https://doi.org/10.1016/j.jcorpfin.2021.102014

The Effect of Shareholder Activism on Earnings Management: Evidence from Shareholder Proposals

Jeffrey Ng
School of Accounting and Finance, The Hong Kong Polytechnic University
tee-yong-jeffrey.ng@polyu.edu.hk

Hong Wu
School of Economics, Fudan University
hongwu@fudan.edu.cn

Weihuan Zhai
School of Accounting and Finance, The Hong Kong Polytechnic University
18070076r@connect.polyu.hk

Jing Zhao*
School of Accounting and Finance, The Hong Kong Polytechnic University
jingzhao@polyu.edu.hk

May 2021

Abstract

We find that in general, both accrual-based and real earnings management decrease after the passage of shareholder-sponsored governance proposals. However, when accounting for the type of proposal, we observe significant heterogeneity in the effects on earnings management. Specifically, proposals focused on changing the governance structure (e.g., board independence) lead to reductions in both types of earnings management, whereas proposals specifically targeted at improving financial reporting quality lead to decreased accrual-based earnings management but increased real earnings management. The results suggest that constraints on accrual-based earnings management induce a shift toward real earnings management. Our paper indicates that the nature of the shareholder proposal has a significant impact on shareholder intervention.

JEL: M41

Keywords: shareholder activism, shareholder proposals, accrual-based earnings management, real activities manipulation

---

We appreciate the helpful comments and suggestions from Stephen Taylor, Gary Biddle, Santosh Ramalingegowda, Feng Chen, Samir Trabelsi, Feng Tian, Shivaram Rajgopal, Qiang Cheng, as well as conference participants at the UTS Summer Accounting Conference, the Asian Financial Association Annual Meeting, the China International Conference of Finance, the AAA Annual Meeting, and the Financial Accounting and Reporting Section Midyear Meeting and seminar participants at The Hong Kong Polytechnic University and Hong Kong Baptist University. All errors are our own.

* Corresponding author

1. Introduction

In recent years, the prevalence of shareholder activism has increased as shareholders seek to improve corporate governance and enhance firm performance (Pound, 1992; Black, 1992).[1] Of the many forms of shareholder activism, submission of shareholder proposals is the least costly and most common way to improve corporate governance (Gillian and Starks, 2000; Iliev et al., 2015). These proposals often focus on governance practices or policies, which allow shareholders to influence firms' governance choices and performance (Appel, Gormley, and Keim, 2016).

Although shareholder proposals are not binding, third parties such as the Council of Institutional Investors can exert external pressure if managers refuse to implement a proposal, particularly if it is passed with a majority of votes.[2] This institutional impact also appears in research showing that shareholder proposals are associated with small positive valuation effects, a better long-run performance, and less earnings management (Thomas and Cotter, 2007; Guercio, Seery, and Woidtke, 2008; Renneboog and Szilagyi, 2011; Cuñat, Giné, and Guadalupe, 2012, 2016; Fan, Radhakrishnan, and Zhang, 2020).

Depending on the nature of proposed actions, shareholder proposals may have distinct effects on managerial incentives and constraints and thereby on corporate decisions. However, evidence on the differential effects of various shareholder proposals is limited. Our paper thus investigates this question by exploring the unique context of shareholder-sponsored governance proposals (hereafter, shareholder proposals) that focus on various aspects of firm management. Specifically,

[1] Shareholders have a financial interest in participating in firms' strategic management. As such, they contribute to a well-functioning governance system by preventing value-destroying activities by managers (Jensen, 1993; Armstrong, Guay, and Weber, 2010). However, shareholders also can impose performance and career pressures on corporate managers, which can promote strategic firm behaviors such as withholding bad news and increasing earnings management and tax avoidance (Cheng et al., 2012; Khurana, Li, and Wang, 2018).

[2] When managers refuse to implement a majority-supported proposal, the company often is subject to negative publicity from shareholder organizations, which undermines investor confidence and triggers activist campaigns (Bach and Metzger, 2017).

we explore different types of shareholder proposals to test how various governance changes triggered by majority shareholder votes affect earnings management.

Research documents that earnings management, which is often attributed to agency conflicts, negatively affects a firm's information environment (e.g., Healy, 1985; Schipper, 1989; Graham, Harvey, and Rajgopal, 2005; Armstrong et al., 2010). Previous papers show that better corporate governance is associated with less accrual-based earnings management (Xie, Davison, and Da Dalt, 2003). However, earnings management can take many forms. For example, recent papers examine a subtle yet costly form of earnings management, namely real management activities manipulation, which includes changing expenses related to firms' business activities, such as R&D and sales. The consequences if the manipulation is discovered can be economically costly to the firm (Cohen, Dey, and Lys, 2008; Cheng, Lee, and Shevlin, 2016).[3]

Ideally, a well-intended proposal reduces agency conflicts and constrains managers' opportunistic behaviors, such as accruals and real earnings management. However, different policy proposals may alter managers' incentives and constraints in different ways, which in turn can affect whether and how managers manipulate earnings. On the one hand, improvements in corporate governance triggered by shareholder proposals may better discipline management. We follow Gompers, Ishii, and Metrick (2003) and Cuñat et al. (2012) to identify governance structure proposals containing provisions associated with an increase in the G-index. For example, a proposal intended to separate the roles of the CEO and chairperson may strengthen board monitoring and enhance the board's capacity to detect managers' opportunistic behavior, which limits managers' discretionary power to manipulate earnings. On the other hand, a proposal that constrains a

[3] Using data from a survey of top executives, Graham et al. (2005) provide evidence that managers prefer real earnings management activities over accrual-based earnings management because the former are less likely to be scrutinized by auditors and regulators and are thus less likely to be detected.

particular form of earnings management might induce managers to pursue an alternative method. For example, a shareholder proposal targeting financial reporting aims to inhibit accrual-based earnings management. However, to the extent that the pressure to meet earnings targets does not change, managers may strategically shift towards real earnings management, which is less detectible but more costly to shareholders. Prior literature documents this substitution effect between accrual-based and real earnings management (Cohen and Zarowin, 2010; Zang, 2012; Chan et al., 2015).

Shareholder proposals also may create performance-driven myopia that encourages managers' opportunistic behavior. In particular, certain types of compensation proposals, such as those that increase pay-for-performance sensitivity, may reinforce a CEO's incentive to achieve better short-term performance by manipulating earnings upward (Bergstresser and Philippon, 2006; Burns and Kedia, 2006; Sun et al., 2013). In this case, managers may engage more in earnings management.

In this paper, we examine all shareholder-sponsored governance proposals for firms in the S&P 1500 and an additional 500 widely-held firms from 1997 to 2014.[4] To address potential endogeneity concerns, we follow Cellini, Ferreira, and Rothstein (2010) and Cuñat et al. (2012) and adopt a dynamic regression discontinuity design (RDD). This approach compares earnings management between firms with proposals that either pass or fail by a small margin. Near the passing threshold, a small increase in the vote share leads to a discontinuity of change in the probability of implementing a proposal and thus a discontinuity in the effectiveness of the shareholder intervention (Ferri and Sandino, 2009; Ertimur, Ferri, and Oesch, 2013; Bach and Metzger, 2017).

Our results show that both accrual-based and real earnings management decrease after the passage of shareholder proposals, indicating that these proposals lead to less opportunistic behavior

[4] We exclude proposals intended to improve corporate social responsibility because the link between it and earnings management remains unclear.

that manipulates earnings upward. On average, the monitoring effect of the shareholder proposal dominates. Our results are robust to various measures of accrual-based and real earnings management. The likelihood of just meeting or beating the analyst forecasts, which is an alternative indicator of less opportunistic financial reporting, is also lower.

We further explore the heterogeneous effects of shareholder proposals. Specifically, we classify proposals into three types, based on what they intend to change: (board-related) governance structure, financial reporting, and compensation. Proposals intended to change a firm's governance structure often aim to strengthen the board and shareholder monitoring. We show that these proposals reduce both accrual-based and real earnings management, suggesting that they constrain managers' overall ability to behave opportunistically.

Financial reporting proposals include those intended to improve auditor independence or establish clawback provisions (i.e., authorizing the board to recoup compensation paid to executives under circumstances such as misstated financial reports). For these proposals, accrual-based earnings management declines, but real earnings management increases. As Cohen et al. (2008) and Zang (2012) show, strong auditor monitoring inhibits managers from bolstering accounting numbers via discretionary accruals. A clawback provision similarly discourages accruals management (Chan et al., 2015). Consequently, managers who feel pressured to boost earnings numbers may switch to real activities manipulation. Our research shows that financial reporting proposals have the (unintended) effect of encouraging real activities manipulation.

Finally, we find that compensation proposals are insignificantly related to earnings management, perhaps because these proposals can increase or decrease managerial incentives for doing so. For example, proposals linking CEO pay to performance incentivize managers to achieve higher

earnings through opportunistic behavior, whereas proposals that cap CEO pay may reduce managers' incentives to boost earnings numbers.[5]

We make several contributions to the literature. First, our study offers new insights into the link between shareholder activism and earnings management.[6] By focusing on shareholder proposals with different goals, as opposed to the presence of institutional investors, we can examine the differential effects of shareholder interventions. Bushee (1998) documents that firms are less likely to cut R&D when institutional ownership is high, indicating that institutional investors typically serve a monitoring role that reduces myopic behavior. Alternatively, Khurana et al. (2018) show that hedge fund activists who acquire a large position in a firm and actively sit on the board impose strong pressure on managers, who then are more likely to report upward-biased earnings. These findings suggest that different forms of shareholder activism may have different effects on earnings management. We complement these studies and show that even within the same form of shareholder activism (i.e., voting for shareholder proposals), the effects on earnings management may differ. Whether shareholder proposals effectively constrain opportunistic managerial behavior depends on how the proposal alters managerial constraints and incentives.

Our paper highlights the importance of understanding how shareholder proposals, depending on their aim, have differential effects on earnings management outcomes. Thus, in examining the effects of shareholders on firm behavior, it is important to consider both the presence of shareholder interventions and their specific direction and focus. Finally, our findings have important policy implications for shareholders and policymakers. Proposals about specific firm practices seem to be

[5] In untabulated analyses, we find that pay-for-performance proposals increase earnings management.

[6] The research into the effects of shareholder activism on managerial behavior and firm performance produces mixed evidence (Morck et al., 1988; Byrd and Hickman, 1992; Brickley et al., 1994; Yermack, 1996; Core et al., 1999; Klein, 2002; Gompers et al., 2003). More recent studies show that shareholder proposals are associated with small positive valuation effects and a better long-run performance (Thomas and Cotter, 2007; Renneboog and Szilagyi, 2011; Guercio et al., 2008). Nonetheless, studying the various forms of shareholder activism is plagued by inherent measurement errors and correlated omitted variable problems (Larcker, Richardson, and Tuna, 2007).

less effective at constraining earnings management than those aimed at improving corporate governance in general. Moreover, managers may respond to shareholders' attempts to improve corporate governance in ways that lead to unexpected outcomes, such as switching from one form of earnings management to another.

Our paper is closely related to those that employ a dynamic RDD to uncover the causal effects of shareholder proposals. Using this methodology, previous papers show that the passage of shareholder proposals is associated with improved valuation effects, long-run performance, innovation, and information production (Cuñat et al., 2012, 2016; Flammer, 2015; Chemmanur and Tian, 2018; Lin, Wei, and Xie, 2020). Fan, Radhakrishnan, and Zhang (2020) show that shareholder proposals reduce discretionary accruals and the propensity to just meet or beat analysts' forecasts by one cent. We use a similar research design to complement and extend this literature by exploring the differential effects of shareholder proposals on accrual-based and real earnings management.

The remainder of this study is organized as follows. Section 2 discusses the institutional background and empirical design. We present our results in Sections 3 and conclude in Section 4.

2. Institutional Background and Research Design

2.1 Institutional Background of Shareholder Proposals

Our empirical analyses of the effects of shareholder votes on earnings management rely heavily on the features of shareholder voting in the United States. In this subsection, we briefly describe the shareholder voting process. More details on shareholder-sponsored governance proposals can be found in Iliev et al. (2015) and Cuñat et al. (2012). During annual general meetings, shareholders may be asked to vote on many different matters, such as electing directors or voting on specific proposals sponsored either by management or a shareholder.[7] According to SEC Rule 14a-8, any

[7] For example, a proposal by the Central Laborers' Pension attempted to improve the board independence of Moody's Corporation (Moody's Corporation Shareholder Meeting, 2009): "Stockholders of Moody's Corporation, ("Moody's"

shareholder with a company holding worth at least $2,000 or 1% of the outstanding shares can submit a proposal. Shareholder-sponsored governance proposals reveal shareholder interventions directly. Moreover, unlike management-sponsored proposals, shareholder-sponsored proposals cannot be strategically changed by the firm's management nor is their vote distribution affected by selective withdrawal around the majority threshold (Listokin, 2008).

However, shareholder-sponsored proposals are not usually binding for management. Even if the vote percentage of a shareholder proposal is over the approval threshold set by the corporate charter, managers and boards of directors still have discretion over whether to implement it. Nevertheless, a non-binding proposal may exert monitoring power over the firm. For example, in 2004, the Council of Institutional Investors represented over 140 pension funds, including many of the largest, to push for implementation based on a consistent approval rate across firms (e.g., voting support for a proposal when the proposal has a plurality of support).[8] Managers receive significant pressure from third parties and shareholders in response to these proposals and hence they are more likely to implement them. Ertimur, Ferri, and Stubben (2010) show that 31.1% of shareholder proposals that pass are implemented, compared to only 3.2% that do not pass. According to Cuñat

or "the Company") ask the board of directors to adopt a policy that, whenever possible, the board's chairman should be an independent director who has not previously served as an executive officer of Moody's. The policy should be implemented so as not to violate any contractual obligation. The policy should also specify (a) how to select a new independent chairman if a current chairman ceases to be independent during the time between annual meetings of shareholders; and (b) that compliance with the policy is excused if no independent director is available and willing to serve as chairman."

[8] Each year, the Council of Institutional Investors provides its member institutions with a list of proposals that garnered this level of support. Non-implementation of these proposals may be viewed as a breach of governance policies, which can have significant consequences if a firm's management and board of directors have to justify their inaction. Council members use non-implementation as a forum for discussing voting decisions related to the firms in which they hold a stake. Because council policies guide these discussions, any perceived breach is likely to trigger sanctions in the form of council members' withdrawing support for the firm (Anand and Givant Star, 1994). For example, when a company does not implement a supported proposal, the council asks the CEO to explain why, and the resulting correspondence is made public to all members of the shareholder organization. Shareholder activists also may contact members of the firm's governance committee, who can decide to reform the corporate charter.

et al. (2012), S&P 1500 firms filed 3,984 shareholder proposals between 1997 and 2007, and the trend increased over the period.

As an example, consider a firm with a December fiscal year end. For fiscal 2012 (i.e., the fiscal year ending on December 31, 2012), the firm likely filed its proxy statement in March or April of 2013 and had its annual meeting in May or June of 2013. Facing monitoring pressure, managers implemented changes that were proposed at the annual meeting, so any effects on earnings management would start appearing in financial reports at the end of 2013. To illustrate the timing of the effects, we would investigate the earnings management measures in the meeting year (i.e., 2013) and the four years that follow it (i.e., 2014, 2015, 2016, and 2017).

2.2 Using a Regression Discontinuity Design to Examine the Effects of Shareholder Votes

Following Cuñat et al. (2012), we employ a dynamic RDD to identify the effect of shareholder proposals on earnings management. This approach mitigates the endogeneity concerns and Cuñat et al. (2012, 2016) and Flammer (2015) use it to investigate stock market reactions to shareholder proposals. Lin et al. (2020) show that proposal passage in general increases voluntary disclosure. Our paper also is closely related to Chemmanur and Tian (2018), who show that firms engage more in innovation activities after passing proposals to establish antitakeover provisions. We add to their work by showing that shareholder proposals in general reduce real earnings management, including R&D investment and other real activities manipulation. We also complement prior research by examining the effects of various types of shareholder proposals on earnings management.

The RDD compares the earnings management of firms with proposals that pass by a small margin with those with proposals that fail by a similar margin. From the RDD perspective, whether a proposal passes or fails by a close margin can be treated as random. For example, assuming a passing threshold of 50%, it cannot be predicted ex-ante whether a proposal will pass with 51% of

the vote or fail at 49%. This approach makes two crucial identification assumptions. First, the respective distribution patterns for earnings management and vote expectations before the shareholder meeting are similar on both sides of the majority threshold. Second, the probability that a narrow-margin proposal will be implemented noticeably increases after its passage, creating a discontinuity. The effect of shareholder proposals can be inferred from the difference in earnings management between firms with those proposals both narrowly pass and narrowly fail, in other words, at the discontinuity.[9] Note that this analysis can be generalized to other discontinuity treatments that are not based on votes, as we discuss in Appendix B.

Suppose that the shareholders of firm *i* vote on a proposal at year *t* that receives a total vote share (percentage of votes in favor) of $v_{i,t}$. Following the standard RDD approach, we employ polynomial terms in the vote share to control for the underlying relationship between any variables that are continuously affected by the vote share $v_{i,t}$ and earnings management $y_{i,t}$. The discontinuous effects at the threshold are captured by β. Allowing for a different polynomial for observations on the left-hand $P_l(v_{i,t}, \gamma_{l,\tau})$ and right-hand sides of the threshold $P_r(v_{i,t}, \gamma_{r,\tau})$ gives

$$y_{i,t} = PASS_{i,t}\beta + P_l(v_{i,t}, \gamma_{l,\tau}) + P_r(v_{i,t}, \gamma_{r,\tau}) + \varepsilon_{i,t+\tau}. \quad (1)$$

When trying to implement the standard regression discontinuity model of equation (1), two issues emerge. First, the shareholder proposal at year *t* affects earnings management in years *t+1*, *t+2*, and so on. Second, in each meeting, shareholders may vote on multiple proposals. We follow

[9] In practice, shareholder proposals are typically not binding. A proposal may pass and not be implemented; thus, the earnings management related to proposals that pass by a small margin will be less negative than if the vote were binding. Similarly, if management feels that a narrowly failed proposal should still be implemented, the earnings management will be more negative to the left of the threshold. The effect on earnings management thus is not necessarily symmetrical around the threshold. Nevertheless, if the vote percentage is continuous and the probability of implementation is discontinuous around the threshold, the differences in earnings management around the passing threshold can be used to measure the effect of a proposal on the firm. Therefore, our identification strategy does not require proposals to be binding. As Lee and Lemieux (2010) discuss, the identification strategy remains valid as long as there is a discrete jump in the probability of implementation at the majority threshold (i.e., the "fuzzy" regression discontinuity setting). Moreover, Cuñat et al. (2012) document the discontinuity in implementation probability.

Cuñat et al. (2012) and Cellini et al. (2010) and implement a multi-period version of the dynamic RDD. This model allows us to estimate the effect of shareholder proposals on earnings management activities for each year after the proposal passes: *t+1*, *t+2*, and so on. It also aggregates the votes for a given firm and meeting date. The multi-period dynamic RDD model can be expressed as follows:

$$y_{i,t+\tau} = \beta_\tau PASS^{\tau}_{i,t} + \left[P_l\left(\sum_{k=1}^{n} v^k_{i,t}, \gamma^k_{l,\tau}\right)\right] + \left[P_r\left(\sum_{k=1}^{n} v^k_{i,t}, \gamma^k_{r,\tau}\right)\right]$$
$$+\alpha_{i,t} + \alpha_\tau + \alpha_c + \alpha_\varphi + \varepsilon_{i,t+\tau}, \qquad (2)$$

$y_{i,t+\tau}$ is the level of earnings management for firm i at year $t + \tau$, where t indicates the meeting year. $PASS^{\tau}{}_{i,t}$ is a dummy variable indicating whether a shareholder proposal passed in year t. If a proposal's vote shares ($v^k_{i,t}$) are equal to or greater than the passing threshold (50%), $PASS^{\tau}_{i,t}$ is defined as 1 and 0 otherwise. Hence, β_τ is the effect of passing a proposal at year t on the earnings management measures τ years later. We obtain separate estimates for the contemporaneous effect (τ = 0), the effect one period later (τ =1), and so on. We extend the model to the full sample of proposals around the close margin of the threshold by following the approach in Cellini et al. (2010) and Cuñat et al. (2012). This RDD strategy retains all data in the sample but absorbs variation from non-close proposals using flexible polynomial controls for the vote share.[10] Specifically, we use the polynomials of the vote shares to approximate the continuous underlying relationship between $y_{i,t+\tau}$ and $v^k_{i,t}$, allowing for a discontinuous jump at the majority threshold v^*. $P_l\left(\sum_{k=1}^{n} v^k_{i,t}, \gamma^k_{l,\tau}\right)$ is the polynomial in vote shares for observations on the left-hand side of the threshold, and

[10] For a detailed comparison of this approach with one that uses data from close-call proposals only, see Imbens and Lemieux (2008).

$P_r\left(\sum_{k=1}^{n} v_{i,t}^{k}, \gamma_{r,\tau}^{k}\right)$ is the polynomial in vote shares for observations on the equation's right-hand side. Throughout this study, we use second-order polynomials to test the effect.[11]

We use a panel dataset to estimate this regression. For each firm-meeting (i, t), observations at time $t + \tau$ are pooled for multiple τ, including $\tau < 0$. We use data from the two years before to the four years after the meeting. For $\tau < 0$, the coefficient on the dummy variable $PASS_{i,t}^{k}$ and the parameters of the polynomials $\gamma_{l,\tau}^{k}$ and $\gamma_{r,\tau}^{k}$ are constrained to 0 and allowed to vary for $\tau > 0$. $\alpha_{i,t}$ is the firm-meeting fixed effects, used to capture any unobservable firm characteristics. We further include fixed effects for the period relative to the meeting α_{τ} ("distance-to-the-election" fixed effects), firm-meeting fixed effects α_{c}, and fiscal year fixed effects α_{φ}. Distance-to-the-election fixed effects are variables equal to 1, 2, 3, or 4 when the observation is respectively in years *t+1*, *t+2*, *t+3*, or *t+4*, where year *t* is the meeting year. Standard errors are clustered at the firm level. Second-order polynomials of the vote difference (the difference between the actual passing vote percentage and 50) are used throughout. We assume that the outcome variable $y_{i,t+\tau}$ is the earnings management of firm *i* in year $t + \tau$. A positive coefficient on β_{τ} implies that a proposal's passage leads to increased earnings management in year $t + \tau$.

Following Cuñat et al. (2012), we also examine the average effect on earnings management over the four years after a proposal passes, as follows:

$$y_{i,t+\tau} = \beta_0 PASS_{i,t} + \left[P_l\left(\sum_{k=1}^{n} v_{i,t}^{k}, \gamma_{l,\tau}^{k}\right)\right] + \left[P_r\left(\sum_{k=1}^{n} v_{i,t}^{k}, \gamma_{r,\tau}^{k}\right)\right]$$
$$+\alpha_{i,t} + \alpha_{\tau} + \alpha_{c} + \alpha_{\varphi} + \varepsilon_{i,t+\tau}. \qquad (3)$$

A positive β_0 implies that the passage of a shareholder proposal leads to an average increase in earnings management over the four years after the annual meeting. This estimate captures a causal

[11] The results are qualitatively similar if we use first-, third-, or fourth-order polynomials.

effect of shareholder proposals and alleviates the effects of endogenous confounding factors, as long as they are continuous around the threshold.

2.3 Measures of Accrual-Based Earnings Management

Following Kothari, Leone, and Wasley (2005), we use discretionary accruals to capture accrual-based earnings management. Discretionary accruals are the difference between expected/normal accruals and the actual accruals. We estimate the former using the modified Jones (1991) and the performance-adjusted modified Jones models. To mitigate the concern that firm performance, rather than discretionary management decisions, affects the level of accruals, we adjust the modified Jones (1991) model by the ROA in the previous or current year. We estimate the following models for each industry-year, where the industry is defined by the first two digits of the SIC code, with at least 15 observations:

$$ACCR_{i,t} = \alpha_0 + \frac{\beta_0}{ASSETS_{i,t-1}} + \beta_1\left(\Delta SALES_{i,t} - \Delta AR_{i,t}\right) + \beta_2 PPE_{i,t} + \varepsilon_{i,t}, \quad (4)$$

$$ACCR_{i,t} = \alpha_0 + \frac{\beta_0}{ASSETS_{i,t-1}} + \beta_1\left(\Delta SALES_{i,t} - \Delta AR_{i,t}\right) + \beta_2 PPE_{i,t} + \beta_3 ROA_{i,t-1} + \varepsilon_{i,t}, \quad (5)$$

and

$$ACCR_{i,t} = \alpha_0 + \frac{\beta_0}{ASSETS_{i,t-1}} + \beta_1\left(\Delta SALES_{i,t} - \Delta AR_{i,t}\right) + \beta_2 PPE_{i,t} + \beta_3 ROA_{i,t} + \varepsilon_{i,t}. \quad (6)$$

Discretionary accruals calculated using equations (4), (5), and (6) are labeled as *DA*, *DA_LROA*, and *DA_ROA*, respectively. $ACCR_{i,t}$ is the total accruals, measured as the change in non-cash current assets minus the change in current non-interest-bearing liabilities, minus depreciation and amortization expenses for firm i in year t, scaled by lagged total assets. $\Delta SALES_{i,t}$ is the annual change in sales scaled by lagged total assets. $\Delta AR_{i,t}$ is the annual change in accounts receivable scaled by lagged total assets. $PPE_{i,t}$ is property, plant, and equipment for firm i in year t, scaled by lagged total assets. $ROA_{i,t}$ is the return on assets for firm i in year t. $ROA_{i,t-1}$ is the return on assets

for firm i in year $t-1$. The estimated residuals are discretionary accruals, which proxy for accrual-based earnings management.

2.4 Measures of Real Earnings Management

Following the literature, we construct measures of real earnings management. First, we follow Roychowdhury (2006) in calculating three individual real earnings management measures (*AB_CFO*, *AB_EXP*, and *AB_PROD*). *AB_CFO* is the abnormal discretionary operating cash flow, multiplied by -1. *AB_EXP* is abnormal discretionary expenses, multiplied by -1. *AB_PROD* is the abnormal discretionary production cost. We then follow Cohen and Zarowin (2010) in constructing two aggregate real earnings management measures, *REM1* and *REM2*. *REM1* is the sum of *AB_CFO* and *AB_EXP*, and *REM2* is the sum of *AB_EXP* and *AB_PROD*. Finally, in keeping with Cohen et al. (2008), we compute *REM* as the sum of *AB_CFO*, *AB_EXP*, and *AB_PROD*. For each measure, a higher value indicates a greater likelihood of real earnings management. The estimation of *AB_CFO* follows equation (7):

$$CFO_{i,t} = \alpha_0 + \frac{\beta_0}{ASSETS_{i,t-1}} + \beta_1 SALES_{i,t} + \beta_2 \Delta SALES_{i,t} + \varepsilon_{i,t}, \quad (7)$$

where $CFO_{i,t}$ is the cash flow from operations scaled by lagged total assets, $SALES_{i,t}$ is annual sales scaled by lagged total assets for firm i in year t, and $\Delta SALES_{i,t}$ is the annual change in sales scaled by lagged total assets for firm i in year t. For each firm-year, *AB_CFO* is the residual of regression (7), multiplied by -1.

The estimation of *AB_EXP* follows equation (8):

$$EXP_{i,t} = \alpha_0 + \frac{\beta_0}{ASSETS_{i,t-1}} + \beta_1 SALES_{i,t-1} + \varepsilon_{i,t}, \quad (8)$$

where $EXP_{i,t}$ is the sum of advertising; R&D; and sales, general, and administrative expenses scaled by lagged total assets for firm i in year t. $SALES_{i,t-1}$ is sales in the previous year scaled by lagged total assets for firm i in year t. *AB_EXP* is the residual of regression (8), multiplied by -1.

The estimation of *AB_PROD* follows equation (9):

$$PROD_{i,t} = \alpha_0 + \frac{\beta_0}{ASSETS_{i,t-1}} + \beta_1 SALES_{i,t} + \beta_2 \Delta SALES_{i,t} + \beta_3 \Delta SALES_{i,t-1} + \varepsilon_{i,t}, \quad (9)$$

where $PROD_{i,t}$ is the sum of the cost of goods and the change in inventory for firm i in year t scaled by lagged total assets; $SALES_{i,t}$ is annual sales scaled by lagged total assets for firm i in year t; $\Delta SALES_{i,t}$ is the annual change in sales scaled by lagged total assets for firm i in year t; and $\Delta SALES_{i,t-1}$ is the change in sales in the previous year scaled by the lagged total assets for firm i in year t. *AB_PROD* is the residual of regression (9). We estimate these three models for each industry (defined using 2-digit SIC codes) and each year with at least 15 observations.

2.5 Sample Selection

We obtain shareholder proposals from ISS (formerly RiskMetrics). The dataset includes all S&P 1500 companies and the 500 most widely held firms. We start with a sample of 6,038 shareholder proposals from 1997 to 2014. We keep only those proposals with firm-level financial variables available in Compustat, leaving 5,837 proposals. Following Roychowdhury (2006), we exclude firms in regulated industries (SIC codes 4400–5000) and financial institutions (SIC codes 6000–6500). We also delete firms with negative book values, which may indicate unusual firm conditions (Fresard, 2010; Almeida, Kim, and Kim, 2015). In addition, we control for firm growth and investment opportunities using the book-to-market of equity. To mitigate outlier effects, we follow Kothari et al. (2005) and exclude observations if the absolute value of total accruals scaled by total assets exceeds 1. We also require at least 15 observations for each industry-year grouping, which is sufficient for estimating our regression-based measures of earnings management. Our final

sample thus comprises 1,831 shareholder proposals, or 1,165 firm-year observations, from 1997 to 2014.

Table 1 presents the within-sample distribution of the proposals over time. Note that proposals typically do not pass the 50% support threshold. The percentages of passed proposals in 2008 and 2009 are 48.78 and 46.84, respectively, much higher than in previous years. A possible explanation is that rightly or wrongly, shareholders attributed firms' problems during the financial crisis to corporate governance and were more likely to demand corporate governance reforms. There is no monotonic trend in the average shareholder support that proposals receive over the years, although the average support for proposals in the latter half of the sample period is larger than that in the first half, perhaps because shareholders were more willing to support proposals that pressured management to improve governance and firm performance.

[Please insert Table 1 about here]

2.6 Proposal Classification

After reading the proposal topics in our data, we classify proposals into three types based on their effects on managerial incentives and constraints in conducting earnings management: (board-related) governance structure, financial reporting, and compensation proposals. We follow Cuñat et al. (2012) and Gompers et al. (2003) to identify governance structure proposals. They state that governance structure proposals should aim to improve a firm's general corporate governance (e.g., better board independence and diversity, separation of the CEO and the chairperson). Thus, we include antitakeover, compensation plan, and golden parachute provisions in this category because, as Gompers et al. (2003) and Cuñat et al. (2012) show, such provisions are associated with changes in the G-index.[12] Typically, improved corporate governance constrains managers' opportunistic

[12] For robustness, we employ an alternative scheme, reclassifying compensation plans and golden parachutes proposals as compensation proposals instead of governance structure proposals.

behavior, including earnings management. Thus, we expect our main result to be present in the subsample of governance structure proposals. Appendix C provides detailed information on proposal classifications.

Financial reporting proposals target audit proposals related to auditor independence, clawback provisions, and other financial reports aspects. These proposals are likely to impose severe constraints on managers' discretion over accruals management. For example, audit proposals specifically aim to limit non-audit fees or services, which can create an economic bond between auditors and clients that impairs auditor independence and thus audit quality (Tepalagul and Lin, 2015). Limiting non-audit services prevents managers from manipulating earnings via accrual-based management. Clawback proposals aim to recoup the compensation gained from a financial reporting restatement, thus making it costly for managers to manipulate accruals. Such proposals also might constrain accrual-based earnings management.

Under strong financial reporting constraints, managers who feel pressured to comply with strict financial reporting rules may switch to real earnings management to achieve performance targets (Cohen et al., 2008; Cohen and Zarowin, 2010; Gunny, 2010; Zang, 2012; Ge and Kim, 2014; Chan et al., 2015; Kothari, Mizik, and Roychowdhury, 2016). Hence, the passage of audit and clawback proposals could result in increased real earnings management but decreased accrual-based earnings management. In other words, firms might respond to financial reporting proposals by switching from accrual-based earnings management to earnings management via real activities.

The third type of proposal targets CEO compensation, such as pay caps and pay-for-performance compensation. As previously mentioned, following Cuñat et al. (2012) and Gompers et al. (2003), we classify compensation plan and golden parachute proposals as governance structure

proposals, which are intended to improve overall corporate governance. Therefore, neither is included here.

The effect of compensation proposals is ambiguous due to the conflict inherent in the incentives and constraints in compensation settings. Specifically, Bergstresser and Philippon (2006) find evidence that managers whose pay is linked to earnings are more likely to manipulate earnings upwards. However, recent governance reforms enable shareholders to file "say-on-pay" proposals, and many shareholder proposals seek to cap CEO pay. Proposals with these disciplinary effects may not encourage managers to pursue more earnings management. As a result, the effectiveness of compensation proposals depends on how these two forces interact. In addition, various performance targets may be attached to a compensation package, such as accounting-based (e.g., EPS), market-based (e.g., stock returns), and operational performance (e.g., customer satisfaction, the defect rate) packages. Such complexity in performance targets suggests that the implications for both accruals and real earnings management may not be clear cut.

3. Empirical Results

3.1 Summary Statistics

As described in the research design, we use a panel dataset including observations from the [*t-2, t+4*] window around the meeting year. Table 2 reports the summary statistics for the earnings management measures and control variables. *DA* is discretionary accruals estimated using the modified Jones model. *DA_LROA* is discretionary accruals estimated using the same model but controlling for lagged ROA. *DA_ROA* is discretionary accruals estimated using the modified Jones model and controlling for ROA. As indicated in Section 2.4, *AB_CFO*, *AB_EXP*, *AB_PROD*, *REM1*, *REM2*, and *REM* are the real earnings management measures. Table 2 shows that the magnitudes

of our accrual-based and real earnings management measures are similar to those in the literature (Cohen et al., 2008; Zang, 2012).

Following the earnings management literature (e.g., Healy and Wahlen, 1999; Fields, Lys, and Vincent, 2001; Cohen et al., 2008; Zang, 2012; Chan et al., 2015, Cheng et al., 2016), we include the following control variables: *BTM* (book-to-market ratio), *SIZE* (natural log of total assets), *LEV* (leverage ratio), and *ROA* (return on assets). In addition, we control for public scrutiny using *ANALYST* (analyst coverage) and *MEDIA* (media sentiment). Table 2 lists the summary statistics for these control variables.

[Please insert Table 2 about here]

3.2 Validity of the Regression Discontinuity Design

With RDD, the sample distribution must follow specific conditions: 1) no discontinuity in vote shares around the threshold (McCrary, 2008) and 2) no discontinuity around the threshold in pre-meeting earnings management. That is, prior to the vote, there can be no significant differences in earnings management for the firms that fall on either side of the threshold. First, we follow the procedures in McCrary (2008) to test the smoothness of the distribution of shareholder proposals. Figure 1 plots the density of the vote percentage. The solid line represents the fitted density function of the forcing variable (the number of votes) with a 95% confidence interval around the fitted line. Figure 1 shows that the discontinuity estimate is 0.056, with a standard error of 0.175. Therefore, we cannot reject the null hypothesis that there is no difference in the density around the majority threshold. We find no evidence of precise manipulation by voters or managers at the threshold. As a result, it appears that the validity condition of RDD is not violated.

The second validity condition of RDD requires that before the annual meeting, no systematic differences in earnings management exist between firms where proposals marginally pass and those

where proposals marginally fail. To verify the validity of this condition, we examine the pre-voting differences in the earnings management measures between the firms that passed and that did not pass shareholder proposals. Table 3 reports the regression model in which the dependent variables are the earnings management measures before a shareholder meeting, and the independent variable is a dummy variable that indicates whether a proposal passed at the meeting. Each entry in Table 3 tabulates the coefficient for one earnings management measure. All models control for fiscal year fixed effects and other control variables, including *BTM*, *SIZE*, *LEV*, *ROA*, *ANALYST*, and *MEDIA*. Standard errors are clustered at the firm level.

Columns (1) and (3) of Table 3 show an OLS regression without the RDD approach. In the one or two years before a meeting, there is no significant difference in earnings management between the passed and unpassed groups. These results hold for all accrual-based and real earnings management measures. Columns (2) and (4) employ an RDD approach and include the polynomial terms of the vote shares in the order of two on each side of the threshold. We obtain similar results in that before the shareholder meeting, there are no systematic differences in earnings management between the firms where proposals are marginally passed or those where they marginally fail. As a result, these pre-voting estimates support the validity of using RDD in our setting.

[Please insert Table 3 about here]

3.3 Shareholder Proposals and Earnings Management

Tables 4 and 5 report the results on the effect of passing a proposal on accrual-based and real earnings management, respectively. We follow the literature and use several alternative accrual-based and real earnings management measures. Table 4 reports the results with *DA, DA_LROA,* and *DA_ROA,* and Table 5 reports the effect on *REM1*, *REM2*, and *REM*.[13] All models control for fiscal

[13] Panel A of Table 6 shows similar results using the three components of real earnings management: *AB_CFO*, abnormal cash flow from operations; *AB_EXP*, abnormal discretionary expenses; and *AB_PROD*, abnormal production

year fixed effects, distance-to-the-election fixed effects, and firm-meeting fixed effects. Standard errors are clustered at the firm level. According to the majority passing threshold, a proposal is considered passed if it receives at least 50% vote support. In Panel B of Table 6, we perform a placebo test and show that proposals have no significant effect if we use either 40% or 60% as a pseudo-passing threshold.[14]

Columns (1), (3), and (5) of Table 4 report the estimates from equation (3). The parameter estimates of the *PASS* dummy are significantly negative. For example, the coefficient is -0.012 (p=0.006) for *DA*, the discretionary accruals measure calculated from the modified Jones model, indicating decreased accruals earnings management after the shareholder meeting. We also use the dynamic RDD model of equation (2) to investigate the timing of the effect. Specifically, we include five dummy variables: *PASS_T, PASS_T+1, PASS_T+2, PASS_T+3*, and *PASS_T+4*. Table 4, columns (2), (4), and (6) show the results. In column (2), the coefficients on *PASS_T* (-0.018), *PASS_T+1* (-0.012), and *PASS_T+2* (-0.015) are negative and significant, suggesting that the decrease in discretionary accruals after the meeting mainly occurs during the meeting year or in the first and second years after it. The coefficients on *PASS_T+3* and *PASS_T+4* are negative but not significant. The most pronounced decrease in discretionary accruals occurs during the meeting year, indicating that a proposal's passage has the greatest impact shortly after the annual meeting. Overall, we find consistent results in columns (3) through (6). The passage of a shareholder proposal is

costs. In addition to the earnings management models, we find a similar reduction in the likelihood of meeting or beating analyst forecasts. The literature shows that firms manage their earnings to just meet or beat analyst forecasts by one cent (Brown, 2001; Bartov, Givoly, and Hayn, 2002). Our results indicate that the passage of a shareholder proposal reduces opportunistic earnings management behavior and that firms are less likely to just meet or beat analysts' earnings forecasts.

[14] In Panel B of Table 6, we re-examine our main results using two variables, *PSEUDO_PASS40%* and *PSEUDO_PASS60%*, which each equal 1 if a proposal respectively receives at least 40% and 60% of the vote, 0 otherwise. Because there is no discontinuous change in the proposal outcome at the pseudo-passing thresholds of 40% or 60%, we expect these firms to not differ in terms of earnings management.

associated with a significant decrease in discretionary accruals that can persist for two years after the annual meeting but that is most pronounced in the meeting year.[15]

[Please insert Table 4 about here]

Table 5 shows that the passage of a governance proposal leads to a reduction in real earnings management. For example, in column (2) of Table 5 where the dependent variable is *REM1*, we find the coefficients on the pass dummies are -0.050, -0.044, -0.040, -0.028, and -0.041 with significance at the 1%, 1%, 5%, 10%, and 5% levels, sequentially, from years *t* to *t+4*. For *REM2* and *REM*, we find a similar across-time effect of a shareholder proposal's passage from years *t* to *t+2*. Overall, our results suggest that a proposal's passage can significantly decrease real earnings management and that this effect persists from the meeting year to the second year after the vote. [16]

[Please insert Table 5 about here]

As a robustness check, we use the ordinary least squares (OLS) approach as an alternative research design to examine the effect of the passage of shareholder proposals on earnings management. Columns (1) and (2) in Panel C of Table 6 show that the *PASS* dummies are not significant. We conjecture that if we do not control for polynomial terms with the vote shares, the potential endogeneity issue could confound our inferences. For example, proposals whose supporting votes are far from the passing threshold could have different firm characteristics than those with supporting votes near to the passing threshold. The passage of such proposals is hence

[15] Across columns (1)–(4), the coefficients on *ROA* are positive and significant, which is consistent with the results of Kothari et al. (2005) and Ali and Zhang (2015) showing that the degree of earnings management is related to profitability. The insignificance of *ROA* in columns (5) and (6) confirms the effectiveness of performance matching in filtering out the effect of performance when calculating discretionary accruals.

[16] The signs on the coefficients on the control variables are all consistent with Cheng et al. (2016). Growth firms are less likely to take real economic actions to manipulate their earnings because such actions can damage their long-term competitive ability and growth. Consistent with this argument, we find that in general, *BTM* is positively associated with real earnings management. *SIZE* is also positively associated with real earnings management, such that larger firms are more capable of manipulating their cash flow, expenses, and production costs. *LEV* shows a similar positive association in that firms with higher leverage also tend to manage earnings.

not random, and we cannot isolate the effect of proposals from the confounding effect of other firm characteristics.

To further enhance our main results, we examine proposals with supporting votes closer to the passing threshold (i.e., close-call proposals). We use both optimal and fixed bandwidths to define close-call proposals. Following Imbens and Kalyanaraman (2012) and Calonico, Cattaneo, and Titiunik (2014), we minimize the mean squared error to calculate the optimal bandwidth. We choose 10% and 15% as the fixed bandwidth. Consistent with our main results, both accrual and real earnings management decrease after close-call proposals pass. The regression results are shown in columns (3)–(6) of Panel C of Table 6. These results, together with the insignificant results when we include all proposals in the analyses, highlight the importance of employing the RDD to address endogeneity.

[Please insert Table 6 about here]

3.4 The Heterogeneous Effects of Governance Proposals on Accrual-Based and Real Earnings Management

In this subsection, we examine the effects of different types of governance proposals on earnings management.[17] Columns (1)–(2) of Table 7 show the regression results for governance structure proposals. The coefficients on *PASS* are significantly negative, suggesting that governance structure proposals restrict accrual and real earnings management. The magnitudes of the effect (-0.013 for *DA_ROA* and -0.078 for *REM*) are slightly stronger than those for the entire sample (-0.010 for *DA_ROA* and -0.063 for *REM*).

Columns (5) and (6) in Table 7 show the results of financial reporting (i.e., audit and clawback) proposals. In column (5), the coefficient on *PASS* is -0.020 and significant at the 1% level for

[17] For brevity, we only report the results using *DA_ROA* and *REM* as accruals and real earnings management measures. Our results are robust to alternative measures and are available upon request.

DA_ROA. Compared with the entire sample, the effect of financial reporting proposals on accruals earnings management is doubled. However, in column (6), the coefficient on *PASS* (0.210) is positive and significant (P=0.006) for *REM*, indicating an increase in real earnings management. The passage of financial reporting proposals severely constrains accrual-based, but not real, earnings management. Our results suggest that the passage of financial reporting proposals can have unintended effects on real earnings management: when managers face financial reporting constraints, they may switch to earnings management via real activities. Our result aligns with the findings of Cohen and Zarowin (2010) and Zang (2012), who also show a substitution effect between accruals and real earnings management.

Columns (7)–(8) report the effects of compensation proposals on earnings management. We find no significant effect of proposal passage on earnings management. This insignificance may not be driven by a sample size decrease in the compensation proposals sample, as that sample size is larger than that of the financial reporting proposals. The ambiguous impact of compensation proposals could be due to the incentives and constraints in compensation settings or due to the fact that managers' performance targets are too complicated to generate a clear-cut effect.

Our results are robust to alternative classification schemes. Columns (3) and (4) report the results for governance structure proposals excluding compensation plans and golden parachutes. The findings are similar to those of columns (1) and (2). Columns (9) and (10) report the effect of compensation proposals including compensation plans and golden parachutes. Regardless of the classification scheme, compensation proposals are not significantly related to earnings management. This finding is consistent with our conjecture about the competing effects of compensation proposals (i.e., stronger managerial incentives to inflate performance versus greater discipline by shareholders).

[Please insert Table 7 about here]

4. Conclusion

Shareholder activism is an important way to align the incentives of shareholders and managers. In this study, we analyze the effects of shareholder proposals on both accrual-based and real earnings management. The results show that after the passage of such proposals, the levels of both accrual-based and real earnings management generally decrease. Looking more closely at the results, we find heterogeneous effects for different types of shareholder proposals. For example, proposals focused on improving a firm's governance structure reduce both accrual-based and real earnings management. In contrast, proposals focused on improving firms' financial reporting induce a switch from accrual-based to real earnings management. Finally, compensation proposals are insignificantly associated with any future earnings management. Our results indicate that some shareholder interventions can have unintended consequences, depending on how they change managers' incentives and constraints.

We contribute to the literature by estimating the causal effects of proposal passage on both accrual-based and real earnings management. The use of a dynamic RDD arguably rules out any unobserved firm characteristics that jointly determine the outcomes of shareholder proposals and firms' accounting choices. Our study differs from and complements research on the effectiveness of shareholder activism. Rather than considering proposals as having a uniform effect, we investigate the distinct effects of various proposal types. This approach enables us to highlight the heterogeneity in shareholder proposal outcomes, whether or not those outcomes are intended. Our findings have important implications for shareholders seeking to improve corporate governance because such interventions may not always prove beneficial to them.

Appendix A: Variable Definitions

Variable	Definition	Source
AB_CFO	Abnormal cash flow from operations, measured as the product of -1 and the residual from equation (7).	COMPUSTAT
AB_EXP	Abnormal expenses, measured as the product of -1 and the residual from equation (8).	COMPUSTAT
AB_PROD	Abnormal production costs, measured as the residual from equation (9).	COMPUSTAT
ANALYST	Analyst coverage equals the log value of 1 plus the number of analysts following.	IBES
BTM	Book-to-market ratio, which is the book value (Compustat item: CEQ) divided by the market value (Compustat items: CSHO × PRCC_F).	COMPUSTAT
DA	Discretionary accruals, calculated using the modified Jones model and measured as the residual from equation (4).	COMPUSTAT
DA_LROA	Discretionary accruals, calculated using the performance-adjusted (adjusted by the previous year's ROA) modified Jones model and measured as the residual from equation (5).	COMPUSTAT
DA_ROA	Discretionary accruals, calculated using the performance-adjusted (adjusted by the current year's ROA) modified Jones model and measured as the residual from equation (6).	COMPUSTAT
LEV	Leverage ratio (Compustat items: (AT-CEQ)/AT).	COMPUSTAT
MEDIA	Composite sentiment score, valued above or below 50 (50 represents neutral sentiment) and determined from intraday stock price reactions modeled empirically using tick data from approximately 100 large-cap stocks.	RPNA
MB_AF_ANN	Dummy variable that equals 1 if the actual EPA is equal to or above the latest consensus analyst forecast EPS, calculated before the earnings announcement, and 0 otherwise.	IBES
PASS	Dummy variable that equals 1 if a firm has a proposal for which the percentage of vote shares is above or equal to 50, 0 otherwise.	RiskMetrics
PASS_T	Dummy variable that equals 1 if a firm has a proposal for which the percentage of vote shares is above or equal to 50 in the meeting year and the observation is in year *t* (*t+1, t+2, t+3, t+4*) and 0 otherwise.	RiskMetrics
PASS_T+1	Dummy variable that equals 1 if a firm has a proposal for which the percentage of vote shares is above or equal to 50 in the meeting year and the observation is in year *t+1*, 0 otherwise.	RiskMetrics
PASS_T+2	Dummy variable that equals 1 if a firm has a proposal for which the percentage of vote shares is above or equal to 50 in the meeting year and the observation is in year *t+2*, 0 otherwise.	RiskMetrics
PASS_T+3	Dummy variable that equals 1 if a firm has a proposal for which the percentage of vote shares is above or equal to 50 in the meeting year and the observation is in year *t+3*, 0 otherwise.	RiskMetrics
PASS_T+4	Dummy variable that equals 1 if a firm has a proposal for which the percentage of vote shares is above or equal to 50 in the meeting year and the observation is year *t+4*, 0 otherwise.	RiskMetrics
POLYNOMIAL TERMS	The second-order polynomial terms of the vote difference (vote share minus 50).	RiskMetrics
PSEUDO_PASS	Dummy variable that equals 1 if the percentage of supporting votes is greater than 40% (60%).	RiskMetrics
REM1	The sum of *AB_CFO* and *AB_EXP*.	
REM2	The sum of *AB_EXP* and *AB_PROD*.	
REM	The sum of *AB_CFO*, *AB_EXP*, and *AB_PROD*.	
ROA	Return on assets (Compustat items: IB/AT).	COMPUSTAT

Appendix B: A Brief Illustration of Regression Discontinuity Design

A regression discontinuity design (RDD) is a quasi-experimental pretest-to-posttest design that elicits the causal effects of interventions by assigning a cut-off or threshold above or below which an intervention is assigned. RDD was first introduced by Thistlethwaite and Campbell (1960) to analyze the impact of merit awards on future academic outcomes. In evaluating merit-based scholarships, the main problem with estimating the causal effect of such an intervention is the endogeneity of performance to the assignment of the treatment group (the scholarship award). As high-performing students are more likely to both be awarded a merit scholarship and to continue performing well, comparing the outcomes of awardees and non-recipients leads to an upward bias of the estimates.

RDD can exploit exogenous characteristics of the intervention to elicit causal effects. If all students with a certain grade (e.g., 80%) receive the scholarship, it is possible to elicit the local treatment effect by comparing students around the 80% cut-off. The intuition here is that a student scoring 79% is likely to be similar to a student scoring 81%, given the pre-defined 80% threshold. However, only one student receives the scholarship. Comparing the outcome of the awardee (treatment group) to the counterfactual outcome of the non-recipient (control group) hence delivers the local treatment effect. RDD has become increasingly popular in recent years (Imbens and Lemieux, 2008). It has been used to investigate the effects of elections with small margins, the Russell 2000 Index inclusion, and pollution in China to the north of the Qinling Mountains and the Huai River (where the government provides coal-fired heating systems). The two most common approaches to estimation using RDD are non-parametric and parametric estimations.

Non-parametric Estimation

The non-parametric method used in an RDD context is the following local linear regression:

$$Y = \beta_1 D + \beta_2(v - c) + \beta_3 D(v - c) + \alpha + \varepsilon,$$

where Y is the treatment cut-off and D is a binary variable equal to 1 if $v \geq c$. Letting h be the bandwidth of the data used, we have $c - h \leq v \leq c + h$. Different slopes and intercepts fit data on either side of the cut-off. The major benefit of using non-parametric methods in RDD is that the estimates are based on data closer to the cut-off, which is intuitively appealing. However, the parametric RDD strategy can retain all data in the sample but absorb variation from non-close data using flexible controls for the vote shares. Imbens and Lemieux (2008) provide a detailed comparison of a parametric approach that uses only data from the close neighborhood.

Parametric Estimation

A parametric RDD often involves a polynomial regression. For example,

$$Y = \beta_1 D + \beta_2 v \quad + \beta_3 v^2 + \beta_3 v^3 + \alpha + \varepsilon,$$

where Y is the treatment cut-off and D is a binary variable equal to 1 if $v \geq c$. Note that the polynomial portion can be shortened or lengthened as needed.

Fuzzy RDD Estimation

The identification of causal effects hinges on the crucial assumption of a sharp cut-off, around which there is a discontinuity in the probability of being assigned either 0 or 1. In reality, however, cut-offs are often not strictly implemented (e.g., discretion is exercised for students who fall just short of the threshold); thus, the estimates are biased. In contrast to a sharp regression discontinuity design, a fuzzy regression discontinuity design does not require a sharp discontinuity in the probability of assignment. Instead, it is applicable as long as the probability of assignment is

different. In the context of shareholder proposals, as long as the distribution of the vote share is continuous but the probability of implementation is discontinuous around the passing threshold, an RDD approach can accurately estimate the effect of the passage of a shareholder proposal.

Appendix C: Description of All Shareholder Proposals

Type	Description Proposal	Observations	Mean Vote For
Board	Allow union/employee reps. on the board	4	3.75
Board	Board miscellaneous	6	11.70
Board	Commit to/report on board diversity	23	21.63
Board	Eliminate dual class	10	29.05
Board	Increase audit committee independence	4	19.50
Board	Increase compensation committee independence	1	39.00
Board	Increase key committee independence	14	20.36
Board	Independent compensation committee	6	19.70
Board	Independent nominating committee	4	26.75
Board	Lead director	7	28.59
Board	Limit director tenure	20	5.29
Board	Majority independent directors	3	44.67
Board	Minimum director stock ownership	1	4.00
Board	Separate chairperson/CEO	155	32.22
Board	Shareholder advisory committee	2	2.50
G-index: Delay	Classified board	254	68.51
G-index: Delay	Special meeting	80	46.66
G-index: Delay	Written consent	53	43.18
G-index: Other	Directors' duties	1	97.10
G-index: Other	Poison pill	98	58.24
G-index: Protection	Compensation plans	37	29.31
G-index: Protection	Executive severance	3	56.33
G-index: Protection	Golden parachutes	40	43.90
G-index: Voting	Bylaws	5	46.48
G-index: Voting	Cumulative vote	86	34.00
G-index: Voting	Secret ballot	2	46.50
G-index: Voting	Supermajority	87	66.49
G-index: Voting	Unequal voting	1	99.00
Voting	Counting shareholder votes	2	11.50
Voting	Equal access to proxy	10	39.78
Voting	Majority vote shareholder committee	5	47.60
Voting	Majority vote to elect directors	171	53.01
Voting	Miscellaneous voting	1	44.00
Compensation	Add performance criteria to equity-based awards	11	33.64
Compensation	Advisory vote on compensation	95	44.41
Compensation	Approve executive compensation	53	15.21
Compensation	Approve/disclose/limit Supplemental Executive Retirement Plan (SERP)	17	34.51
Compensation	Award performance-based stock options	42	26.05
Compensation	Cap executive pay	21	9.57
Compensation	Disclose executive compensation	31	11.39

Compensation	Expense stock options	35	52.26
Compensation	Hire independent compensation consultant	2	40.95
Compensation	Link executives' pay to social criteria	30	7.64
Compensation	Link pay to performance/recoup bonuses	16	22.19
Compensation	Miscellaneous compensation	21	20.38
Compensation	No repricing underwater stock option	5	16.60
Compensation	Pay directors in stock	5	11.60
Compensation	Pension fund surplus reporting	8	27.38
Compensation	Require equity awards to be held	60	24.20
Compensation	Restrict director compensation	2	11.50
Compensation	Restrict nonemployee director pensions	5	25.12
Financial Reporting	Limit consulting by auditors	19	16.42
Financial Reporting	Recoup bonuses if restatement	13	27.31
Compensation	Link pay to performance	37	30.23
Other	Shareholder approval of auditors	2	39.50
Other	Affirm political nonpartisanship	2	3.50
Other	Change annual meeting date	1	73.50
Other	Change annual meeting location	6	3.17
Other	Double board nominees	9	8.67
Other	Issue post-meeting report	1	5.00
Other	Miscellaneous	64	20.12
Other	Nominee statement in proxy	2	5.50
Other	Reincorporate to U.S. state	12	19.73
Other	Study sell company	22	11.71

References

Ali, A., and W. Zhang. 2015. CEO tenure and earnings management. *J Account Econ* 59: 60–79.

Almeida, H., C. S. Kim, and H. B. Kim. 2015. Internal capital markets in business groups: Evidence from the Asian financial crisis. *J Finance* 70: 2539–2586.

Anand, V., and M. Givant Star. 1994. Protest considered by CII – Members may withhold support from some directors, *Pensions Investments* 21 February.

Appel, I., T. Gormley, and D. Keim. 2016. Passive investors, not passive owners. *J Financial Econ* 121 (1), 111–141.

Armstrong, C. S., W. R. Guay, and J. P. Weber. 2010. The role of information and financial reporting in corporate governance and debt contracting. *J Account Econ* 50 (2-3), 179–234.

Bach, L., and D. Metzger. 2017. How Do Shareholder Proposals Create Value? Working paper, Stockholm School of Economics and Swedish House of Finance.

Bach, L., and D. Metzger. 2019. How close are close shareholder votes? *Rev Financial Stud* 32 (8): 3183–3214.

Bartov, E., D. Givoly, and C. Hayn. 2002. The rewards to meeting or beating earnings expectations. *J Account Econ* 33: 173–204.

Bergstresser, D., and T. Philippon. 2006. CEO incentives and earnings management. *J Financial Econ* 80 (3): 511–529.

Black, B. S. 1992. Agents watching agents: The promise of institutional investor voice. *UCLA Law Rev* 39: 811–893.

Brickley, J. A., J. L. Coles, and R. L. Terry. 1994. Outside directors and the adoption of poison pills. *J Financial Econ* 35 (3): 371–390.

Brown, L. D. 2001. A temporal analysis of earnings surprises: Profits versus losses. *J Account Res* 39 (2): 221–241.

Burns, N., and S. Kedia. 2006. The impact of performance-based compensation on misreporting. *J Financial Econ* 79 (1): 35–67.

Bushee, J. 1998. The influence of institutional investors on myopic R&D investment behavior. *Account Rev* 73 (3): 305–333.

Byrd, J. W., and K. A. Hickman. 1992. Do outside directors monitor managers? Evidence from tender offer bids. *J Financial Econ* 32: 195–221.

Calonico, S., M. D. Cattaneo, and R. Titiunik. 2014. Robust nonparametric confidence intervals for regression-discontinuity designs: Robust nonparametric confidence intervals. *Econometrica* 82 (6): 2295–2326.

Cellini, S. R., F. Ferreira, and J. Rothstein. 2010. The value of school facility investments: Evidence from a dynamic RDD. *Q J Econ* 125 (1): 215–261.

Chan, L. H., K. C. W. Chen, T. Y. Chen, and Y. Yu. 2015. Substitution between real and accruals–based earnings management after the voluntary adoption of compensation clawback provisions. *Account Rev* 90 (1): 147–174.

Chemmanur, T. J., and X. Tian. 2018. Do antitakeover provisions spur corporate innovation? A regression discontinuity analysis. *J Financial Quantitative Analysis* 53 (3): 1163–1194.

Cheng, C. S., H. H. Huang, Y. Li, and J. Stanfield. 2012. The effect of hedge fund activism on corporate tax avoidance. *Account Rev* 87 (5): 1493–1526.

Cheng, Q., J. Lee, and T. Shevlin. 2016. Internal governance and real earnings management. *Account Rev* 91 (4): 1051–1085.

Chi, W., L. L. Lisic, and M. Pevzner. 2011. Is enhanced audit quality associated with greater real earnings management? *Account Horizons* 25 (2): 315–335.
Cohen, D. A., A. Dey, and T. Z. Lys. 2008. Real and accrual-based earnings management in the pre- and post-Sarbanes Oxley periods. *Account Rev* 83 (3): 757–787.
Cohen, D. A., and P. Zarowin. 2010. Accrual-based and real earnings management activities around seasoned equity offerings. *J Account Econ* 50: 2–19.
Core, J. E., R. W. Holthausen, and D. F. Larcker. 1999. Corporate governance, chief executive officer compensation, and firm performance. *J Financial Econ* 51 (3): 371–406.
Cuñat, V., M. Giné, and M. Guadalupe. 2012. The vote is cast: The effect of corporate governance on shareholder value. *J Finance* 67 (5): 1943–1977.
Cuñat, V., M. Giné, and M. Guadalupe. 2016. Say pays! Shareholder voice and firm performance. *Rev Finance* 20 (5): 1799–1834.
Denis, D. 2012. Mandatory clawback provisions, information disclosure, and the regulation of securities markets. *J Account Econ* 54: 197–200.
Ertimur, Y., F. Ferri, and D. Oesch. 2013. Shareholder votes and proxy advisors: Evidence from say on pay. *J Account Rev* 51 (5): 951–996.
Ertimur, Y., F. Ferri, and S. R. Stubben. 2010. Board of directors' responsiveness to shareholders: Evidence from shareholder proposals. *J Corp Finance* 16 (1): 53–72.
Fan, Z., S. Radhakrishnan, and Y. Zhang. 2020. Corporate governance and earnings management: Evidence from shareholder proposals. *Contemp Account Res*: https://doi.org/10.1111/1911-3846.12624.
Ferri, F., and T. Sandino. 2009. The impact of shareholder activism on financial reporting and compensation: The case of employee stock options expensing. *Account Rev* 84 (2): 1–34.
Fields, T. D., T. Z. Lys, and L. Vincent. 2001. Empirical research on accounting choice. *J Account Econ* 31: 255–307.
Flammer, C. 2015. Does corporate social responsibility lead to superior financial performance? A regression discontinuity approach. *Management Sci* 61 (11): 2549–2568.
Fresard, L. 2010. Financial strength and product market behavior: The real effects of corporate cash holdings. *J Finance* 65 (3): 1097–1122.
Ge, W., and J. Kim. 2014. Boards, takeover protection, and real earnings management. *Rev Quantitative Finance Account* 43 (4): 651–682.
Gillian, S. L., and L. T. Starks. 2000. Corporate governance proposals and shareholder activism: The role of institutional investors. *J Financial Econ* 57 (2): 275–305.
Gompers, P., J. Ishii, and A. Metrick. 2003. Corporate governance and equity prices. *Q J Econ* 118 (1): 107–156.
Graham, J. R., C. Harvey, and S. Rajgopal. 2005. The economic implications of corporate financial reporting. *J Account Econ* 40: 3–73.
Guercio, D. D., L. Seery, and T. Woidtke. 2008. Do boards pay attention when institutional investor activists "just vote no"? *J Financial Econ* 90 (1): 84–103.
Gunny, K. A. 2010. The relation between earnings management using real activities manipulation and future performance: Evidence from meeting earnings benchmarks. *Contemp Account Res* 27 (3): 855–888.
Healy, P. M. 1985. The effect of bonus schemes on accounting decisions. *J Account Econ* 7: 85–107.
Healy, P. M., and J. M. Wahlen. 1999. A review of the earnings management literature and its implications for standard setting. *Account Horizons* 13 (4): 365–383.

Iliev, P., K. V. Lins, D. P. Miller, and L. Roth. 2015. Shareholder voting and corporate governance around the world. *Rev Financial Stud* 28 (8): 2167–2202.
Imbens, G. W., and K. Kalyanaraman. 2012. Optimal bandwidth choice for the regression discontinuity estimator. *Rev Econ Stud* 79 (3): 933–959.
Imbens, G. W., and T. Lemieux. 2008. Regression discontinuity designs: A guide to practice. *J Econometrics* 142: 615–635.
Jensen, M. C. 1993. The modern industrial revolution, exit, and the failure of internal control systems. *J Finance* 48 (30): 831–880.
Jones, J. J. 1991. Earnings management during import relief investigations. *J Account Res* 29 (2): 193–228.
Khurana, I. K., Y. Li, and W. Wang. 2018. The effects of hedge fund interventions on strategic firm behavior. *Management Sci* 64 (9): 3971–4470.
Klein, A. 2002. Audit committee, board of director characteristics, and earnings management. *J Account Econ* 33 (3): 375–400.
Kothari, S. P., A. J. Leone, and C. E. Wasley. 2005. Performance-matched discretionary accrual measures. *J Account Econ* 39: 163–197.
Kothari, S. P., N. Mizik, and S. Roychowdhury. 2016. Managing for the moment: The role of earnings management via real activities versus accruals in SEO valuation. *Account Rev* 91 (2): 559–586.
Larcker, D. F., S. A. Richardson, and I. Tuna. 2007. Corporate governance, accounting outcomes, and organizational performance. *Account Rev* 82 (4): 963–1008.
Lee, D., and T. Lemieux. 2010. Regression discontinuity designs in economics. *J Econ Literature* 48: 281–355.
Lin, C., L. Wei, and W. Xie. 2020. Managerial entrenchment and information production. *J Financial Quantitative Analysis* 55 (8): 2500-2529.
Listokin, Y. 2008. Management always wins the close ones. *Am Law Econ Rev* 10 (2): 159–184.
McCrary, J. 2008. Manipulation of the running variable in the RDD: A density test. *J Econometrics* 142: 698–714.
Moody's Corporation Shareholder Meeting. 2009. Definitive Proxy Statement, page 41. https://www.sec.gov/Archives/edgar/data/1059556/000119312509057760/ddef14a.htm#toc71277_53.
Morck, R., A. Shleifer, and R. W. Vishny. 1988. Management ownership and market valuation: An empirical analysis. *J Financial Econ* 20: 293–315.
Pound, J. 1992. Raiders, targets, and politics: The history and future of American corporate control. *J Applied Corp Finance* 5 (3): 6–18.
Renneboog, L., and P. G. Szilagyi. 2011. The role of shareholder proposals in corporate governance. *J Corp Finance* 17 (1): 167−188.
Roychowdhury, S. 2006. Earnings management through real activities manipulation. *J Account Econ* 42 (3): 335–370.
Schipper, K. 1989. Commentary on earnings management. *Account Horizons* 3: 91–102.
Sun, Y., W. Wang, X. Wang, and W. Zhang. 2013. Shareholder activism and earnings management incentives: An empirical examination of shareholder proposals in the United States. *J Int Financial Management Account* 24 (3): 234–260.
Tepalagul, N., and L. Lin. 2015. Auditor independence and audit quality: A literature review. *J Account Auditing Finance* 30 (1): 101–121.

Thistlethwaite, D. L., and D. T. Campbell. 1960. Regression-discontinuity analysis: An alternative to the ex-post facto experiment. *J Educ Psychology* 51 (6): 309–317.

Thomas, R. S., and J. F. Cotter. 2007. Shareholder proposals in the new millennium: Shareholder support, board response, and market reaction. *J Corp Finance* 13 (2-3): 368–391.

Xie, B., W. Davison, and P. Da Dalt. 2003. Earnings management and corporate governance: The role of the board and the audit committee. *J Corp Finance* 9 (3): 295–316.

Yermack, D. 1996. Higher market valuation of companies with a small board of directors. *J Financial Econ* 40 (2): 185–211.

Zang, A. Y. 2012. Evidence on the trade-off between real activities manipulation and accrual-based earnings management. *Accounting Rev* 87 (2): 675–703.

Figure 1 Smoothness Test

This graph plots the density of the governance proposal vote shares following the procedure in McCrary (2008). The x-axis is the percentage of votes. The small circles depict the density estimates. The solid line represents the fitted density function of the forcing variable (the number of votes) with a 95% confidence interval around the fitted line. The discontinuity estimate is 0.056, with a standard error of 0.175.

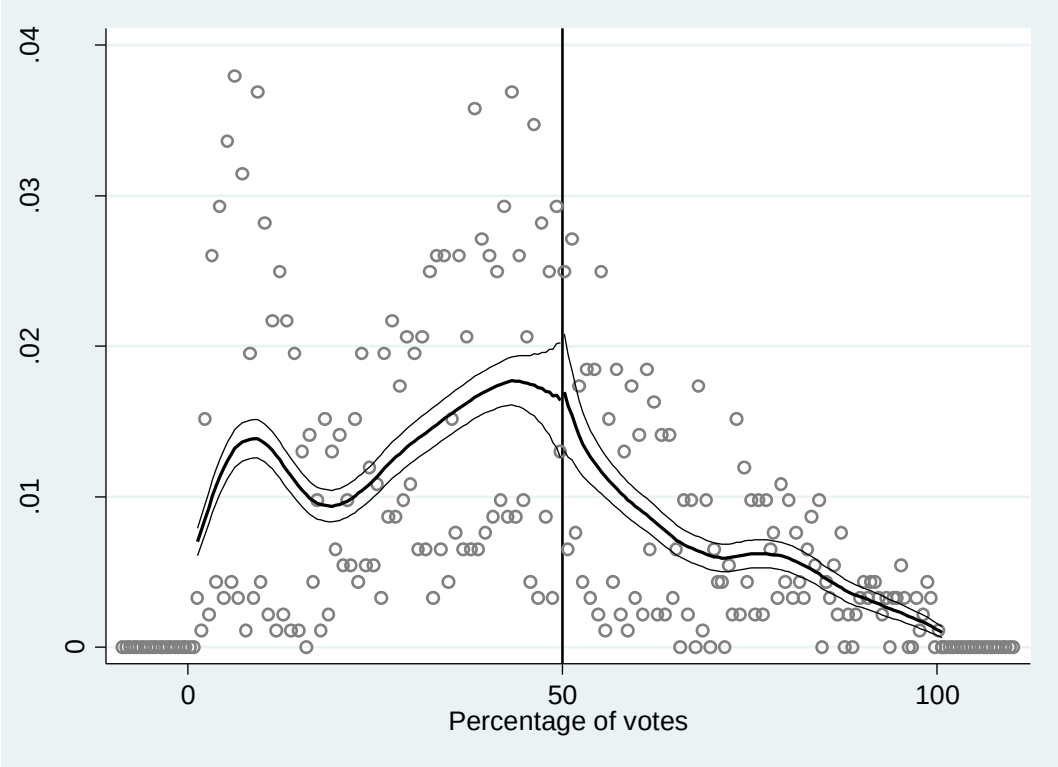

Table 1 Within-Sample Distribution of Shareholder Proposals over Time

Table 1 presents the summary statistics for the 1,845 shareholder proposals from S&P 1500 firms and from the 500 most widely held firms in our sample. The threshold for passing a proposal is 50%. The table reports the frequency and percentage of passed proposals and the average percentage of votes in support of proposals over time.

Year	No. of Proposals	No. of Passed Proposals	Percentage of Passed Proposals	Average Percentage of Votes in Support of Proposal
1997	36	3	8.33%	18.03%
1998	47	4	8.51%	22.64%
1999	55	11	20.00%	29.93%
2000	62	16	25.81%	30.47%
2001	72	25	34.72%	33.97%
2002	92	30	32.61%	34.68%
2003	137	50	36.50%	38.52%
2004	121	37	30.58%	34.09%
2005	122	31	25.41%	35.30%
2006	141	52	36.88%	43.11%
2007	136	32	23.53%	37.90%
2008	126	51	40.48%	48.78%
2009	150	64	42.67%	46.84%
2010	115	38	33.04%	44.94%
2011	87	35	40.23%	50.13%
2012	123	48	39.02%	49.65%
2013	121	41	33.88%	44.70%
2014	88	26	29.55%	43.40%

Table 2 Summary Statistics

Table 2 reports the summary statistics for our main samples. In all analyses, we include observations in the [*t-2*, *t+4*] window around the year of the annual meeting. We require the accrual and real earnings management measures, as well as the control variables, to be available. Panel A reports the summary statistics for the measures of accrual-based earnings management. We use the modified Jones (1991) model and the performance-adjusted modified Jones model (adjusted by lagged ROA or ROA) from Kothari et al. (2005) to calculate abnormal discretionary accruals. The measures calculated using these models are *DA*, *DA_LROA*, and *DA_ROA*, respectively. The underlying accrual models (the modified Jones and the performance-adjusted modified Jones models) include a constant term. Panel B reports the summary statistics for the measures of real earnings management. We follow Roychowdhury (2006) in calculating the abnormal discretionary real earnings management measures. *AB_CFO* is the abnormal discretionary cash flow from operations multiplied by -1. *AB_EXP* is abnormal discretionary expenses multiplied by -1. *AB_PROD* is the abnormal discretionary production costs. *REM1* is the sum of *AB_CFO* and *AB_EXP*, following Cohen and Zarowin (2010). *REM2* is the sum of *AB_EXP* and *AB_PROD*. Following Cohen et al. (2008), *REM* is the sum of *AB_CFO*, *AB_EXP*, and *AB_PROD*. Panel C reports our control variables. Appendix A provides the variable definitions.

	N	Mean	Median	Std Dev	25th %	75th %
Panel A: Accrual-based Earnings Management Measures						
DA	4,991	0.000	0.000	0.039	-0.020	0.020
DA_LROA	4,991	-0.001	-0.001	0.038	-0.021	0.019
DA_ROA	4,991	0.000	-0.001	0.038	-0.021	0.020
Panel B: Real Earnings Management Measures						
AB_CFO	5,910	-0.004	-0.002	0.065	-0.041	0.034
AB_EXP	5,050	-0.003	0.008	0.155	-0.081	0.093
AB_PROD	5,637	-0.003	-0.001	0.140	-0.083	0.076
REM1	5,049	-0.009	0.002	0.187	-0.110	0.113
REM2	4,836	-0.015	0.002	0.276	-0.165	0.153
REM	4,835	-0.022	-0.010	0.315	-0.205	0.183
Panel C: Control Variables						
BTM	5,911	0.413	0.336	0.285	0.213	0.545
SIZE	5,911	9.168	9.380	1.610	8.212	10.331
LEV	5,911	0.568	0.575	0.193	0.442	0.706
ROA	5,911	0.058	0.062	0.085	0.027	0.099
ANALYST	5,911	2.896	3.135	0.760	2.565	3.367
MEDIA	5,911	50.122	50.272	1.102	49.547	50.892

Table 3 Pre-voting Differences

Table 3 reports the relation between the passage of a proposal and the earnings management activity prior to the meeting. Panel A reports the results for accrual-based earnings management, and Panel B reports the results for real earnings management. The dependent variables are measures of earnings management. Each entry reports the coefficient on the independent variable, a dummy variable that equals 1 if a proposal is passed and 0 otherwise. Columns (1) and (2) include measures of earnings management 2 years prior to the annual meeting. Columns (3) and (4) include measures of earnings management 1 year prior to the meeting. For all columns, we control for fiscal year fixed effects and include the control variables *BTM*, *SIZE*, *LEV*, *ROA*, *ANALYST*, and *MEDIA*. For simplicity, the coefficients on the control variables are not tabulated. In columns (2) and (4), we introduce second-order polynomials in the vote shares on each side of the threshold. Standard errors are clustered at the firm level. *P*-values are in parentheses. Significance at the 10%, 5%, and 1% levels is indicated by *, **, and ***, respectively.

Panel A: Measures of Accrual-based Earnings Management				
	Before Meeting (*t-2*)		Before Meeting (*t-1*)	
	(1)	(2)	(3)	(4)
DA	0.001	-0.002	0.005	0.006
	(0.810)	(0.653)	(0.102)	(0.281)
DA_LROA	0.000	-0.002	0.004	0.003
	(0.894)	(0.735)	(0.251)	(0.539)
DA_ROA	0.000	-0.002	0.004	0.004
	(0.898)	(0.652)	(0.214)	(0.508)
POLYNOMIAL TERMS	No	Yes	No	Yes
Panel B: Measures of Real Earnings Management				
	Before Meeting (*t-2*)		Before Meeting (*t-1*)	
	(1)	(2)	(3)	(4)
AB_CFO	-0.004	0.001	-0.000	0.004
	(0.458)	(0.928)	(0.995)	(0.547)
AB_EXP	0.020	0.021	0.020	0.028
	(0.187)	(0.346)	(0.149)	(0.174)
AB_PROD	-0.011	-0.007	-0.006	0.004
	(0.353)	(0.694)	(0.620)	(0.816)
REM1	0.019	0.022	0.024	0.035
	(0.262)	(0.366)	(0.143)	(0.140)
REM2	0.015	0.001	0.025	0.035
	(0.560)	(0.974)	(0.318)	(0.375)
REM	0.014	0.001	0.029	0.044
	(0.621)	(0.989)	(0.297)	(0.315)
POLYNOMIAL TERMS	No	Yes	No	Yes

Table 4 Shareholder Proposals and Accrual-Based Earnings Management

Table 4 reports the regression analyses for the effect of the passage of a shareholder proposal on accrual-based earnings management. The dependent variable in columns (1) and (2) is *DA*, in columns (3) and (4) it is *DA_LROA*, and it is *DA_ROA* in columns (5) and (6). In columns (1), (3), and (5), *PASS* is a dummy variable that equals 1 if a firm has a proposal for which the percentage of votes is equal to or greater than 50% and the observation is in year *t* (*t+1, t+2, t+3, t+4*) and 0 otherwise. In columns (2), (4), and (6), *PASS_T* (*PASS_T+1*, *PASS_T+2*, *PASS_T+3*, and *PASS_T+4*) is a dummy variable that equals 1 if a firm has a proposal for which the percentage of votes is equal to or greater than 50% in the meeting year and the observation is in year *t* (*t+1, t+2, t+3, t+4*) and 0 otherwise. All columns include second-order polynomials in the vote shares on each side of the threshold and control for fiscal year fixed effects, distance-to-the-election fixed effects, and firm-meeting fixed effects. Standard errors are clustered at the firm level. *P*-values are in parentheses. Significance at the 10%, 5%, and 1% levels is indicated by *, **, and ***, respectively. Please refer to Appendix A for the variable definitions.

	DA		*DA_LROA*		*DA_ROA*	
	(1)	(2)	(3)	(4)	(5)	(6)
PASS	-0.012***		-0.010**		-0.010**	
	(0.006)		(0.014)		(0.012)	
PASS_T		-0.018***		-0.016***		-0.018***
		(0.001)		(0.003)		(0.001)
PASS_T+1		-0.012**		-0.011*		-0.010*
		(0.040)		(0.068)		(0.079)
PASS_T+2		-0.015***		-0.014**		-0.014**
		(0.008)		(0.013)		(0.012)
PASS_T+3		-0.004		-0.002		-0.001
		(0.549)		(0.733)		(0.900)
PASS_T+4		-0.003		-0.001		-0.002
		(0.652)		(0.868)		(0.696)
BTM	0.012	0.012	0.015	0.015	0.012	0.013
	(0.234)	(0.206)	(0.150)	(0.129)	(0.221)	(0.191)
SIZE	0.004	0.005	0.007	0.007	0.007	0.007
	(0.512)	(0.482)	(0.332)	(0.308)	(0.277)	(0.260)
LEV	0.006	0.007	0.014	0.015	0.000	0.001
	(0.710)	(0.688)	(0.396)	(0.372)	(0.987)	(0.971)
ROA	0.100***	0.099***	0.094***	0.092***	0.041	0.040
	(0.001)	(0.001)	(0.001)	(0.001)	(0.135)	(0.145)
ANALYST	-0.003	-0.003	-0.005	-0.005	-0.005	-0.005
	(0.535)	(0.528)	(0.306)	(0.299)	(0.290)	(0.282)
MEDIA	0.001	0.001	0.001	0.001	0.001	0.001
	(0.474)	(0.452)	(0.471)	(0.450)	(0.470)	(0.444)
Constant	-0.057	-0.092	-0.079	-0.115	-0.071	-0.106
	(0.548)	(0.337)	(0.411)	(0.230)	(0.456)	(0.271)
Obs	4991	4991	4991	4991	4991	4991
R^2	0.312	0.316	0.306	0.310	0.304	0.308

Table 5 Shareholder Proposals and Real Earnings Management

Table 5 reports the analyses for the effect of the passage of a shareholder proposal on real earnings management. The dependent variable in columns (1) and (2) is *REM1*, in columns (3) and (4) it is *REM2*, and it is *REM* in columns (5) and (6). In columns (1), (3), and (5), *PASS* is a dummy variable that equals 1 if a firm has a proposal for which the percentage of votes is equal to or greater than 50% and the observation is in year *t* (*t+1, t+2, t+3, t+4*) and 0 otherwise. In columns (2), (4), and (6), *PASS_T* (*PASS_T+1, PASS_T+2, PASS_T+3*, and *PASS_T+4*) is a dummy variable that equals 1 if a firm has a proposal for which the percentage of votes is equal to or greater than 50% in the meeting year and the observation is in year *t* (*t+1, t+2, t+3, t+4*) and 0 otherwise. All columns include second-order polynomials in the vote shares on each side of the threshold and control for fiscal year fixed effects, distance-to-the-election fixed effects, and firm-meeting fixed effects. Standard errors are clustered at the firm level. *P*-values are in parentheses. Significance at the 10%, 5%, and 1% levels is indicated by *, **, and ***, respectively. Please refer to Appendix A for variable definitions.

	REM1		*REM2*		*REM*	
	(1)	(2)	(3)	(4)	(5)	(6)
PASS	-0.042***		-0.051***		-0.063***	
	(0.001)		(0.002)		(0.001)	
PASS_T		-0.050***		-0.055***		-0.072***
		(0.000)		(0.001)		(0.000)
PASS_T+1		-0.044***		-0.051***		-0.069***
		(0.004)		(0.005)		(0.003)
PASS_T+2		-0.040**		-0.051**		-0.060**
		(0.017)		(0.023)		(0.026)
PASS_T+3		-0.028*		-0.033		-0.038
		(0.093)		(0.168)		(0.160)
PASS_T+4		-0.041**		-0.067***		-0.075***
		(0.015)		(0.007)		(0.007)
BTM	0.093***	0.092***	0.110***	0.110***	0.145***	0.145***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
SIZE	0.036**	0.036**	0.096***	0.097***	0.103***	0.104***
	(0.034)	(0.031)	(0.000)	(0.000)	(0.001)	(0.001)
LEV	0.012	0.012	0.036	0.038	0.101	0.103
	(0.825)	(0.831)	(0.639)	(0.617)	(0.250)	(0.239)
ROA	-0.101*	-0.103*	-0.110	-0.110	-0.284***	-0.285***
	(0.070)	(0.065)	(0.222)	(0.224)	(0.005)	(0.005)
ANALYST	-0.006	-0.007	0.003	0.002	-0.008	-0.008
	(0.567)	(0.541)	(0.831)	(0.856)	(0.633)	(0.616)
MEDIA	-0.001	-0.001	0.002	0.002	0.006	0.006
	(0.786)	(0.794)	(0.573)	(0.560)	(0.242)	(0.237)
Constant	-0.298	-0.308	-1.099***	-1.105***	-1.336***	-1.358***
	(0.194)	(0.187)	(0.000)	(0.000)	(0.000)	(0.000)
Obs	5049	5049	4836	4836	4835	4835
R^2	0.861	0.862	0.886	0.886	0.878	0.879

Table 6 Robustness Checks

Table 6 reports the results of the robustness checks. Panel A reports the analyses for the effect of the passage of a shareholder proposal on other measures of earnings management. The dependent variables are *AB_CFO*, *AB_EXP*, *AB_PROD*, and *MB_AF_ANN* in, respectively, columns (1), (2), (3), and (4). *MB_AF_ANN* equals 1 if the actual EPS is equal to or above 3 cents of the latest consensus analyst forecast EPS, calculated before the earnings announcement, and 0 otherwise. Panel B reports the effect of shareholder proposals using a pseudo-passing threshold. Panel C reports the simple OLS analysis and the effect of proposals in which the vote percentage is close to the passing threshold. The optimal bandwidth is calculated following Imbens and Kalyanaraman (2012) and Calonico et al. (2014). For all panels, *PASS* is a dummy variable that equals 1 if a firm has a proposal for which the percentage of votes is equal to or greater than 50% and 0 otherwise. All columns include second-order polynomials in the vote shares on each side of the threshold. For all panels, we control for fiscal year fixed effects, distance-to-the-election fixed effects, and firm-meeting fixed effects. Standard errors are clustered at the firm level. *P*-values are in parentheses. Significance at the 10%, 5%, and 1% levels is indicated by *, **, and ***, respectively. Please refer to Appendix A for variable definitions.

Panel A: Other Measures of Earnings Management

	AB_CFO	*AB_EXP*	*AB_PROD*	*MB_AF_ANN*
	(1)	(2)	(3)	(4)
PASS	-0.008	-0.030***	-0.021**	-0.093*
	(0.134)	(0.004)	(0.029)	(0.067)
BTM	0.031***	0.056***	0.046***	-0.039
	(0.007)	(0.001)	(0.002)	(0.615)
SIZE	0.009	0.030**	0.068***	-0.125**
	(0.296)	(0.033)	(0.000)	(0.048)
LEV	0.040*	-0.054	0.061	0.054
	(0.074)	(0.243)	(0.117)	(0.764)
ROA	-0.168***	0.061	-0.261***	0.306
	(0.000)	(0.166)	(0.003)	(0.225)
ANALYST	-0.002	0.002	0.006	-0.039
	(0.782)	(0.757)	(0.527)	(0.382)
MEDIA	0.003*	-0.005*	0.006***	0.006
	(0.095)	(0.057)	(0.006)	(0.704)
Constant	-0.258**	-0.093	-0.981***	1.480
	(0.039)	(0.634)	(0.000)	(0.115)
Obs	5910	5050	5637	5528
R^2	0.693	0.868	0.833	0.414

Panel B: Effect of Pseudo-passing Threshold				
PSEUDO_PASS =	*PSEUDO_PASS40%*		*PSEUDO_PASS60%*	
	DA_ROA	*REM*	*DA_ROA*	*REM*
	(1)	(2)	(3)	(4)
PSEUDO_PASS	-0.004	-0.025	-0.004	-0.007
	(0.348)	(0.222)	(0.445)	(0.756)
BTM	0.010	0.136***	0.010	0.136***
	(0.303)	(0.000)	(0.305)	(0.000)
SIZE	0.009	0.118***	0.006	0.118***
	(0.193)	(0.003)	(0.447)	(0.003)
LEV	0.001	0.065	0.006	0.068
	(0.969)	(0.476)	(0.710)	(0.457)
ROA	0.031	-0.288***	0.078***	-0.287***
	(0.165)	(0.002)	(0.006)	(0.003)
ANALYST	-0.007	-0.013	-0.004	-0.013
	(0.210)	(0.434)	(0.445)	(0.433)
MEDIA	0.001	0.005	0.001	0.006
	(0.488)	(0.247)	(0.380)	(0.237)
Constant	-0.107	-1.411***	-0.105	-1.426***
	(0.281)	(0.001)	(0.296)	(0.000)
Obs	4991	4835	4991	4835
R^2	0.293	0.873	0.299	0.873

Panel C: OLS Regression and Close-call Proposals

	OLS Analysis		Optimal Bandwidth		Fixed Bandwidth			
			(37.166%, 62.834%)	(36.151%, 63.849%)	(40%, 60%)		(35%, 65%)	
	DA_ROA	*REM*	*DA_ROA*	*REM*	*DA_ROA*	*REM*	*DA_ROA*	*REM*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
PASS	-0.001	-0.009	-0.006*	-0.031*	-0.008*	-0.038**	-0.006*	-0.030*
	(0.628)	(0.552)	(0.086)	(0.068)	(0.062)	(0.044)	(0.071)	(0.069)
BTM	0.010	0.137***	0.010	0.170***	0.007	0.202***	0.006	0.165***
	(0.282)	(0.000)	(0.420)	(0.000)	(0.569)	(0.000)	(0.589)	(0.000)
SIZE	0.009	0.117***	0.007	0.098***	0.009	0.085***	0.009	0.095***
	(0.188)	(0.003)	(0.305)	(0.005)	(0.200)	(0.007)	(0.182)	(0.006)
LEV	0.001	0.064	-0.012	0.122	-0.008	0.146*	-0.014	0.126
	(0.943)	(0.484)	(0.616)	(0.136)	(0.788)	(0.069)	(0.555)	(0.121)
ROA	0.031	-0.288***	0.040	-0.330**	0.040	-0.366***	0.032	-0.353***
	(0.164)	(0.003)	(0.280)	(0.011)	(0.253)	(0.003)	(0.370)	(0.007)
ANALYST	-0.006	-0.011	-0.010	-0.001	-0.011	0.015	-0.011*	0.001
	(0.212)	(0.492)	(0.199)	(0.979)	(0.208)	(0.568)	(0.097)	(0.958)
MEDIA	0.001	0.006	0.001	0.007	0.000	0.009	0.001	0.007
	(0.433)	(0.232)	(0.650)	(0.264)	(0.841)	(0.153)	(0.772)	(0.254)
Constant	-0.124	-1.450***	-0.083	-1.396***	-0.078	-1.461***	-0.064	-1.365***
	(0.232)	(0.001)	(0.501)	(0.002)	(0.536)	(0.001)	(0.578)	(0.002)
Obs	4991	4835	2366	2416	2002	1966	2651	2591
R^2	0.292	0.873	0.320	0.889	0.323	0.894	0.321	0.892

Table 7 The Effects of Different Types of Proposals on Accrual-based and Real Earnings Management

This table reports the effect of the passage of different types of proposals on accrual-based and real earnings management. Columns (1)–(4) report the analyses for governance structure proposals aimed at improving board independence and governance, including proposals for compensation plans and golden parachutes (Cuñat et al., 2012). Columns (7)–(10) report the analyses for compensation proposals. Columns (3), (4), (9), and (10) use an alternative classification, reclassifying proposals for compensation plans and golden parachutes as compensation rather than as governance structure proposals. Governance structure proposals and compensation proposals are restricted to the samples in which only one type of proposal passes. Columns (5) and (6) report analyses for financial reporting proposals, including those related to auditor independence and clawbacks. *PASS* is a dummy variable that equals 1 if a firm has a proposal with a percentage of votes greater than 50% in the meeting year and the observation is in year *t* (*t+1, t+2, t+3, t+4*) and 0 otherwise. All columns include second-order polynomials in the vote shares on each side of the threshold. In columns (5) and (6), the models control for fiscal year fixed effects and standard errors are clustered at the industry level. For other columns, the models control for fiscal year fixed effects, distance-to-the-election fixed effects, and firm-meeting fixed effects, with standard errors clustered at the firm level. *P*-values are in parentheses. Significance at the 10%, 5%, and 1% levels is indicated by *, **, and ***, respectively. Please refer to Appendix A for variable definitions.

	Governance structure proposals		Governance structure proposals - alternative classification		Financial reporting proposals		Compensation proposals		Compensation proposals - alternative classification	
	DA_ROA	*REM*	*DA_ROA*	*REM*	*DA_ROA*	*REM*	*DA_ROA*	*REM*	*DA_ROA*	*REM*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
PASS	-0.013*	-0.078**	-0.014*	-0.091***	-0.020***	0.210***	-0.019	-0.065	-0.021	-0.061
	(0.073)	(0.012)	(0.077)	(0.006)	(0.003)	(0.006)	(0.152)	(0.417)	(0.129)	(0.373)
BTM	0.002	0.132***	-0.000	0.126***	0.047***	0.686**	0.020	0.240***	0.017	0.223***
	(0.870)	(0.000)	(0.983)	(0.000)	(0.002)	(0.018)	(0.174)	(0.001)	(0.289)	(0.001)
SIZE	0.016	0.099***	0.018*	0.108***	-0.006**	0.095*	-0.006	0.074	-0.005	0.070
	(0.131)	(0.001)	(0.091)	(0.000)	(0.024)	(0.067)	(0.337)	(0.261)	(0.417)	(0.266)
LEV	-0.012	0.149	-0.009	0.155	0.043***	0.184	0.015	-0.016	0.006	-0.024
	(0.571)	(0.135)	(0.683)	(0.126)	(0.001)	(0.502)	(0.578)	(0.909)	(0.823)	(0.865)
ROA	0.042*	-0.198**	0.042*	-0.191**	0.109*	-2.150	0.015	-0.326*	0.021	-0.335*
	(0.093)	(0.035)	(0.090)	(0.044)	(0.066)	(0.164)	(0.683)	(0.099)	(0.531)	(0.077)
ANALYST	-0.005	0.007	-0.005	0.007	0.005	-0.150	-0.003	-0.022	-0.004	-0.018
	(0.448)	(0.787)	(0.407)	(0.794)	(0.301)	(0.151)	(0.733)	(0.390)	(0.673)	(0.473)
MEDIA	0.001	0.003	0.001	0.004	0.001	0.087**	0.002	0.003	0.002	-0.002
	(0.647)	(0.651)	(0.535)	(0.573)	(0.671)	(0.034)	(0.291)	(0.771)	(0.412)	(0.822)
Constant	-0.148	-1.184***	-0.177	-1.286***	-0.037	-4.976**	-0.047	-0.942	-0.016	-0.676
	(0.267)	(0.004)	(0.182)	(0.002)	(0.748)	(0.021)	(0.701)	(0.179)	(0.890)	(0.314)
Obs	2744	2667	2567	2490	172	158	1018	954	1192	1120
R^2	0.313	0.869	0.312	0.868	0.219	0.592	0.289	0.853	0.307	0.854