic shifting of votes that we have documented would not be that costly in the end if these shareholder contests were repeated games in which

¹⁴ One refinement of this methodology consists of making sure that the counterfactual density integrates to one. Best and Kleven (2018) show that this provides only second-order improvements in the quality of the fit at the expense of the robustness of the results, which is why we do not implement this refinement here.

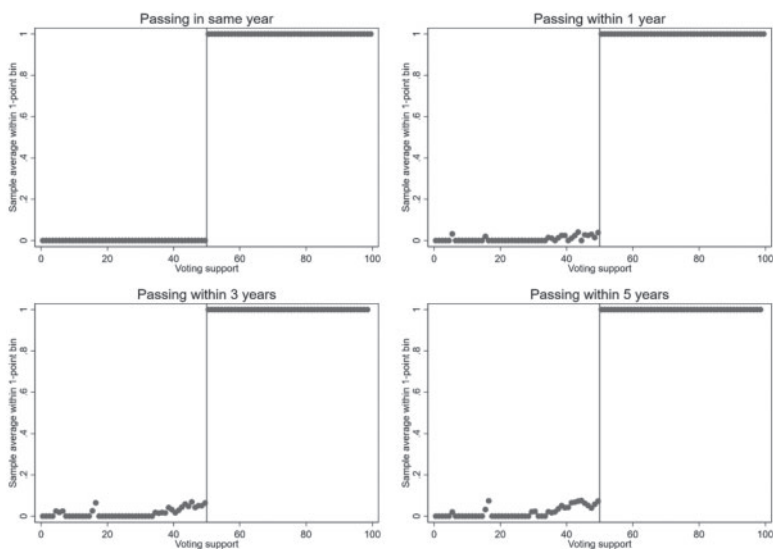


Figure 2
Future passing rate for proposals currently on the ballot

The figures show the RDD plots for the future passing rates of shareholder proposals based on voting support in year t . Passing in the same year or within 1, 3, and 5 years is a dummy that is equal to 1 when the proposal passes in the same year or when the same type of proposal passes within 1, 3, or 5 years at the same firm. Each bin corresponds to a 1-percentage-point-wide interval of the voting support distribution. Please note that the number of observations naturally shrinks as we extend the horizon into the future. The number of observations is 4,344 for passage in the same year, 3,968 for passage within 1 year, 3,364 for passage within 3 years, and 2,766 for passage within 5 years. *Source*. ISS (2003–2016).

shareholder proponents who are convinced that their reform is good for the firm resubmitted the reform proposal at successive general meetings until the proposal received majority support. Unless management has full power over the voting results, these repeated attempts would eventually lead to a victory for the activists.

An easy way to gauge this possibility is to run a regression discontinuity design taking as an outcome the probability that the content of the proposal that is being voted upon will pass (i.e., obtain 50% of the votes) either now or in the next 1, 3, or 5 years. Figure 2 shows that resubmitting a shareholder proposal does very little to make sure that a proposal that is narrowly rejected today will eventually pass in the future. In fact, a proposal that has been rejected with an extremely narrow margin today only has a 10% probability of winning in the next 5 years. This suggests that the manipulation of votes by management is a very effective way to resist shareholders' attempts to reform the company.

3.2 ISS support

In Table 2 and Figure A3, we differentiate proposal types depending on whether or not the proxy advisor, ISS, generally thinks the proposal is good for the company. More precisely, for each proposal type, we compute the frequency

Table 2
Discontinuity results

	log density	p-value	Sample	Obs.
<i>Baseline sample</i>	-0.471	.000	ISS VA (2003–2016)	4,442
<i>ISS support (high)</i>	-0.491	.000	ISS VA (2003–2016)	1,937
<i>ISS support (low)</i>	-0.111	.276	ISS VA (2003–2016)	1,930
<i>Avg. proposal implementation rate (high)</i>	-0.541	.000	ISS VR+SP (2003–2011)	1,147
<i>Avg. proposal implementation rate (low)</i>	-0.055	.374	ISS VR+SP (2003–2011)	812
<i>Sponsored by an individual</i>	-0.523	.002	ISS VR+SP (2003–2011)	617
<i>Sponsored by an institutional investor</i>	-0.132	.280	ISS VR+SP (2003–2011)	644

The table displays the log densities of the McCrary (2008) test for shareholder proposals between 2003 and 2016 for different subsamples. The local linear regression is estimated using the bandwidth suggested by McCrary (2008). The first row shows the results for our baseline sample. Rows 2 to 7 present the log densities of the sample splits corresponding to Figures 3 and 4. *Sources.* ISS Voting Analytics (2003–2016), ISS Voting Results plus ISS Shareholder Proposals (1997–2011), and DEF 14A filings (1997–2011).

with which ISS has advised shareholders to vote in favor of the proposal across firms and years. We consider that shareholder-value-friendly proposals are those whose approval frequency by ISS is higher than the median across proposal types.¹⁵ Rows 2 and 3 of Table 2 show very clearly that the outcome of close votes is predictable only when ISS considers the content of the proposal to reflect good governance practices. On the contrary, management does not engage in discernible manipulation when ISS does not consider the proposal to be a uniformly good idea. This result is key as it implies that management will fight a proposal to a greater extent when the proposal is likely to be beneficial to shareholder value. Another way to document the overrepresentation of good governance proposals among the missing mass of winning proposals is to run a balance test: if a particular variable affects the vote distribution around the 50% threshold, such as the quality of proposals like in this case, then such a variable should be significantly affected by passing the 50% threshold in a local linear regression. This approach has the advantages of delivering an estimate that is statistically testable and of considering the variable of interest over its entire support rather than just over a few groupings. We report the corresponding balancing tests (see Lee and Lemieux 2010) in Table 3. The first row shows that proposals with high levels of support from ISS are negatively associated with crossing the majority threshold.

3.3 Likelihood of implementation

In Tables 2 and 3 and Figure A4, we consider whether the decision to manage votes depends on whether the proposal is more likely to be implemented if passed, which we measure using the average probability of implementation of a proposal type conditional on the proposal receiving a majority of votes. The idea here is that some proposals can be disregarded by management even when they receive considerable support, either because the content is too vague or

¹⁵ An alternative would be to distinguish proposals based on the decision made by ISS for each specific firm. However, this could be an endogenous split, as management could initially try to convince ISS to take their side.

Table 3
Balance tests

	Coeff.	SE	<i>p</i> -value	<i>p</i> -value (robust)	N
Proposals: High ISS support (mean)	-0.046	0.020	0.02**	.028**	3,922
Proposals: High implementation rate	-0.101	0.070	0.149	.256	1,959
Participation	-0.029	0.013	0.025**	.046**	4,438
Written material	-0.094	0.034	0.005***	.008***	4,442
Sponsor: Individual	-0.193	0.099	0.052*	.038**	1,261

This table tests whether covariates are locally balanced on either side of the threshold (Lee and Lemieux 2010). We use the local polynomial regression discontinuity (RD) point estimators with robust bias-corrected confidence intervals from Calonico, Cattaneo, and Titiunik (2014). We report ordinary standard errors and corresponding *p*-values as well as robust ones. Table A1 defines the variables. *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$. Sources: ISS Voting Analytics (2003–2016), ISS Voting Results plus Shareholder Proposals (1997–2011), and DEF 14A filings (1997–2011).

because the law or corporate charter does not give management powers to act on the proposal. Rows 4 and 5 of Table 2 show very clearly and not surprisingly that management feels an urge to bias voting results in their favor only when they know a shareholder victory would effectively constrain their actions. Row 2 of Table 3 shows the corresponding balancing test. One robust conclusion from these tests is that the predictability of election outcomes in close contests is at least as strong for precise and implementable proposals as for vague ones. This reinforces the economic importance of our baseline result.

3.4 Stock market valuation

Another way of gauging the economic importance of a lack of activist victories in hotly contested votes is to measure the impact of passing proposals on the stock price of the firm. So far, the most convincing way to estimate a causal impact of shareholder proposals on value consists of using a regression discontinuity design (RDD) around the voting threshold that determines the passage of a shareholder proposal to improve governance (Cuñat, Giné, and Guadalupe 2012). Unfortunately, this is precisely the type of identification that the main result in this paper may invalidate.

Keeping in mind the existence of this bias, it may still be informative to learn about the size of the RDD estimates in our sample. We can use a technique developed by Gerard, Rothe, and Rokkanen (2016) to put some bounds on the causal effect of passing a shareholder proposal given our knowledge that a substantial portion of proposals are not randomly assigned around the passage threshold. Our main outcomes of interest are the likelihood of implementing the proposal in the 2 years after the meeting and the cumulative abnormal return (CAR) on the day of the AGM, which we estimate through either a market model or a Fama-French momentum model. Estimating the likelihood of implementation is a key first step because the voting results on shareholder proposals are not binding, and firms are not obliged to implement majority-supported proposals. As a result, the treatment effect on firm value should be scaled up by the inverse of the treatment effect on implementation.

Table 4
Estimated value of governance proposals in the presence of manipulation

	Prob. of impl. of a proposal (2003–2011)	CAR on meeting day (2003–2016)	
		Market model	FFM model
<i>A. Ignoring manipulation</i>			
Treatment estimate	0.281	0.35%	0.36%
95% CI on estimate	[0.165, 0.396]	[0.08%, 0.62%]	[0.07%, 0.66%]
<i>B. Accounting for manipulation</i>			
Treatment bounds	[0.174, 0.525]	[-0.56%, 1.26%]	[-0.61%, 1.36%]
95% CI on bounds	[0.02, 0.664]	[-0.96%, 1.58%]	[-1.03%, 1.73%]
#	2,328		4,409

Each row presents the treatment effect of passing a shareholder proposal at the threshold defined in the corporate charter. In panel A, we assume that proposals are as good as randomly assigned in the vicinity of the passage threshold, and we estimate the treatment effect with a local polynomial regression discontinuity (RD) estimators. In panel B, we account for the broken density of voting results and use the method suggested by Gerard, Rothe, and Rokkanen (2016) to determine bounds on the range of treatment effects that are compatible with the observed density gap and the point estimate shown in the first row. We report 95% confidence intervals for both the point estimate and the treatment interval. We consider two classes of outcomes: in column 1, the implementation of a proposal in the next 2 years; in columns 2 and 3, the cumulative abnormal return on the corporation's stock on the day of the meeting. Table A1 defines the variables. *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$. Sources: ISS (2003–2016), ISS Voting Results plus Shareholder Proposals (1997–2011), SEC filings, and CRSP.

The intuition for the methodology of Gerard, Rothe, and Rokkanen (2016) is as follows. First, the McCrary test helps us estimate the share of proposals just below the passage threshold that is not randomly assigned. In a second stage, one may then assume two polar opposite cases: these failed proposals generate the worst CAR values (conditional on being defeated) or they generate the best CAR values conditional on being defeated. For these extreme scenarios, one may use our knowledge of the distribution of CAR values just below and just above the passage threshold to estimate the corresponding treatment effect of passing the proposal.

Table 4 provides the results. Row 1 reports the traditional RDD estimates. It confirms the findings from Cuñat et al. (2012): proposals reaching a level of support just above 50% are more likely to be implemented (by approximately 28 percentage points after 2003) and generate a larger increase in stock prices than proposals with support just below 50% (by approximately 0.35%). Disregarding the possibility that voting results are not random, both estimates are statistically significant at the 5% level. However, the exercise suggested by Gerard, Rothe, and Rokkanen (2016), shown in rows 3 and 4, indicates that the manipulation bias-free treatment effects may be much smaller or larger. If manipulated proposals were the most value-destroying conditional on losing (e.g., if management exerts more effort to defeat proposals that the market ex ante expects to generate more value), then the bias-free treatment effect of passing a proposal on firm value would be negative (-0.56%). If instead manipulated proposals were the most value-creating conditional on losing (e.g., if management exerts more effort to defeat proposals that the market ex ante expects to generate less value), then the

bias-free treatment effect of a winning proposal would be large and positive (+1.26%).¹⁶

Unfortunately, we cannot be more conclusive about the true value loss or creation from proposals that are defeated by design rather than by chance because it is unclear which of the two polar scenarios suggested by [Gerard, Rothe, and Rokkanen \(2016\)](#) is more likely: management may exert more effort to defeat proposals that destroy more shareholder value or that protect them the most at the expense of shareholder value. Crucially, this shows the importance of running a sensitivity test when thinking about the causal impact of shareholder proposals in an RDD setup.

4. Which Actions Lead Close Shareholder Votes to Favor Management?

As discussed in Section 2.1, by the nature of its tasks, Broadridge knows the number of votes cast for each position on the proxy card in real time. However, contrary to the usual process in political elections, it can provide this information to some of its clients, often on an intra-daily basis, from the time the proxy materials are distributed to the day of the AGM. In theory, all parties sending proxy materials to shareowners through Broadridge are also eligible to access real-time information on the vote tally. This includes proponents of an alternative slate of directors¹⁷ and the sponsors of a shareholder proposal as soon as they try to communicate with shareholders either through official proxy filings or through exempt solicitations. An oft-stated reason for making real-time results available to issuers is that they must make sure that a quorum is reached at the AGM and that decision-making is not paralyzed by a lack of voter participation at the AGM.

Furthermore, Broadridge provides a list of the names and addresses of beneficial owners to the issuers and other third parties sending proxy materials, provided that those owners have not objected to having their identities communicated to the company (the so-called NOBOs, which represent approximately 25% of street name shareowners according to the [SEC 2004](#)). Given that issuing companies also have access to the contact details of shareholders directly registered in the company's share register, they know the identities of approximately 45% of shares eligible to vote, on average. This does not include more infrequent and noisy sources of information, such as 13d, 13f, and 13g SEC filings.

It is not enough for management to have privileged access to real-time information on voting results. To affect the results in a decisive way, companies must rely on shareholders who will vote against the proposal at their request.

¹⁶ In comparison, taking the probability of implementation as an outcome is unambiguous. Table 4 shows that the positive effect of proposal passage on implementation remains even though manipulated proposals are the least likely to be implemented.

¹⁷ As indicated in [Kahan and Rock \(2011\)](#).

This can be done either by making sure that shareholders who would not have participated send back their proxy cards completed in favor of management's views or by asking shareholders who would have voted for the proposal to overturn their decisions and vote against it.

4.1 Participation

Given that we have data on the turnout rate for every general meeting, we can analyze participation rates in contested votes. We classify votes on shareholder proposals into two groups: those for which the turnout rate is above the median and those for which the turnout rate is below it. The third row of Table 3 shows that voting manipulation only takes place where the turnout rate is above the median. Our preferred explanation is that high participation reflects efforts made by management to encourage friendly voters to participate or decisions made by company insiders to exercise stock options and increase their voting power just before the vote (in a similar fashion to what has been documented by Fos and Jiang 2015 for proxy contests). Another possible interpretation is that high turnout arises when the vote is of special importance and that this is precisely when management most wants to influence the voting results. The second interpretation is consistent with, for instance, Cvijanovic, Groen-Xu, and Zachariadis (2017), who use participation rates to estimate the importance of proposals as perceived by shareholders. Those explanations are clearly not contradictory. However, two pieces of evidence are mostly consistent with managers boosting participation in their favor. First, Lee and Souther (2017) show that retail investors are more likely to vote with management rather than against it. Second, as we show below, CEOs and other insiders are more likely to exercise their option packages *before* the record date to obtain additional voting rights. The actual voting process only starts once the proxy materials have been distributed *after* the record date.

4.2 Communication

How do managers reach out to (retail) investors? Anecdotal evidence indicates that proxy consultants help firms or activists to communicate with their shareholder base. Actions include the organization of meetings with individual investors, media actors and analysts, the organization of online and print campaigns in publications read by retail investors, and the building of microsites with detailed voting instructions, background information, and supportive press coverage. Although no systematic data are available on meetings or press campaigns, we collect information on written materials sent to investors through SEC Form PX14A6G. We search the SEC Edgar database to determine whether there has been at least one PX14A6G filing before the annual meeting. The fourth row in Table 3 reveals that the likelihood that written materials have been sent to shareholders is indeed associated with contested elections that are marginally won by management. The RDD estimate is 9.4%, which is a very

large effect of almost 100% in relative terms (the unconditional likelihood of sending written material is 10.6%).

4.3 Voting rights and option exercise by insiders

We can identify one group that is naturally expected to vote with management: CEOs and other insiders of companies targeted by shareholder proposals. We follow [Fos and Jiang \(2015\)](#), who show that CEOs increase their rates of exercising options when they face proxy contests. This allows them to strengthen their voting power when facing a challenge. Under strict assumptions (e.g., perfect markets), it can be theoretically shown that CEOs and other insiders should not exercise their options before maturity. However, under more realistic assumptions, insiders may want to exercise their options if they are sufficiently deep in the money (e.g., [Hall and Murphy 2002](#); [Sircar and Xiong 2007](#)). We use data on option holdings and exercises to estimate a baseline model of the likelihood of option exercise by CEOs and other insiders employing a large array of firm characteristics and time fixed effects. We then test whether the arrival of a shareholder meeting makes it more likely that insiders exercise their option rights to obtain additional voting rights. If managers expect a clear voting outcome, that is, a vote share far from the 50% threshold, the extra voting rights acquired by exercising the options are unlikely to impact the passing rate of a proposal. If, however, the voting outcome is expected to be close to the 50% threshold, the extra votes of insiders might indeed be decisive. For this reason, we conjecture that CEOs and other insiders are more likely to exercise their options when proposals are expected to be contested.

Table 5 reports the results of our analysis. The dependent variable is a dummy variable equal to 1 if the CEO or other insiders exercise at least 25% of a given option package in the month before the record date. The covariates are option package controls and standard firm controls as employed in [Fos and Jiang \(2015\)](#). Moreover, we include a set of four dummy variables related to the presence of the record date of an upcoming shareholder meeting in a given month. The first three dummies are nested: the “Month with record date of general shareholder meeting” dummy is equal to 1 when the record date of a general annual shareholder meeting falls in a given month; the “Month with record date of general shareholder meeting with shareholder proposal on program” dummy is equal to 1 when the record date of a general annual shareholder meeting with a corporate governance shareholder proposal on the program falls in a given month; and the “Month with record date of general shareholder meeting with contested corporate governance proposal” dummy is equal to 1 when the record date of a general annual shareholder meeting with an ex post contested (i.e., vote share between 45% and 55%) shareholder proposal falls in a given month. The last dummy, “Month with record date of special shareholder meeting,” is equal to 1 when the record date of a special annual shareholder meeting falls in a given month. This last dummy is not nested and

Table 5
Insider option exercises

	Exercise				Exercise and hold	
	(1)	(2)	(3)	(4)	(5)	(6)
Record date annual shareholder meeting	0.001*	0.002***	0.002***	0.002***	0.000	0.00028***
	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.00007)
Record date annual shareholder meeting with shareholder proposal	0.007***	0.006***	0.003**	0.002*	-0.000	0.00038*
	(0.002)	(0.002)	(0.001)	(0.001)	(0.000)	(0.00020)
Record date annual shareholder meeting with contested shareholder proposal	0.011**	0.013**	0.014***	0.015***	0.004**	0.003***
	(0.006)	(0.006)	(0.003)	(0.003)	(0.002)	(0.001)
Record date special shareholder meeting	0.010**	0.008*	0.005***	0.003	0.002	0.000
	(0.004)	(0.005)	(0.002)	(0.002)	(0.002)	(0.001)
Years to maturity		-0.008***		-0.007***	-0.002***	-0.001***
		(0.000)		(0.000)	(0.000)	(0.000)
Market cap (\$ mil)		0.000***		0.000	0.000	0.000
		(0.000)		(0.000)	(0.000)	(0.000)
BM		-0.001**		-0.000***	-0.000**	-0.000***
		(0.000)		(0.000)	(0.000)	(0.000)
Growth		-0.001		0.002***	0.000	0.000*
		(0.001)		(0.001)	(0.000)	(0.000)
Stock ret		0.002**		0.002***	0.000	0.000**
		(0.001)		(0.001)	(0.000)	(0.000)
Idiosyncratic volatility		-0.005**		-0.003***	-0.001*	-0.000
		(0.002)		(0.001)	(0.001)	(0.000)
Dividend yield		-0.002		-0.002	0.001	-0.001*
		(0.002)		(0.002)	(0.001)	(0.000)
Illiq (like in Fos 2015)		-0.000		0.000	0.000	-0.000
		(0.000)		(0.000)	(0.000)	(0.000)
Dividend record month		0.001		0.001***	0.000**	0.000**
		(0.000)		(0.000)	(0.000)	(0.000)
Earnings month		0.001***		0.001***	0.000**	0.000***
		(0.000)		(0.000)	(0.000)	(0.000)
New grant		0.009***		0.006***	0.002***	0.001***
		(0.001)		(0.000)	(0.000)	(0.000)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Person fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Sample	CEOs	CEOs	Non-CEOs	Non-CEOs	CEOs	Non-CEOs
# of option package months	980,375	789,347	11,553,327	9,293,874	789,347	9,293,874

This table shows the determinants of CEO and non-CEO option exercises. The results are presented at the option package-month level using fixed effects regressions. *p*-values are based on standard errors clustered at the firm level. Table A1 defines the variables. *** *p* < 0.01; ** *p* < 0.05; * *p* < 0.1.

serves as a benchmark the size of any potential effect. Our main variable of interest is the third dummy variable that is equal to 1 when the record date is affiliated with a shareholder meeting with an ex post contested proposal, that is, a proposal with voter support between 45% and 55%. Note that due to nesting, one needs to add up the coefficients of the first three dummies for comparison with average non-record-date months.

In our estimation, we exploit within-insider variation by including insider fixed effects in our tests. To account for serial correlation in the error terms, we cluster standard errors at the firm level. The likelihood that a CEO exercises a substantial part of an option package is 0.73% in an average month (the same likelihood found in Fos and Jiang 2015). This likelihood is 27% higher in a month with an annual shareholder meeting (without a shareholder proposal considered in our analysis). If the meeting has a shareholder proposal on the program, the likelihood of exercising an option package increases by 110% compared to a month without a meeting; if the shareholder proposal is contested (i.e., between 45% and 55% voter support), the likelihood of exercise is 288% higher (see column 2 of Table 5). To benchmark the magnitude, we look at special shareholder meetings. In months with record dates for special shareholder meetings, the likelihood of exercise increases by 110%. Columns 3 and 4 show consistent evidence for non-CEO insiders.

After exercising their options, insiders have the opportunity to immediately sell their shares, potentially before the record date that determines who is entitled to vote at the shareholder meeting. While insiders may sell their shares to shareholders who are known to be management friendly, we focus on cases in which insiders hold shares until after the record date as well. Columns (5) and (6) show the results corresponding to specifications (2) and (4), imposing the additional restriction that the insider does not sell stock between the exercise day and the record day. Taken together, these results support the hypothesis that CEOs strategically exercise their option packages to obtain additional voting rights prior to votes on contested shareholder proposals.

4.4 Countervailing activist campaigns

One last dimension that may influence whether or not managers can easily act upon the final voting outcome is the sophistication of the competing party, that is, the shareholder activist or group of shareholder activists who sponsored the proposal. For a subpopulation of shareholder proposals, we know the identity of sponsor. We distinguish proposals according to the type of proponent, that is, whether the sponsor of the proposal is an individual shareholder or an institutional investor (typically, a pension fund). These two types of sponsors are known to engage differently with the companies they wish to reform. Pension funds are more likely to have long-term relationships with companies; they often withdraw their proposals before the vote when their negotiations with companies yield a satisfying result. More importantly, they also have the resources to counteract any effort by management to affect voting outcomes. Consistent with these hypotheses, we find that close votes have unpredictable outcomes when the sponsor of a shareholder proposal is an institutional investor (see the last row of Table 3). This suggests either that these sophisticated shareholders engage in the same campaigning tactics as management or that management chooses not to campaign as aggressively when the activist has the means to oppose its campaign actions.

5. When Do Close Votes Favor Management and When Do They Not?

In this section, we document the lack of randomness in the outcome of close votes beyond shareholder-sponsored proposals and compare our findings to earlier research. We first show manipulation for a wide range of voting items, including SOP items and director elections. We then analyze the distribution of voting results for shareholder proposals using different data sources, scopes of items, voting rules, or time periods. These analyses will help us to compare our findings with previous research and help guide future research.

5.1 The distribution of voting results in alternative samples and voting items

Panel A of Table 6 and Figure A5 show the robustness of our baseline estimates of the log density gaps for different voting items and samples. The first row shows our baseline sample, which includes all shareholder proposals addressing governance issues between 2004 and 2016. As a robustness test of our previous test, we look at different placebo cutoffs around the 50% threshold, as defined in the corporate charter. In particular, we consider thresholds that previous research has suggested to be important (e.g., the 30% threshold of ISS for SOP votes, 15% of withhold votes for directors, and the 25% (now 20%) threshold proposed by Glass Lewis). The corresponding tests, however, reveal that vote manipulation only takes place at the official threshold of 50% (see Figure A6 for shareholder proposals).

Rows 2 and 3 of Table 6 show corresponding evidence for all types of shareholder proposals, a longer sample period and an alternative data source (Georgeson).¹⁸ Though a bit smaller, the density gap remains. The results are likely weaker because extending the time-series means adding observations from the period before 2003 for which we do not find much evidence of manipulation (see below). Row 4 shows the results for proposals considered in Bach and Metzger (2017), a sample for which we have information on implementation and the identity of the sponsor, which we already used in some tests.

Panel B of Table 6 and Figure 3 extend the analysis to SOP proposals, uncontested director elections,¹⁹ and management-sponsored proposals. We also find a large and significant drop in the voting density for these items. Please note that the drop is on the other side of the threshold as it is in the interest of management to obtain support for these voting items, in contrast to shareholder proposals. Documenting vote manipulation for SOP proposals and

¹⁸ Georgeson independently provides data on voting results in S&P 1500 companies taking place between January and July. This data set does not specify the passage threshold chosen by each company, so we impute it using the state of incorporation and the corresponding default threshold.

¹⁹ We do not analyze voting results in contested director elections, because a vote eventually takes place in few proxy contests: 146 cases from 2008 to 2016 in the Voting Analytics database (which undersampled smaller firms) and 503 cases from 1994 to 2012 in the comprehensive analysis by Fos (2017).

Table 6
Discontinuity results: robustness and external validity

A. Shareholder proposals (robustness)

Database	Items	Period	#	Voting rule	Average vote (%)	Contested proposals	Shareholder winning	Discontinuity
ISS Voting Analytics	Shareholder proposals	2004–2016	4,442	Corp. charter	41.7	27.87%	40.39%	–0.396
	All governance items					1,238	1,229	0.094
ISS Voting Analytics	Shareholder proposals	2000–2016	8,456	Corp. charter	31.5	18.71%	30.49%	–0.334
	All items					1,582	1,410	0.093
Georgeson	Shareholder proposals	1996–2016	5,180	Corp. charter	38.0	27.41%	37.61%	–0.196
						1,420	1,226	0.096
Bach & Metzger	Shareholder proposals	1997–2011	2,512	Corp. charter	49.3	40.92%	52.81%	–0.272
	Top 10					1,028	873	0.089

B. SOP, directors, and management proposals

Database	Items	Period	#	Voting rule	Average vote (%)	Contested proposals	Shareholder winning	Discontinuity
ISS Voting Analytics	Say-on-pay	2008–2016	18,816	Corp. charter	90.6%	3.22%	1.92%	0.441
						606	358	0.155
ISS Voting Analytics	Directors (uncontested)	2003–2016	250,850	Corp. charter	95.3%	0.89%	1.14%	0.233
						2233	502	0.083
ISS Voting Analytics	Management proposals	2000–2016	79,448	Corp. charter	91.5%	3.24%	1.68%	0.998
						2574	753	0.046

The table displays the log densities of the McCrary (2008) test for different types or proposals and subsamples. The local linear regression is estimated using the bandwidth suggested by McCrary (2008). Contested proposals refer to the fraction of proposals with a voting share between 40% and 60%. Shareholder winning refers to the fraction of annual meetings in which shareholders are winning at least one election of the corresponding type. Discontinuity reports the results of the McCrary test. *Sources*. ISS, Georgeson, and DEF 14A filings (1996–2016).

director elections shows the considerable influence management has over the corporate voting process. The analysis of SOP proposals and director elections has another purpose as well. As previously discussed, shareholder proposals can only be withdrawn by the sponsor of the proposal (not by management). For SOP proposals and director elections, however, withdrawal is not possible, yet we find that the outcome of contested votes on these issues is equally highly predictable.²⁰

To compare our results with Listokin (2008), we consider management-sponsored proposals. We confirm that his results for the 1997–2004 period extend into the 2000–2016 period; the analysis presented in row 3 of Table 6, panel B, shows a huge density gap around the 50% threshold, whereas the

²⁰ This last result is not surprising given that most withdrawals take place before the proxy statement is sent to shareholders, well before the AGM. Using data from ISS Voting Analytics and ISS Shareholder Proposals, we find that only 7% of withdrawn proposals are removed between the filing of the proxy statement and the meeting date. This represents less than 3% of all shareholder proposals for which a voting result is eventually declared. Since no-action letters to the SEC are sent by management long before shareholders can vote, they cannot affect the internal validity of our results either.

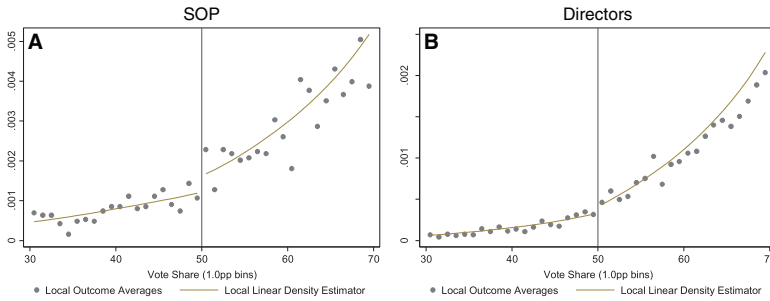


Figure 3
Say-on-pay votes and uncontested director elections

This figure shows the results of the McCrary (2008) test for say-on-pay votes and director elections between 2003 and 2016. Proposals are grouped into 1-percentage-point bins: proposals that passed by 0% to 1% are assigned to the bin to the right of the vertical line, and those that failed by similar margins are assigned to the bin to the left of that line. The local linear regression is estimated using the bandwidth suggested by McCrary (2008). There are 18,816 say-on-pay votes and 250,850 director elections. *Source.* ISS (2003-2016).

density below the threshold looks flat. However, our main findings are more relevant to corporate governance debates for two reasons. First, shareholder representatives and proxy advisors rarely use management proposals to voice opposition to management; instead, they use shareholder proposals to do so. According to our own data, since the time Listokin (2008) was published, of all elections (shareholder proposals, management proposals, SOP, and director elections) in which management lost a vote—in the sense that the final voting outcome contradicts its recommendation—only 21.5% correspond to a management proposal. Therefore, the manipulation of these votes has not yet been a cause for concern among shareholder activists. For the same reason, it was usually thought that votes on shareholder proposals were much harder to influence. Indeed, the same article by Listokin (2008) analyzed shareholder-sponsored proposals but did not find evidence of vote manipulation. Second, voters overwhelmingly adopt management proposals. The average (median) voter support for management proposals is 91.5% (97.7%). In more than 96% of cases, voter support is above 60%, and, in only very few cases, is the level of support low enough to make management willing to use aggressive campaigning tactics. Indeed, shareholder proposals represent a unique set of oft-contested items (approximately 28% of proposals), for which a large fraction of firm-years (over 40%) have at least one shareholder proposal win majority support. In contrast, in approximately 98% of AGMs, management wins *all* SOP votes, director elections, or management-sponsored proposals (see the “Shareholder winning” column of Table 6).

5.2 Subsamples and voting rules

In Table 7, we report McCrary tests for shareholders proposals for earlier sample periods and different voting rules. This will help us to compare our evidence with previous research.

Table 7
Discontinuity results: Pre-2003 period and voting rules

Database	Items	Period	#	Voting rule	Average vote (%)	Discontinuity
Bach Metzger	Shareholder proposals	1997–2002	1,659	Corp. charter	28.3	−0.123 0.178
ISS Voting Analytics	Shareholder proposals	2000–2016	8,462	F/(F+A)	32.42	−0.171 0.106

The table displays the log densities of the McCrary (2008) test for different types or proposals and subsamples. The local regression is estimated using the bandwidth suggested by McCrary (2008). Contested proposals refer to the fraction of proposals with a voting share between 40% and 60%. Shareholder winning refers to the fraction of annual meetings in which shareholders win at least one election. The voting metric used to calculate the vote share is based on the corporate charter in the first row. In rows 2 and 3, the vote share is based on votes for (F) and against (A) the proposal; that is, it is calculated as $F/(F+A)$. We consider all proposals in row 2 and investigate only a subsample of proposals for which the official voting rule; that is, the voting rule in the corporate charter is or is not this simple majority rule in rows 3 and 4. Discontinuity reports the results of the McCrary test. Sources: ISS (1997–2016).

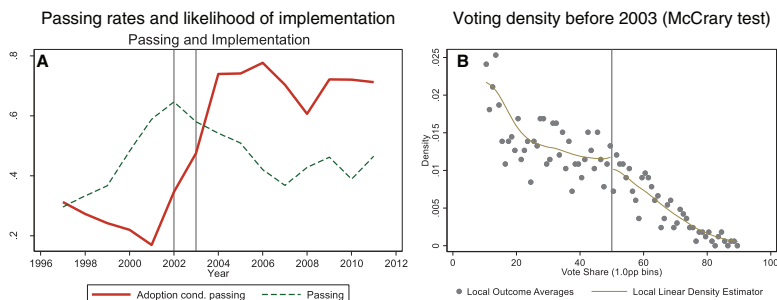


Figure 4
Passing rates, implementation rates, and voting density

Panel A shows the time trends of passing rates and, conditional on passing, implementation rates for shareholder proposals between 1997 and 2011. A proposal passes if the share voting in favor of the proposal reaches 50% according to the voting rule in the corporate charter. A proposal is considered implemented if management adopts the content of the proposal within 2 years of the shareholder meeting. The vertical lines around 2002–2003 in panel A illustrate the appearance of SOX and changes in the disclosure policies of registered investment companies. Panel B shows the density test results of the McCrary (2008) test for shareholder proposals between 1997 and 2003. Proposals are grouped into 1-percentage-point bins: proposals that passed by 0% to 1% are assigned to the bin to the right of the vertical line, and those that failed by similar margins are assigned to the bin to the left of that line. The local linear regression is estimated using the bandwidth suggested by McCrary (2008). The sample on implementation (panel A) contains 2,418 observations; the pre-2003 sample contains 1,659 observations. Sources: ISS (1997–2011) and DEF 14A filings (1997–2011).

The usage of shareholder proposals has grown since their modern inception in the late eighties. In fact, as already documented in Ertimur, Ferri, and Stubben (2010) and Bach and Metzger (2017), a massive shift in the importance given to shareholder proposals by management took place over 2003–2004. Panel A of Figure 4 shows that before 2003, majority-supported shareholder proposals were not implemented very often (in only 26% of cases). After 2003, the implementation rate jumps to approximately 70%.

While we are not aware of any legal change that forced management to implement majority-supported shareholder proposals after 2003, two events

overlap with this period. First, after the Enron scandal and the debate around SOX reforms, the reputational cost of not complying with shareholder votes may have gone up significantly. Under this new regime, votes on shareholder proposals have essentially become referenda, and as a result, the management teams of targeted companies may find it important to actively campaign against these proposals (Georgeson Associates 2003, 2004). In other words, when passing the majority threshold did not have important consequences for the implementation of shareholder proposals, management did not have strong incentives to intervene in the voting process. Second, since 2003, registered management investment companies have been required to disclose how they vote in proxies relating to portfolio securities they hold. These changes in disclosure policies may have led management investment companies to follow the outcomes of corporate elections more closely and to put pressure on companies that do not react to majority-supported voting outcomes.

For these two reasons, the intensity of manipulation of voting results at the 50% threshold might have been lower before 2003. The first row of Table 7 and panel B of Figure 4 show that, contrary to the post-2003 period, the density of vote shares around the 50% threshold is not discontinuous. The corresponding estimate of the jump in density according to the McCrary test is equal to -12%, with a standard error of 17.8%, which is both economically and statistically insignificant.

Another key dimension of the data that will affect the measurement of the density is the way vote shares are measured. Indeed, votes are aggregated according to a specific voting rule to decide whether or not a proposal has been approved. The voting rule determines whether certain options (e.g., abstentions) are not counted or counted as de facto votes against a proposal. The official voting rule is stated in the corporate charter of a firm. Some data sets (e.g., ISS Shareholder Proposals) have not consistently reported voting results according to the official voting rule. Instead, they reported voting results according to the simple majority rule ($F/[F+A]$). The second row of Table 7 shows that the gap is not significant at the 50% threshold using this simple majority rule ($F/[F+A]$).²¹

5.3 Comparison with the literature

The results of the previous section help us to compare our findings to those of previous research. Since the seminal work by Cuñat et al. (2012), a long and growing list of research contributions have used the uncertainty of voting results in close contests as a source of identification for, for example, corporate governance, corporate social responsibility (CSR) policies, or SOP.²² In contrast to our evidence, these papers have not documented a discontinuity

²¹ We provide a more detailed discussion and further subsample tests in Section 2 of the Internet Appendix.

²² See, for example, Chemmanur and Tian (2018), Cuñat et al. (2012, 2016), Ertimur, Ferri, and Stubben (2015), Flammer (2015), and Flammer and Bansal (2017).

in the vote distribution. Instead of commenting on specific papers, we provide a list of reasons previous research has reached different conclusions; in some cases, several reasons may apply.

First, some papers simply do not report density tests. These papers (1) are completely silent on the matter of a density test, (2) refer to earlier research that did not find a discontinuity, or (3) plot a histogram of voting results without providing a proper statistical test for detecting a discontinuity.

Second, in many papers, the majority of proposals sampled are from before 2003. As we have shown in Section 6.2, there is no evidence of vote manipulation before 2003.

Third, researchers have analyzed voting results that do not follow the official voting rule from the corporate charter. Some popular voting data sets only provide the ratio of votes cast for a proposal over the sum of votes cast either for or against it. This is the case particularly for the shareholder proposals segment of the ISS data set available on WRDS, the primary source of information for most of the existing papers in the governance literature. WRDS provides another segment of the ISS data, called “Voting Results,” which includes the appropriate voting metric for each proposal, but the data stop in 2006 and, for this reason, are usually disregarded. To the best of our knowledge, no previous papers use the voting analytics component of the ISS data set used here, even though it is currently the only source that measures voting support using the same metric outlined in the corporate charter of each firm.²³

5.4 Implications for future research

Given that regression discontinuity designs have been, and still are, a promising way to estimate the causal effects of corporate elections, the results in this paper suggest a few rules to follow in order to establish the causality of the results.

First, shareholder proposals submitted before 2003 should probably be excluded from the sample because prior to this date, management very rarely implemented proposals in response to majority support. As a result, the RDD threshold is a weak instrument in that subsample. Since discontinuities in the density of voting results were not observable prior to 2003, using data from this early period risks diminishing the power of McCrary tests. By combining the pre- and post-2003 periods, one may find a significant treatment effect and little manipulation even when, in fact, there is no causal effect of majority support

²³ This set of discrepancies helps us reconcile our results with [Cuiñat et al. \(2012\)](#), who mostly cover the period the pre-2003 (1997–2007) and employ the ISS data set available on WRDS, not adjusted for the fact that abstentions are very often counted as votes against the proposal. First, we redo the McCrary test on a subsample of their data including most of the G-index-related proposals and confirm the absence of manipulation: the McCrary test suggests the density is 8.4% *lower* just below the approval threshold, with a standard deviation of 15.8%. In a second step, we use ISS Voting Analytics and ISS Voting Results to account for abstentions when required by the corporate charter. We then find that the density of vote shares is 25.6% *higher* just below the approval threshold, but with a high standard error of 16.6%, which is more in line with our findings, but not statistically significant. We also find that this gap is entirely driven by the post-2003 period, because the density during the 1997–2002 period has virtually no gap.

for a proposal. At the very least, an important robustness check is to estimate the treatment effect and the McCrary test using only the post-2003 data.

Second, it is crucial to use a measure of voting support that is effectively followed by corporations when gauging the success of a proposal. Given that the RDD focuses on very small differences in voting results, choosing a voting metric that is different from the one triggering implementation by one or two percentage points may be enough to deliver drastically different results when running McCrary tests.

Third, the presence of manipulation in voting results does not imply that the RDD method should be completely disregarded. In this paper, we implement the refinements of the regression discontinuity design from [Gerard, Rothe, and Rokkanen \(2016\)](#) that allow for credibly causal, albeit less powerful, estimations, even in the presence of manipulation in voting results.

6. Conclusion

In this paper, we provide original evidence that the voting systems of U.S. corporations can be systematically and precisely influenced by management to obtain results in their favor. We show that this decisively prevents well-recognized, easy-to-implement proposals from winning a majority. This challenges the widely held view that corporate elections accurately aggregate the views of shareholders. In fact, our results suggest that corporate elections are a mix of citizen votes in which fundamental uncertainty arises about the preferences and the information sets of voters and the final result and congressional votes in which participants constantly bargain between each other in advance of the vote in such a way that the final result on a specific item becomes fully predictable. Existing theoretical research on voting shows that this kind of vote trading may be either welfare-improving or welfare-destroying depending on the structure of preferences and information held by voters ([Piketty 1994](#)). It would be fruitful for future theoretical research to investigate the positive and normative implications of a situation in which some voters act like Congressmen and others act like citizens.

Our research also suggests that a key contributor to the predictability of contested corporate elections is the disclosure of preliminary voting results to interested parties. Since 2013, corporate insiders have had exclusive access to this information, which can only contribute to the phenomenon. However, we find imbalances in the outcomes of close elections even before 2013, when shareholder proposal sponsors also had access to preliminary voting results. This indicates that shareholder activists did not have the means to act upon available voting information. The issue can be addressed in two ways. The first solution would be to bar proxy services firms from providing preliminary results. This would theoretically ensure that no party has enough information to determine the voting results as precisely as is the case today. In practice, it may be difficult to ensure that no such information is leaked, particularly to

corporations since they pay the proxy services firms. An alternative solution would be to make information about preliminary voting results as transparent as possible, at least far more than it has ever been, in order to make sure that activists can make use of this information as easily as corporate insiders. This solution has the advantage that it does not rely on the benevolence of proxy services firms. However, as the evidence prior to 2013 shows, this strategy only works if it seriously levels the playing field between corporations and activists in terms of campaigning resources.

Table A1
Definition of Variables

Variable name	Description	Database
<i>A. Voting outcomes and participation (main sample)</i>		
Vote share	Percentage of votes for proposal over denominator according to the bylaws of the company	ISS/Voting Analytics
Contested proposals	Dummy equal to 1 if the vote share is between 45% and 55%	ISS/Voting Analytics
Passing	Dummy for when a proposal reaches 50% of votes according to the management threshold; that is, if the vote share to management reaches 50%	ISS/Voting Analytics
Passing rate (next 1, 3, or 5 years)	Dummy for when a proposal reaches 50% of votes according to the management threshold in the current year or within 1, 3, or 5 years	ISS/Voting Analytics
Participation (high/low)	Dummy that is equal to 1 if participation (fraction of votes voted as of shares outstanding) is above the median participation	ISS/Voting Analytics
Participation rate	The fraction of all shares outstanding for which a vote has been submitted	ISS/Voting Analytics
ISS support (high/low)	Dummy that is equal to 1 if the average support for a proposal type is above or below the median support by ISS for all proposal types	ISS/Voting Analytics
ISS recommendation	The average support by ISS for each proposal type	ISS/Voting Analytics
Written material	Dummy that is equal to 1 if written material has been sent to shareholders	SEC Form PX14A6G
<i>B. Voting outcomes and proposal implementation (sample from Bach and Metzger 2017)</i>		
Variable name	Description	Database
Vote share	Percentage of votes for proposal over denominator according to the the bylaws of the company	ISS/Voting Results, ISS/Voting Analytics, Georgeson corporate governance reviews, and SEC filings in EDGAR
Passing	Dummy for when a proposal reaches 50% of votes according to the management threshold; that is, if the vote share to management reaches 50%	ISS/Voting Results, ISS/Voting Analytics, Georgeson corporate governance reviews, and SEC filings in EDGAR
Participation rate	The fraction of all shares outstanding for which a vote has been submitted	ISS/Voting Results, ISS/Voting Analytics, Georgeson corporate governance reviews, and SEC filings in EDGAR
Implementation	Dummy for implementation of the proposal by the management in the year after the shareholder meeting	SEC filings in EDGAR

(continued)

Table A1
Continued

Variable name	Description	Database
Implementation passing/avg. proposal implementation rate/always implementing majority supported proposals	Implementation rate of proposal conditional on passing management threshold. This rate is analyzed in the time-series (before SOX (before 2003) and after SOX (after 2003), excluding 2003) and in the cross-section (by proposal type or by firm).	ISS/Voting Results, ISS/Voting Analytics, Georgeson corporate governance reviews, and SEC filings in EDGAR
Sponsor	Classifies the sponsor of a proposal into Private Sponsors and Institutional Sponsors	ISS/Voting Results, ISS/Voting Analytics, Georgeson corporate governance reviews, and SEC filings in EDGAR
Variable name	Description	Database
<i>C. CEO Option holding and exercising</i>		
Record date annual shareholder meeting	Month containing the record date of regular annual shareholder meeting.	N-PX filings in EDGAR
Record date annual shareholder meeting with shareholder proposal	Month containing the record date of regular annual shareholder meeting with a shareholder proposal on the program	N-PX filings in EDGAR, ISS/Voting Analytics
Record date annual shareholder meeting with contested shareholder proposal	Month containing the record date of regular annual shareholder meeting with a shareholder proposal on the program, which is contested; that is, the vote share lies between 45% and 55%	N-PX filings in EDGAR, ISS/Voting Analytics
Record date special shareholder meeting	Month containing the record date of special shareholder meeting obtained from N-PX filings	N-PX filings in EDGAR
Exercise	A dummy that is equal to 1 if a CEO exercises at least 25% of her option package holdings in a given month	Thomson Insider
Exercise and hold	A dummy that is equal to 1 if a CEO exercises at least 25% of her option package holdings in a given month and does not sell more than 25% of the acquired shares within the next 3 months or before the next record date, whichever comes first	Thomson Insider

References

Bach, L., and D. Metzger. 2017. How do shareholder proposals create value? Working Paper, Stockholm School of Economics.

Best, M. C., and H. J. Kleven. 2018. Housing market responses to transaction taxes: Evidence from notches and stimulus in the UK. *Review of Economic Studies* 85:157–93.

Bhandari, T., P. Iliev, and J. Kalodimos. 2017. Governance changes through shareholder initiatives: The case of proxy access. Working Paper.

Calonico, S., M. Cattaneo, and R. Titiunik. 2014. Robust Nonparametric Confidence Intervals for Regression-Discontinuity Designs. *Econometrica* 82:2295–2326.

Chemmanur, T., and X. Tian. 2018. Do antitakeover provisions spur corporate innovation? A regression discontinuity analysis. *Journal of Financial and Quantitative Analysis* 53:1163–94.

Cheng, I., H. Hong, and K. Shue. 2013. Do managers do good with other people’s money? Working Paper, NBER.

Council of Institutional Investors. 2012. The OBO/NOBO distinction in beneficial ownership: Implications for shareholder communications and voting. Mimeo.

———. 2014. Correspondence between CII and SEC. http://www.cii.org/files/issues_and_advocacy/correspondence/2014/03_06_14_CII_letter_SEC_proxy_distributors.pdf

- . 2015. Correspondence between CII and SEC. http://www.cii.org/files/issues_and_advocacy/correspondence/2015/5-26-15%20CII%20Letter%20Regarding%20Proxy%20Distributors%20Broadridge%20Preliminary%20Voting%20docx.pdf
- Cox, J., F. Ferri, C. Honigsberg, and R. Thomas. 2016. Quieting the shareholders' voice: Empirical evidence of pervasive bundling in proxy solicitations. *Southern California Law Review* 89:1179–242.
- Cuñat, V., M. Giné, and M. Guadalupe. 2012. The vote is cast: The effect of corporate governance on shareholder value. *Journal of Finance* 67:1943–77.
- . 2013. Corporate governance and value: Evidence from 'close calls' on shareholder governance proposals. *Journal of Applied Corporate Finance* 25:44–54.
- . 2016. Say pays! Shareholder voice and firm performance. *Review of Finance* 20:1799–834.
- Craig, S., and J. Silver-Greenberg. 2013. Shareholders denied access to JPMorgan vote results. *New York Times*, May 13. <http://dealbook.nytimes.com/2013/05/15/jpmorgan-voters-are-denied-access-to-results>
- Cvijanovic, D., A. Dasgupta, and K. E. Zachariadis. 2016. Ties that bind: How business connections affect mutual fund activism. *Journal of Finance* 71: 2933–66.
- Cvijanovic, D., M. Groen-Xu, and K. E. Zachariadis. 2017. Free-riders and underdogs: Participation in corporate voting. Working Paper.
- Ertimur, Y., F. Ferri, and D. Oesch. 2015. Does the director election system matter? Evidence from majority voting. *Review of Accounting Studies* 20:1–41.
- Ertimur, Y., F. Ferri, and S. Stubben. 2010. Board of directors' responsiveness to shareholders: Evidence from shareholder proposals. *Journal of Corporate Finance* 16:53–72.
- Ferri, F., and D. Oesch. 2016. Management influence on investors: Evidence from shareholder votes on the frequency of say on pay. *Contemporary Account Research* 33:1337–74.
- Flammer, C. 2015. Does corporate social responsibility lead to superior financial performance? A regression discontinuity approach. *Management Science* 61:2549–68.
- Flammer, C., and P. Bansal. 2017. Does a long-term orientation create value? Evidence from a regression discontinuity. *Strategic Management Journal* 38:1827–47.
- Fos, V. 2017. The disciplinary effects of proxy contests. *Management Science* 63:655–71.
- Fos, V., and W. Jiang. 2015. Out-of-the-money CEOs: Private control premium and option exercises. *Review of Financial Studies* 29:1549–85.
- Gerard, F., M. Rokkanen, and C. Rothe. 2016. Identification and inference in regression discontinuity designs with a manipulated running variable. Working Paper.
- Georgeson Associates. 2003. Annual report on corporate governance.
- . 2004. Annual report on corporate governance.
- Hall, B. J., and K. J. Murphy. 2002. Stock options for undiversified executives. *Journal of Accounting and Economics* 33:3–42.
- Iliev, P., and M. Lowry. 2015. Are mutual funds active voters? *Review of Financial Studies* 28:446–85.
- Kahan, M., and E. Rock. 2011. The hanging Chads of corporate voting. *Georgetown Law Journal* 96:1227.
- . 2011. The insignificance of proxy access. *Virginia Law Review* 97:1347–434.
- Kleven, H. 2016. Bunching. *Annual Review of Economics* 8:435–64.
- Lee, D. S., and T. Lemieux. 2010. Regression discontinuity designs in economics. *Journal of Economic Literature* 48:281–355.

- Lee, C., and M. Souther. 2017. Managerial reliance on the retail shareholder vote: Evidence from proxy delivery methods. *Oxford Business Law Blog*, June 13. <https://www.law.ox.ac.uk/business-law-blog/blog/2017/06/managerial-reliance-retail-shareholder-vote-evidence-proxy-delivery>
- Levit, D., and N. Malenko. 2011. Nonbinding voting for shareholder proposals. *Journal of Finance* 66:1579–614.
- Listokin, Y. 2008. Management always wins the close ones. *American Law and Economics Review* 10:159–84.
- Malenko, A., and N. Malenko. 2017. Proxy advisory firms: The economics of selling information to voters. Working Paper.
- Malenko, N., and Y. Shen. 2015. The role of proxy advisory firms: Evidence from a regression-discontinuity design. *Review of Financial Studies* 29:3394–427.
- Matvos, G., and M. Ostrovsky. 2010. Heterogeneity and peer effects in mutual fund proxy voting. *Journal of Financial Economics* 98:90–112.
- Matsusaka, J. G., O. Ozbas, and I. Yi. 2018. Can shareholder proposals hurt shareholders? Evidence from SEC no-action letter decisions. Working Paper, Marshall School of Business.
- McCrary, J. 2008. Manipulation of the running variable in the regression discontinuity design: A density test. *Journal of Econometrics* 142:698–714.
- New York Stock Exchange. 2006. Report and recommendations of the Proxy Working Group to the New York Stock Exchange. Mimeo.
- Piketty, T. 1994. Information aggregation through voting and vote-trading. Working Paper, MIT.
- Popadak, J. 2013. A corporate culture channel: How increased shareholder governance reduces firm value. Working Paper, Wharton.
- Securities and Exchange Commission. 2012. Report on Authority to Enforce Exchange Act Rule 12g5-1 and Subsection (b)(3). Mimeo.
- . 2004. Request for rulemaking concerning shareholder communications. Mimeo.
- . 2010. Concept release on the U.S. proxy system. Mimeo.
- Sircar, R., and W. Xiong. 2007. A general framework for evaluating executive stock options. *Journal of Economic Dynamics and Control* 31:2317–49.
- Soltes, E. F., S. Srinivasan, and R. Vijayaraghavan. 2017. What else do shareholders want? Shareholder proposals contested by firm management. Working Paper, Harvard Business School.