Lower Defeat Thresholds for Minority Shareholders and Corporate Governance: Evidence from the Australian "Two-Strikes" Rule

ABSTRACT

This study assesses the impact of minority shareholder empowerment via lower defeat thresholds in "say-on-pay" votes on CEO compensation and career prospects for directors. We exploit the adoption of the Australian "two-strikes" rule as a quasi-exogenous shock, which empowers shareholders to vote on board dismissal if a firm's remuneration report receives 25 percent or more dissent votes for two consecutive years. Using a difference-in-differences methodology, we find that firms respond to a "strike" by curbing excessive CEO pay. Under the two-strikes regime, independent directors are held more accountable for poor oversight and experience significant reputational penalties in terms of turnover and the loss of outside directorships subsequent to receiving a strike. The results are mainly driven by firms receiving a non-majority strike, indicating that the effectiveness of the two-strikes regime stems largely from the lower defeat threshold.

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Data Availability: Data are available from the public sources cited in the text.

I. INTRODUCTION

The empowerment of minority shareholders and the protection of their interests are key themes of share market regulation. Several regulatory measures have recently been introduced and studied with the goal of empowering minority shareholders in relation to shareholder voting. For example, "say-on-pay" legislation has been introduced in many countries and its merits (or lack thereof) have been heavily debated. Proponents argue that it strengthens shareholder voting rights, limits excessive executive compensation, and heightens directors' reputational concerns (Bebchuk, A. Friedman, and W. Friedman 2007). In contrast, opponents maintain that it may cause directors to pander to shareholders who lack the information, expertise, and sophistication to judge compensation practices (Kaplan 2007; Bainbridge 2009). Another measure used to empower minority shareholders is to provide them veto rights over certain corporate transactions. For example, Fried, Kamar, and Yafeh (2020) show that the 2011 Israeli reform provides minority shareholders with veto rights over related-party transactions, which curbs controller-executive pay and accordingly acts as an effective governance tool.

In this study, we examine the effectiveness of another measure, lower defeat thresholds in shareholder voting, as a means of empowering minority shareholders and improving governance. This analysis is conducted by exploiting the Australian "two-strikes" rule, enacted in 2011, as a quasi-exogenous shock. Between 2005 and 2010, Australian shareholders were permitted to cast a non-binding vote on executive and non-executive remuneration at each annual general meeting (AGM). Following criticism (Clarkson, Walker, and Nicholls 2011; Productivity Commission 2009) that firms were unresponsive to shareholder dissent on remuneration, the Australian Government legislated the two-strikes rule, which allows shareholders to vote on "spilling" the board if the remuneration report receives a "no" vote of 25 percent or more at two consecutive AGMs.

Unlike the non-binding "say-on-pay" arrangements with majority-based voting regimes adopted by the US and the UK, Australia's two-strikes rule incorporates a number of unique features that empower minority shareholders and introduce penalties for a lack of responsiveness to shareholder dissent.¹ First, the two-strikes rule only requires a 25 percent vote against the

¹ Obermann and Velte (2018) present an international overview and comparison of say-on-pay regulation.

remuneration report to trigger a "strike" (i.e., lower defeat thresholds), standing in contrast to the majority-based say-on-pay votes in other countries. Prior literature has found a low dissent vote for remuneration resolutions, particularly for firms with a high ownership concentration (Conyon and Sadler 2010). Theoretical models presented by Levit and Malenko (2011) suggest a positive association between shareholder voting power and voting against controversial resolutions (e.g., remuneration), as shareholders tend not to vote against management unless their votes are likely to affect the outcome. Consistent with this notion, the lower threshold for registering dissent is designed to empower minority shareholders to express their views on executive compensation, as well as to provide incentives for non-executive directors to take action on CEO compensation following a first strike. Accordingly, this lower threshold is associated with more strikes than would otherwise occur in settings requiring a majority vote (e.g., in the US and UK).

Second, under the two-strikes rule, if a firm obtains two consecutive strikes and shareholders pass a third majority-based "spill vote," each director position (except the CEO) is spilled and a new board election is held. This feature represents a direct threat to the future careers of non-executive directors; furthermore, it gives non-executive directors *ex-ante* incentives to monitor executive compensation and respond to shareholder dissatisfaction by altering remuneration levels and practices, either by adjusting compensation or changing governance arrangements.

Finally, the legislation excludes parties included in the remuneration report from voting on the report (i.e., exclusion of related-party votes).² As prior literature has identified a negative relation between insider ownership and shareholder dissent (Conyon and Sadler 2010; Ertimur, Ferri, and Muslu 2011), this rule removes the diluting impact of insider ownership on the percentage of shareholder dissent, thus empowering minority shareholders and increasing the threat of receiving a strike for firms with high insider ownership.

Anecdotal evidence suggests that the two-strikes rule has reduced excessive executive pay, improved firm-initiated shareholder engagement and increased disclosure quality (Egan 2016;

 $^{^2}$ See Section 250R(4) of the Corporations Act. However, directors can still vote in board elections at the spill meeting if a board spill occurs (Section 250E of the Corporations Act). By contrast, there is no similar restriction for UK and US directors or parties included in the remuneration report with regard to voting on the say-on-pay resolution.

Kenny 2017).³ However, its critics argue that the rule is costly and ineffective. Possible costs associated with the two-strikes rule include the undue power of a small group of major shareholders to trigger a strike (BIS 2012) and shareholders using the remuneration report vote as a general protest vote due to dissatisfaction with company performance and management (Egan 2016). In addition, under the two-strikes rule, the lower defeat thresholds only apply to the resolution adopting the remuneration report, while the spill resolution to dismiss the board and director re-election remain majority-based. Therefore, shareholders still need to attain majority votes to spill the board and change its composition. More importantly, the exclusion of related-party votes only applies to the say-on-pay vote; thus, related parties, including directors, can use their power to re-elect the existing directors once a spill has occurred, which substantially dilutes the power of minority shareholders.⁴ Accordingly, the costs pertaining to remuneration strikes may not be sufficiently substantive to materially influence board incentives and corporate remuneration practice. Consistent with this view, the two-strikes rule and its 25 percent threshold have been widely challenged by executives, business practitioners and even regulators themselves.⁵

Thus, it remains an empirical question as to whether a failure to address minority shareholder concerns, as indicated by minority strikes, has real consequences for remuneration practice and director career outcomes. In addition, there is scant empirical evidence regarding whether lower defeat thresholds in shareholder voting have any material impact. Our analysis is undertaken using hand-collected data pertaining to shareholder dissent for Australian Securities Exchange (ASX) firms during 2006–2014. We conduct a difference-in-differences (DiD) analysis⁶ by comparing firms with shareholder dissent levels *at or above 25 percent but lower*

³ Durkin and Tadros (2012) report that dozens of Australian listed firms lowered the increase in total executive remuneration and reduced annual cash bonuses for their CEOs by eight per cent in 2012 after receiving a strike in 2011. For example, BlueScope Steel reduced the overall bonuses by 67%.

⁴ For example, Globe International received a second strike and passed the spill resolution in November 2012. However, as the CEO Matthew Hill and his brothers held a total of 69% of shares in the firm, both Hill and board chairman Paul Isherwood indicated publicly that they would simply use their voting power to re-elect the existing directors.

⁵ For example, a former supervisor at the Australian Prudential Regulation Authority, Fahmi Hosain, said that "We have to get rid of the two-strikes rule because it's enabling shareholders to have a huge sway in terms of remuneration structuring going forward" (Fernyhough 2019). In addition, in a survey conducted by a leading international law firm (Allens Linklaters) in 2012, 72% of its Australian listed clients support the abolition of the two-strikes rule.

⁶ In this study, we use two-way fixed effects DiD regressions to estimate the effect of the two-strikes policy, given that our setting comprises one single treatment period. Baker et al. (2022) show that DiD estimates are valid and

than 50 percent ("treatment" firms) and those with dissent votes lower than 25 percent ("control" firms), before and after the adoption of the two-strikes rule, to assess the impact of receiving minority strikes on CEO pay and career consequences for directors triggered by the two-strikes regime.⁷ To control for potential sample selection bias, we use an alternative "control" group based on the entropy balancing approach (Hainmueller 2012; McMullin and Schonberger 2020) to mitigate the differences in covariate means between the treatment and control groups to ensure that such differences are unlikely to spuriously drive the empirical results.⁸ We further include firm and year fixed effects to control for unobserved firm-specific or time-variant confounding covariates.

We first analyze the determinants of minority strikes. We find that the likelihood of minority strikes is positively associated with abnormal CEO pay, suggesting that shareholders are able to distinguish between "justifiable" and "unjustifiable" components of CEO remuneration (Conyon and Sadler 2010; Ertimur et al. 2011). Shareholder votes against executives' pay are largely a reaction to compensation arrangements rather than poor firm performance, because the likelihood of minority strikes is not associated with a firm's financial or market performance. The results therefore indicate that the occurrence of minority strikes tends to reflect shareholder concerns regarding excess compensation rather than general shareholder dissatisfaction.

We next examine whether lower defeat thresholds trigger greater responsiveness to shareholder say-on-pay votes in the form of adjustments to CEO compensation. Empirical evidence in the US and UK generally suggests that say-on-pay has an insignificant effect on the level or structure of future compensation, perhaps due to the non-binding nature of the votes.⁹ In contrast to prior evidence, our results reveal a significant decrease in abnormal CEO pay for firms that received minority strikes following the adoption of the two-strikes rule, while there is no significant decline in abnormal CEO pay for strike firms before 2011. Thus, our findings

unbiased in settings with a single treatment period (even with dynamic treatment effects), in contrast to DiD estimates with staggered treatment timing.

⁷ For convenience, we use the term "minority strike" to refer to firms that report shareholder dissatisfaction levels at or above 25 percent but lower than 50 percent both before and after the adoption of the two-strikes rule. ⁸ See Section III for a more detailed discussion.

⁹ In the US, Armstrong, Larcker, Ormazabal, and Taylor (2013) and Cuñat, Giné, and Guadalupe (2016) find that the adoption of say-on-pay has little impact on the levels and structure of CEO pay. Carter and Zamora (2009) and Conyon and Sadler (2010) report similar results for UK firms. Correa and Lel (2016) and Iliev and Vitanova (2019) document an *increase* in the level of CEO pay following the introduction of say-on-pay laws.

provide evidence consistent with a lower threshold in the two-strikes mechanism leading to Australian firms being more responsive to shareholder dissent by curbing excessive CEO pay.

We then investigate whether low defeat thresholds provide directors with higher *ex-ante* incentives for monitoring due to the potential reputational and career damage associated with receiving minority strikes (Fama and Jensen 1983) than was the case under the previous non-binding regime that operated during 2005–2010. We analyze director turnover in strike firms and find an increased likelihood of turnover after minority strikes, with this likelihood increasing significantly following the adoption of the two-strikes rule. Importantly, director turnover after minority strikes appears to be targeted at independent directors, especially those serving on the remuneration committee, suggesting that the market perceives these directors to be more accountable for the monitoring failures highlighted by a strike.

Our analysis of director external labor market consequences indicates that after the introduction of the two-strikes rule, directors incur significant reputational penalties following minority strikes and experience a decrease in the number of outside directorships. The threat of losing outside directorships is most evident for independent directors and remuneration committee chairs relative to other executive directors. This evidence supports *ex-post* settling-up, in that the two-strikes rule increases both directors' accountability and their reputational costs (as reflected by the loss of outside directorships) when firms receive minority strikes.

We conduct several tests to ensure that our findings are robust. We employ a dynamic DiD approach and confirm that our treatment and control samples satisfy the parallel trend criterion. The results of placebo tests also indicate that our results do not appear to be driven by chance or by factors other than the effect of the two-strikes rule. We conduct the Oster (2019) test and find evidence significantly rejecting the null hypothesis that our results of the impacts of minority strikes are driven by an omitted variable bias. In addition, our results are robust to alternative definitions of the treatment group (i.e., strike firms) and the possible confounding effect of the global financial crisis. Finally, because the 25% voting threshold in the two-strikes rule is ad hoc, we examine the effect of different voting thresholds and find that the impacts of lower defeat thresholds on CEO pay and director career consequences are evident in different threshold ranges (e.g., the 35–40% and 45–50% ranges) rather than a single range.

In additional tests, we assess whether our findings are mainly attributed to the lower defeat threshold (i.e., reduced from 50 percent to 25 percent) or driven by the threat of board dismissal or the exclusion of related-party votes. Accordingly, we examine whether a firm's response upon receiving a strike differs between first minority (25–49 percent) strikes, first majority (>50 percent) strikes and second strikes. To the extent that first majority strikes and second strikes at least partially capture the confounding effects of the threat of board dismissal and the exclusion of related-party votes, we expect that the significant effects of strikes on CEO pay, and labor market consequences are predominantly driven by firms receiving minority strikes. This finding lends support to Australia's introduction of lower defeat thresholds in say-on-pay votes to enhance the effectiveness of say-on-pay regulations.

Finally, we examine how the market perceives the implications of receiving a strike. We find a negative and significant market reaction around the announcement of a strike, along with negative abnormal returns over the 12 months following receipt of a strike. These results are consistent with the view that the market regards a strike as a value-destroying sign due to loss of confidence in directors and/or a perception of poor corporate governance (Bebchuk and Cohen 2005; Cremers and Nair 2005; Cai, Garner, and Walkling 2009). Importantly, negative announcement returns, and long-run underperformance are largely attributable to firms receiving a minority first strike, indicating that the introduction of lower voting thresholds prompts investors to regard minority strikes as more important and unexpected than majority strikes.

This study makes several contributions. First, it is among the first to provide evidence on the effectiveness of lower defeat thresholds in shareholder voting on governance and executive compensation. Prior studies have examined charter amendments requiring supermajority shareholder approval for mergers in the context of antitakeover protections (Straska and Waller 2014). Previous research has also examined the causes and consequences of firms implementing supermajority voting for shareholders to approve takeovers as an anti-takeover protection, but present mixed evidence regarding the effect of supermajority voting on shareholder wealth (Harris and Raviv 1988; Karpoff, Malatesta, and Walkling 1996; Kim and Han 2022). In contrast to prior research examining firm-initiated supermajority voting on corporate charter amendments and control contests, our study focuses on legislated supermajority voting in the context of say-on-pay, and examines its effects on executive compensation, governance, and director career consequences.

Second, the present research contributes to the ongoing debate regarding whether nonbinding say-on-pay arrangements achieves its intended purpose of improving the link between accountability and executive compensation. Empirical evidence from several countries supports both views, with results on the impact of say-on-pay on executive remuneration and market reactions remaining mixed (Ferri and Gox 2018). In general, firms tend to respond to say-on-pay votes or regulation adoption by strengthening the link between pay and performance, but making little change to the level of CEO pay.¹⁰ Our study adds to the findings of Correa and Lel (2016), Cuñat et al. (2016) and Iliev and Vitanova (2019), and presents novel evidence on the effectiveness of say-on-pay frameworks as a governance mechanism, which can be enhanced by empowering minority shareholders and reducing the defeat threshold over executive remuneration. We demonstrate that the occurrence of minority strikes tends to reflect shareholder concerns regarding excess pay rather than general shareholder dissatisfaction (Conyon and Sadler 2010; Ertimur et al. 2011). In contrast to prior studies with insignificant results, we document a significant decrease in abnormal CEO pay for firms that receive minority strikes following the adoption of the two-strikes rule.

Third, this study adds to research on *ex-post* settling-up in the director labor market. Prior literature documents that the director labor market imposes significant reputational penalties, in the form of turnover and a reduction in outside board seats, on directors exhibiting poor oversight in firms subject to accounting fraud (Srinivasan 2005; Dou 2017), securities litigation (Brochet and Srinivasan 2014) and proxy contests (Fos and Tsoutsoura 2014). Our study is among the first to provide evidence that these penalties extend to the inefficient monitoring of

¹⁰ See Burns and Minnick (2013) and Correa and Lel (2016) for evidence on pay-for-performance sensitivity, and Carter and Zamora (2009), Conyon and Sadler (2010), Armstrong et al. (2013), Brunarski et al. (2015), Cuñat et al. (2016) and Iliev and Vitanova (2019) for evidence on CEO pay. It is noted that the objective of our study is to analyze the impacts of lower defeat thresholds in say-on-pay votes rather than to resolve the mixed evidence in the existing literature. This is because: (1) given the differing time periods and countries (i.e., mainly USA and UK) investigated in prior research it would be inappropriate to attempt to reconcile mixed findings using Australian data, which has different institutional environments and capital market characteristics compared to other jurisdictions; (2) the treatment sample we examine (i.e., minority-strike firms with shareholder dissent between 25% and 50%) is completely different from those used in prior studies, as these treatment firms would be identified as the control sample in prior research. As such, it is unclear whether the results should be consistent with those in the existing literature; (3) as prior studies adopt different research designs and use alternative approaches to addressing endogeneity, it is beyond the scope of the current paper to attempt to examine whether and how these different choices have led to inconsistent results.

executive compensation. Moreover, we document that the two-strikes rule provides directors with *ex-ante* incentives to engage in effective monitoring or face the reputational damage associated with receiving minority strikes. Our findings differ from those of Ertimur, Ferri, and Maber (2012), who report that directors at firms involved in option backdating do not suffer any significant loss in outside directorships.

Our findings provide policy implications for regulators and corporate stakeholders. Lower voting thresholds in say-on-pay votes, a unique feature of the Australian two-strikes rule, have officially been taken into account as an important (non-exclusive) policy option for a strengthened model of shareholder voting on executive compensation in some countries.¹¹ Our comparison between minority and majority strikes provides evidence to support the beneficial nature of requiring a higher level of shareholder support on pay-related resolutions, which can be applied to any model of shareholding voting. However, we acknowledge that the potential (unintended) costs of a higher level of shareholder support are not yet fully understood. This topic is beyond the scope of the current study, and we leave it for future research. We also acknowledge that the evidence we document is suggestive rather than causal because the treatment firms are not randomly assigned. Although we have employed various approaches to address possible endogeneity, we cannot entirely rule out the possibility that the results are driven by omitted variables. Thus, the results should be interpreted with caution. Another caveat is that our sample ends in 2014 due to the difference-in-differences research design and costs of data collection. The analysis of the data in more recent years could be informative for making policy recommendations and we call for future research.

The remainder of this study is organized as follows. Section 2 discusses the institutional background of the two-strikes rule and presents hypotheses. The sample construction and descriptive statistics are provided in Section 3. Section 4 presents the results for the consequences of remuneration strikes. Additional tests are conducted in Section 5. Finally, Section 6 concludes this study.

¹¹ For example, in its impact assessment of shareholder votes on directors' remuneration, the UK Government outlines the requirement for a higher level of shareholder support on pay-related issues as the third option for consideration, and points out that "one benefit of this would be to encourage companies to improve their engagement with shareholders on the issue of pay, ... [this] would also give more power to those shareholders that are actively engaged in challenging on pay" (BIS 2012, p. 27).

II. INSTITUTIONAL BACKGROUND AND HYPOTHESES

2.1. Institutional background

A non-binding annual shareholder advisory vote on remuneration reports was introduced in Australia through the *Corporate Law Economic Reform (Audit Reform & Corporate Disclosure) Act 2004* (CLERP 9), which became effective on 1 July 2004. However, evidence suggests that—similar to the say-on-pay model adopted in the UK in 2002—the non-binding shareholder votes were largely ignored by Australian firms, despite the growing rate of shareholder dissatisfaction between 2005 and 2008 (Clarkson et al. 2011; Productivity Commission 2009). In June 2011, as a response to the introduction of the *Dodd-Frank Act* in the US and public outrage at excessive corporate executive remuneration (Productivity Commission 2009), the Australian Government introduced the two-strikes rule and approved the *Corporations Amendment (Improving Accountability on Director and Executive Remuneration) Act 2011* (hereafter the *Remuneration Amendment Act*), which took effect on 1 July 2011.¹²

According to the two-strikes rule, a firm receives a strike when the remuneration report receives 25 percent or more "no" votes from eligible shareholders at the AGM. Unlike the nonbinding say-on-pay regime before 2011, a firm receiving a first strike under the new regime must, in the subsequent remuneration report, provide a detailed explanation of the actions that have been taken to address shareholders' concerns (Section 249L (2), the *Remuneration Amendment Act*). A second strike occurs when a first-strike firm receives a subsequent strike in the following year.

In the event of a second strike, shareholders are required to vote on a "spill resolution" to determine whether all directors except the CEO should stand for re-election (Section 250V, the *Remuneration Amendment Act*).¹³ If the spill resolution is approved with a majority of 50 percent or more of eligible votes cast, the firm is required to hold an extraordinary general meeting (the spill meeting) to re-elect all directors except the CEO within 90 days of the AGM.¹⁴ If a firm

¹² Under the *Dodd-Frank Act*, shareholders in publicly listed US firms cast non-binding votes on executive compensation at least once every three years.

¹³ A firm receiving a first strike must provide notice of a potential spill resolution at the subsequent annual general meeting in case a spill resolution is triggered by a second strike. The second strike and the spill resolution are intentionally separated to ensure that shareholders are not discouraged from voting against the remuneration report for fear of director removal.

¹⁴ Following the passing of a spill resolution, the firm must provide the minimum notice period required by both the *Corporations Act* and any self-imposed notice period set out in the company constitution to ensure shareholders' ability to nominate and endorse board candidates at the extraordinary general meeting (the spill meeting). At the

fails to hold the spill meeting by the end of the 90-day period, each director serving on the board at the end of the period commits an offence of strict liability (Section 250W, the *Remuneration Amendment Act*). Consideration of a spill resolution is only permitted at every second AGM (Section 250U, the *Remuneration Amendment Act*). Figure 1 provides a schematic diagram of the two-strikes procedure.

[Insert Figure 1 Here]

2.2. Say-on-pay, the two-strikes rule and CEO compensation

Advocates for say-on-pay maintain that the monitoring provided by enhanced shareholder voting rights results in more efficient compensation contracts, lower agency costs, and increased shareholder wealth by preventing insider-controlled boards from adopting value-destroying compensation plans and actions, particularly in firms with overpaid managers.¹⁵ For example, Ferri and Maber (2013) suggests that adopting say-on-pay reduces directors' psychological barriers and empowers them when engaging in compensation negotiations with CEOs.

Opponents of say-on-pay contend that the practice may be disruptive and could lead to sub-optimal compensation practices that harm firm value. First, say-on-pay adoption may distract directors and management, possibly prompting them to pay undue attention to shareholders who have special interests or lack the required expertise to understand executive remuneration structures, which may ultimately result in the adoption of suboptimal pay practices (Deane 2007; Kaplan 2007; Bainbridge 2009). Second, opponents have cast doubt on shareholders' expertise to distinguish between justifiable and unjustifiable amounts of executive compensation, and shareholders may unwittingly target firms with justifiably high pay.¹⁶ Third, unsophisticated dispersed shareholders tend to rely on proxy advisory firms for their voting decisions. To minimize their own costs, proxy advisors tend to be more inclined to promote a "one-size-fits-all" model when issuing voting recommendations, which may have a negative impact on firm value (Bainbridge 2010; Ferri and Maber 2013).

time of the spill meeting, all directors except the CEO cease to hold office unless they are re-appointed by shareholders. However, if a vacating director is re-appointed, their term continues as though uninterrupted. Such surviving directors serve the duration of their appointment from the date they were last appointed to the board. However, if the directors except the CEO are removed at the spill meeting, there is a deeming provision to ensure that a minimum of three directors remain on the board (Section 250X, the *Remuneration Amendment Act*).

¹⁵ See, for example, Bebchuk and Fried (2003), Bebchuk et al. (2007), Davis (2007) and Burns and Minnick (2013).
¹⁶ See Carter and Zamora (2009), Conyon and Sadler (2010) and Ertimur et al. (2011). In particular, shareholders may be unaware that variations in firm characteristics (such as size, performance, risk, business strategy and complexity) can justify significant differences in what level of executive compensation is considered "reasonable."

We expect that the adoption of the two-strikes rule, especially the lower defeat threshold, is likely to empower minority shareholders to express their opinions regarding executive compensation and provide incentives for non-executive directors to take action on CEO compensation following a first strike. The theoretical models in Levit and Malenko (2011) suggest a positive association between shareholder voting power and voting against controversial resolutions, as shareholders tend not to vote against management unless their votes are likely to affect the outcome. To the extent that firms rationally anticipate shareholders' voting behaviors, we argue that the likelihood of a second-strike increases with the level of dissent on the first strike, but decreases with any improvement in CEO compensation or practices.¹⁷ Thus, firms receiving a majority first strike are likely to perceive that it will be difficult to avoid a second strike by improving shareholder sentiment, irrespective of any changes in compensation. By contrast, firms receiving a minority first strike consider it feasible that remedial actions on executive remuneration will appease shareholders and reduce the chance of a second strike. Accordingly, we predict that after the implementation of the twostrikes rule in 2011, a firm is more likely to respond to dissent expressed by shareholders via minority strikes by changing compensation arrangements to avoid the possibility of a second strike and a spill in directors. Anecdotal evidence also supports this prediction.¹⁸ This leads us to our first hypothesis:

H1: Firms are more likely to adjust CEO compensation practices in response to minority strikes after the introduction of the two-strikes rule.

2.3. Say-on-pay, the two-strikes rule and career consequences for directors

An efficient boardroom labor market rewards directors who have reputations for effective monitoring and penalizes poor monitors with loss of their positions and associated benefits. This *ex-post* settling-up mechanism provides directors *ex-ante* incentives to be efficient monitors due to potential reputational damage caused by failures in oversight (Fama and Jensen 1983).

¹⁷ The rationale is that shareholder dissatisfaction with executive compensation arrangements persists in the absence of any change in a firm's compensation practices. This is consistent with statistics from the Australian Securities and Investment Commission showing that, for nearly two-thirds of ASX 200 companies, voting results on remuneration reports in 2017 were consistent with those in 2016, and the chance of having the "against" vote reduced by more than 5 percent was less than 20 percent (ASIC 2018). Thus, shareholder votes at the second annual general meeting largely depend on their votes at the first meeting that triggered the first strike.

Consistent with the mechanism of *ex-post* settling-up, previous studies document higher director turnover within firms involved in financial restatements (Srinivasan 2005), securities litigation (Brochet and Srinivasan 2014), option backdating (Ertimur et al. 2012) and financial distress (Gilson 1990). Negative events such as proxy contests (Fos and Tsoutsoura 2014) and accounting fraud (Srinivasan 2005; Dou 2017) are also found to result in significant reputational penalties for directors, as reflected by a decrease in their future outside directorships.

However, it is possible that reputational penalties incurred by directors cannot be observed if: (1) the labor market is at times inefficient; (2) the reputational damage for inefficient monitoring is too small to affect director ex-ante incentives (Ertimur et al. 2012); or (3) the market believes that directors are not (directly) accountable for any relevant negative events or outcomes (Srinivasan 2005). The model in Levit and Malenko (2016) shows that director reputational concerns can lead to ex-ante incentives to be more management-friendly and exercise poor oversight when most peer firms have weak corporate governance. Ertimur et al. (2012) find that no significant penalties for option backdating are imposed on directors in the form of losing outside directorships. Moreover, Harford and Schonlau (2013) document that outside directors receive more future board seats after making value-decreasing acquisitions. Consistent with this view, anecdotal evidence appears to support the lack of reputational penalties following a remuneration strike in Australia. For example, Robert Webster, the head of global board services at Korn Ferry International, indicates that there is no evidence that directors consider leaving the board upon receiving a remuneration strike.¹⁹ Similarly, it was noted by Egon Zehnder that the two-strikes rule had not reduced the attractiveness of directorships at ASX 200 companies.

We view a strike as potentially signaling inadequate monitoring of executive compensation on the part of non-executive directors, and accordingly we conjecture that shareholder dissent over a remuneration report may have a significantly higher negative impact on directors' reputations and career prospects following the 2011 adoption of the two-strikes rule. There are two key reasons for this. First, compared to the majority-based vote system in place prior to 2011, the lower cut-off point for a strike introduced by the two-strikes regime

¹⁹ See <u>http://www.companydirectors.com.au/director-resource-centre/publications/company-director-magazine/2012-back-editions/february/feature-two-strikes-health-check</u>.

substantially increases the probability of the remuneration report being defeated and heightens the risk of directors' inadequate monitoring being exposed. This is supported by anecdotal evidence of a "greater appetite from investors to vote against the re-election of directors where there are concerns over board accountability" (Durkin 2017). Second, the introduction of the two-strikes rule and the receipt of strikes against firms results in greater awareness of potential governance issues within these firms on the part of investors and the corporate sector. To the extent that public awareness and media coverage are heightened (Hooghiemstra, Kuang, and Qin 2015), one would expect to observe more negative career consequences for directors in firms that receive a strike after 2011.²⁰ These conjectures lead to our next hypothesis:

H2: Directors in firms receiving minority strikes are more likely to experience a loss of board seats and outside directorships after the introduction of the two-strikes rule.

III. SAMPLE AND DESCRIPTIVE STATISTICS

We use the Fairfax Media's *Australian Financial Review* voting database to extract voting results from 2011–2014 and hand-collect voting information from 2006–2010 for all Australian listed companies. Fairfax Business Research (FBR) collects shareholder voting data on the adoption of remuneration reports from 2011–2014 at AGMs from first-hand sources, such as company secretaries and AGM announced results. The sample period ends in 2014 because FBR ceased collecting data at this time.²¹ Remuneration and governance data are extracted from the SIRCA Corporate Governance database, while information on takeovers is obtained from the Connect 4 database. Financial data and stock price data are drawn from the ASPECT Huntleys FinAnalysis database and the SPPR database respectively. To mitigate the undue influence of outliers, we winsorize the top and bottom one percentile of key variables used in the regression analysis. Our final sample consists of 13,432 firm-years, with 5,582 firm-years occurring after the implementation of the two-strikes rule in 2011. Our DiD analyses of the consequences of receiving a strike use the sample after excluding 1,631 firm-years in 2010, to avoid any confounding effect between the periods immediately before and after the adoption of the two-strikes rule.

²⁰ For example, Kenny (2017) documents that "it's clear that boards are starting to get the message from the national government, shareholders, the public, and the media that excessive executive packages are unacceptable (p. 1)". ²¹ Fairfax Media closed Fairfax Business Research permanently in 2016.

Panel A of Table 1 shows the yearly distribution of strikes from 2011 onwards. We identify 369 strikes, representing approximately 7 percent of firm-years. There are more strike firms in the early years (102 in 2011 and 115 in 2012) than in later years (82 and 70 for 2013 and 2014 respectively). There are 60 two-strike firms from 2012–2014. Of the 369 firms receiving a strike, around 69 percent have a level of dissent between 25 and 49 percent. By contrast, only 31 percent of strike firms defeated the remuneration resolution with a majority vote against the motion. This highlights how the Australian two-strikes rule empowers minority shareholders to express dissatisfaction with executive pay via the lower cut-off point of 25 percent. The distribution of the percentage votes against the remuneration report (*Dissent*) is shown in Panel B of Table 1. We find that the likelihood of dissent votes higher than 1 percent increases consistently across all distribution intervals in the 2011–2014 period compared to 2006–2010, except for minority strikes (i.e., 25–50%).

[Insert Table 1 here]

Panel A of Table 2 reports descriptive statistics. Definitions of all variables are presented in the Appendix. We find that strikes occur in 6.6 percent of firm-years between 2011 and 2014, while 16.3 percent of firms that receive a first strike subsequently experience a second strike. Importantly, we find significant differences in firm characteristics between the samples before and after the two-strikes rule became effective, indicating possible substantial variation between the treatment and control groups. Accordingly, we employ the entropy balancing approach to construct a control group of firm-years that exhibit covariate balance with the treatment group. Entropy balancing assigns continuous weights to control group observations, ensuring that the means of the control group covariates are approximately equal to those in the treatment group (Hainmueller 2012; McMullin and Schonberger 2020). Thus, entropy balancing is a more general form of matching to improve covariate imbalance and mitigate selection bias when compared to propensity score matching (PSM), which uses integer weights to a subset of control group observations and discards the unmatched ones, resulting in low-power tests and possible random matches (Shipman, Swanquist, and Whited 2017; Gaver and Utke 2019).²²

²² Entropy balancing has been widely used in recent empirical research (see e.g., Arif, Marshall, Schroeder, and Yohn 2019; Gaver and Utke 2019; Boland and Godsell 2020; Dambra, Gustafson, and Quinn 2020). Entropy balancing allows much less discretion in design choices and facilitates higher replicability relative to PSM by setting a tolerance for convergence of the algorithm (McMullin and Schonberger 2020).

[Insert Table 2 here]

Panels B to D of Table 2 present means for the sample of minority strike firms and the control sample generated from entropy balancing.²³ The results indicate no significant difference between the treatment and control samples. This finding suggests that the covariates are balanced across the two groups, and that differences in the control variables are unlikely to spuriously drive our empirical results. The treatment and entropy balanced control groups are used in the analyses of the impact of minority strikes on future remuneration, director turnover and outside directorships.

IV. EMPIRICAL RESULTS

4.1. Determinants of minority strikes

As initial analyses, we examine the effect of CEO pay, firm and governance characteristics on the likelihood of receiving minority strikes through the estimation of the following panel regression model:

MinorityStrike =
$$\alpha + \sum \beta^*$$
Determinants + *Firm FE* + *Year FE* + ε (1)

where *MinorityStrike* is a binary variable equal to one if the percentage of votes against the remuneration report resolution at the AGM is no less than 25 percent but lower than 50 percent, and zero otherwise. *Determinants* represents a vector of variables predicted to influence the likelihood of receiving a strike. These variables include: CEO abnormal pay (*CEO abnormal pay*), CEO normal pay (*CEO normal pay*), proportion of insider ownership (*Insider ownership*), CEO duality (*CEO duality*), board independence (*Board independence*), board size (*Board size*), the number of blockholders with shareholdings of five percent or more (*Number of blockholders*), the ownership held by the top 20 shareholders (*Top20 ownership*), return on assets (*ROA*), market-to-book ratio (*MTB*), stock return over the past 12 months (*Return*), financial leverage (*Leverage*) and total assets (*Firm size*).²⁴ We also include firm and year fixed effects in the

²³ We follow the approach adopted in prior research (e.g., Shroff, Verdi, and Yost 2017; Quinn 2018; Arif et al. 2019; Boland and Godsell 2020; Dambra et al. 2020). In particular, we use the default settings in Hainmueller and Xu's (2013) "ebalance" Stata macro to balance on all control variables, except firm and year fixed effects, for each set of regression analysis.

²⁴ Prior research reveals that CEO duality leads to conflicts of interest and higher agency costs (Yermack 1996; Core, Holthausen, and Larcker 1999). Thus, shareholders tend to favor the separation of the chairman and the CEO and express such a preference through the exercise of their voting power (Core et al. 1999). There are conflicting views regarding the relation between board independence and shareholder dissent. On the one hand, the presence of independent directors should enhance the effectiveness of board monitoring (Core et al. 1999) and result in a negative association with dissent among shareholders. On the other hand, prior studies find that the likelihood of being targeted and receiving dissent votes over compensation policies is higher for firms with more independent

regression.

Table 3 presents the results of estimating model (1) using alternative sample periods in different columns. In Column (1), the finding for *POST* highlights a significant increase in minority strikes over the period of 2011–2014. In all columns, we find that *CEO abnormal pay* is positively associated with the probability of receiving minority strikes, while the effect for normal CEO pay is mostly insignificant. These results are inconsistent with those of Grosse, Kean, and Scott (2017) and suggest that empowered Australian shareholders aim their dissent votes at CEOs with excessive pay.²⁵ Because we control for firm and year fixed effects, most firm and governance variables are statistically insignificant; the only exceptions are *Board independence* and *MTB*, which are negatively associated with the probability of receiving minority strikes across some of the regression models.²⁶

[Insert Table 3 here]

Column (5) presents the results for the determinants of the occurrence of second strikes, which are conditional on receiving a first strike, from 2011–2014. We replace *MinorityStrike* with *SecondStrike* in model (1); here, *SecondStrike* is a binary variable set to one if the remuneration report resolution is rejected at the AGM following a first strike in the previous year, and zero otherwise. The results suggest that the probability of receiving a second strike is

directors (Thomas and Cotter 2007; Ertimur et al. 2011). This may be because independent directors are perceived to have fewer incentives to monitor and constrain executive compensation due to the low correlation between their pay and firm value (Ertimur et al. 2011). The degree of ownership concentration may also affect shareholders' dissatisfaction with executive compensation. Firms with a lower degree of ownership concentration tend to have higher executive pay (Barontini and Bozzi 2011; Belcredi, Bozzi, Ciavarella, and Novembre 2015). However, a high degree of ownership concentration may demotivate rent-seeking behavior in low-litigation-risk countries, such as Australia. Large firms with more complex operations are documented to have greater shareholder dissatisfaction, because they tend to draw more attention from shareholders and offer higher levels of executive compensation (Murphy 1985; Core et al. 1999).

²⁵ Grosse et al. (2017) use only two years of data in 2011 and 2012 and a matched pairs approach to analyze the determinants of a strike. They do not include any fixed effects in their regression models. They document that a shareholder strike is not associated with CEO total pay, normal pay or abnormal pay, but is positively associated with a firm's book-to market ratio, leverage and board independence. It is noted that our tests of the determinants of minority strikes in Table 3 are to provide descriptive evidence and provide the basis of entropy balancing for the consequences test.

 $^{^{26}}$ We acknowledge the possibility that firm characteristics such as *Board independence* and *MTB* leading to minority strikes have changed between the two sample periods, because the coefficients on these two variables are significant for 2006–2009 in Column (3) but insignificant for 2011–2014 in Column (4). To address this concern, we include the interaction term between the *Post* variable and *CEO abnormal pay*, *Board independence* and *MTB* in the regression. The results in Column (6) suggest no significant difference in the effects of *CEO abnormal pay*, *Board independence* or *MTB* in the pre- and post-two-strike periods, which assuages the concerns about the confounding effect of the global financial crisis.

positively associated with CEO abnormal pay.²⁷

4.2 Future compensation after minority strikes

A large number of studies examine whether firms respond to shareholder dissent on sayon-pay votes regulated by law by removing ineffective or controversial compensation practices. However, the evidence to date remains mixed and inconclusive, especially for CEO pay. Several studies suggest that firms faced with shareholder disagreement decrease the growth of total CEO pay (Kimbro and Xu 2016) and the short-term bonus component of CEO pay (Grosse et al. 2017). Others, however, find little evidence of a relationship between shareholder disagreement and future CEO pay. For example, Armstrong et al. (2013) find no evidence that shareholder votes for equity compensation plans have any substantive impact on the level or composition of future CEO incentive compensation.²⁸ UK results presented by Carter and Zamora (2009) and Conyon and Sadler (2010) also document that boards tend not to respond to shareholder dissent by changing the level or structure of CEO compensation. Brunarski, Campbell, and Harman (2015) find that excess compensation in fact *increases* for overpaid CEOs regardless of the outcome of the vote. In the Australian context, Grosse et al. (2017) find no evidence that firms respond to a strike by changing total or equity-based CEO compensation.

To test H1, we use the DiD approach to examine whether firms receiving minority strikes following the adoption of the two-strikes rule respond to shareholder dissatisfaction by making changes to CEO compensation practices in the following year. The model estimated is:

Future CEO pay = $\alpha + \beta_1 Post^*MinorityStrike + \beta_2 MinorityStrike + \gamma^*Controls + Firm FE +$ $Year FE + <math>\varepsilon$ (2)

where *Future CEO pay* represents either *CEO total pay* or *CEO abnormal pay* in the next year. *Post* is a binary variable set to one for observations from 2011–2014. We include firm and year fixed effects to control for unobserved firm-specific or time-variant confounding factors. Moreover, to capture the influence of minority strikes on subsequent CEO pay, as reflected in

²⁷ We also estimate a multinomial logit model against the base case of no strike using the following three categories: first-strike firms receiving minority strikes (i.e., 25–50 percent), first-strike firms receiving majority strikes (50–100 percent) and second-strike firms. The results (untabulated) remain similar.

²⁸ Relatedly, Cuñat, et al. (2016) investigate the passage of shareholder-sponsored say-on-pay proposals among US firms and find that adopting say-on-pay has little impact on the levels and structure of CEO pay. In fact, Correa and Lel (2016) and Iliev and Vitanova (2019) document an *increase* in CEO pay following the introduction of say-on-pay laws.

the interaction term *Post*MinorityStrike*, we estimate model (2) using only firm-years in which the percentage of votes against the remuneration report are lower than 50 percent.²⁹

The results in Columns (1) and (3) of Table 4 show that the interaction term between *Post* and *MinorityStrike* is negative and significant. This suggests that, following the adoption of the two-strikes rule in 2011, firms became more likely to respond to minority strikes by cutting total and abnormal CEO pay.³⁰ Given the endogenous nature of receiving minority strikes, we also use the entropy balanced sample to address possible sample selection bias arising from the substantial differences between the treatment and control groups. The results using the entropy balanced sample in Columns (2) and (4) show a consistent and significantly negative coefficient on the interaction term between *Post*MinorityStrike*, suggesting that firms reduce the level of abnormal CEO pay after receiving minority strikes from 2011 onwards.

Economically, our results in Table 4 indicate that firms on average respond to minority strikes by reducing total and abnormal CEO pay by 0.243 and 0.193 million respectively following the adoption of the two-strikes rule, representing an average reduction of CEO total pay by 33.3% for these minority-strike firms. Overall, our results confirm that the two-strikes rule empowers minority shareholders and provide consistent evidence that receiving minority strikes has the effect of curbing excessive CEO pay. Our findings differ from prior studies that fail to find any substantive impact of say-on-pay on CEO pay (Conyon and Sadler 2010; Armstrong et al. 2013; Brunarski et al. 2015; Cuñat et al. 2016; Iliev and Vitanova 2019).³¹

[Insert Table 4 here]

²⁹ Controls represents control variables, which are as follows: firm size (*Firm size*), financial leverage (*Leverage*), stock return volatility (*Volatility*), market-to-book ratio (*MTB*), return on assets (*ROA*), stock return (*Return*), Top 20 ownership (*Top20 ownership*), insider ownership (*Insider ownership*), CEO duality (*CEO duality*), board independence (*Board independence*), board size (*Board size*) and CEO abnormal pay (*CEO abnormal pay*).

³⁰ Among the control variables, we find that future CEO abnormal (total) pay is positively associated with *Firm size*, *Return*, *MTB*, *Board size* and *CEO abnormal pay*, and negatively associated with *Leverage*.

³¹ Besides the use of different samples, it is important to note that amongst prior research other than Conyon and Sadler (2010) there is little attempt to control for the endogenous nature of shareholder voting in the tests analyzing the impact of shareholder dissent on CEO pay. The regression models in earlier studies typically use industry fixed effects. Our study aims to contribute to this line of research, not by reconciling the results, but by examining if shareholder votes under the two-strike regime empower shareholders, which lead to firms "listening" to the voice of shareholders and adjusting CEO compensation and results in directors facing reputational penalties.

4.3 Say-on-pay and director turnover

We test H2 using the DiD approach to investigate the effect of empowering minority shareholders via lower defeat thresholds on the likelihood of director turnover using the following linear probability model:

Director turnover = $\alpha + \beta_1 Post^*MinorityStrike + \beta_2 MinorityStrike + \gamma Controls + Firm FE + Year FE + <math>\varepsilon$ (3)

where *Director turnover* is an indicator variable equal to one if a director does not hold office within one year after minority strikes, and zero otherwise.³²

First, we explore whether receiving minority strikes on the remuneration report is associated with the likelihood of director turnover within the strike firm in the subsequent year.³³ The results for the full sample and the entropy balanced sample are presented in Panels A and B of Table 5, respectively. The findings show that, after controlling for a variety of firm-specific characteristics and firm and year fixed effects, the likelihood of director turnover following a strike has increased by 5.9 percentage points following the adoption of the two-strikes rule (column (1)). In columns (2)–(6), we separately estimate our director turnover regression for independent directors, non-independent directors, independent directors of the remuneration committee chairs, respectively. The findings indicate that the turnover rate of independent directors on the board and the remuneration committee has increased by 6.6 and 6.1 percentage points, respectively, following minority strikes during the post-2011 period, suggesting that they bear higher reputational costs under the two-strikes regime.

[Insert Table 5 here]

We also examine whether managing directors (i.e., CEOs) are more likely to lose their position following receipt of a strike. The introduction of the two-strikes rule affords shareholders the ability to express their (dis)satisfaction with the performance of the CEO and

³² Following Bushman et al. (2010), Lee et al. (2012) and Jenter and Kanan (2015), we include the following controls: return on assets (*ROA*), stock return (*Return*), sales growth (*Sales growth*), stock return volatility (*Volatility*), market-to-book ratio (*MTB*), firm size (*Firm size*), financial leverage (*Leverage*), CEO duality (*CEO duality*), board independence (*Board independence*), CEO ownership (*CEO ownership*), and CEO abnormal pay (*CEO abnormal pay*).

³³ Our definition of director turnover is similar to Fischer, Gramlich, Miller, and White (2009) and Iliev, Lins, Miller, and Roth (2015). Our results remain similar and are slightly stronger when testing director turnover on the strike firm in the subsequent two years.

the executive team. A strike on the remuneration report may thus be viewed as a loss of confidence in the CEO. In an effort to alleviate possible reputational damage, directors are incentivized to respond to shareholder dissatisfaction by curbing excessive CEO pay or, in extreme cases, dismissing CEOs. Prior research indicates that CEOs are more likely to be dismissed when a firm's performance fails to meet market expectations (Bushman, Dai, and Wang 2010; Lee, Matsunaga, and Park 2012; Jenter and Kanaan 2015). A poorly perceived CEO is typically considered a symptom of the board's failure to carry out its monitoring duties over the CEO (Fischer, Gramlich, Miller, and White 2009). Thus, upon receiving a strike, and particularly after the introduction of the two-strikes rule, it is possible that boards are more likely to dismiss the CEO to alleviate shareholder dissatisfaction and avoid a second strike.

To test this prediction, we replace *Director turnover* in Equation (4) with *CEO turnover*, which is an indicator variable equal to one if the CEO does not hold office within one year after minority strikes, and zero otherwise.³⁴ The results in column (7) of Table 5 show that the *Post*MinorityStrike* coefficient is insignificant regardless of whether the full or entropy balanced sample is used. This indicates that the likelihood of CEO dismissal among firms that receive minority strikes has not increased following the introduction of the two-strikes rule.

4.4 Say-on-pay and future outside directorships

Next, we expand the testing of H2 and investigate whether minority strikes are associated with the future career prospects of directors, as reflected in the number of future outside board seats held. We conjecture that, due to their reputations for monitoring being tarnished by strikes, directors of strike firms experience a decrease in the number of directorships at other firms. To test the effect of a strike on directors' outside directorships (i.e., excluding the strike firm) after minority strikes, we use the following DiD model:

$$\Delta Seat_{t+2} = \alpha + \beta_1 Post^* Minority Strike + \beta_2 Minority Strike + \gamma Controls + Firm FE + Year FE + \varepsilon$$
(4)

where $\triangle Seat_{t+2}$ denotes the change in the number of outside directorships in the second year following minority strikes.

³⁴ Our results remain similar if we include CEO age and tenure as additional control variables, or measure *CEO turnover* as an indicator equal to one if the CEO does not hold office within two years after minority strikes, and zero otherwise.

The results are reported in Table 6 (Panel A for the full sample and Panel B for the entropy balanced sample). The findings in column (1) indicate that directors with at least one outside directorship hold significantly fewer other board seats after receiving a strike from 2011 onwards. Our results are consistent with the view that strike-firm directors are disciplined by the director labor market for their inadequate monitoring of CEO compensation. To further assess which directors are held more accountable for strikes, we partition directors into independent and nonindependent, and further identify directors who are members and chairs of remuneration committees. The results in columns (2) to (6) indicate that independent directors and the chairs of the remuneration committees are significantly more likely to lose outside board seats after minority strikes following the adoption of the two-strikes rule.³⁵ The reduction in outside board seats for directors is nontrivial. Compared to non-strike firms, the future outside board seats for directors in firms receiving minority strikes, who have at least one outside directorship, reduce by 0.179 (8.7%) compared to their directorship before the strike, while the reduction for the remuneration committee chairs is 0.612 (29.2%).³⁶ Overall, our evidence supports ex-post settling-up in that the two-strikes rule empowers minority shareholders via the introduction of lower thresholds, and further increases both director accountability and their reputational costs upon receiving minority strikes (through the loss of outside directorships).

[Insert Table 6 here]

4.5 Robustness: Parallel trend tests

The validity of the DiD approach depends on the parallel trend assumption, namely that the outcome variables among the treated firms would have behaved similarly to those of the control firms in the absence of the treatment (i.e., the adoption of two-strikes rule). We follow Bertrand

³⁵ It is somewhat surprising that a strike is found to have no significant effect on the outside directorships of independent directors on remuneration committees (see Column (5)). There are two possible reasons for this finding. First, not every Australian listed firm has a remuneration committee; thus, independent directors in firms without such committees may face high reputational risk pertaining to corporate remuneration practice and are more likely to lose their outside board seats. Second, independent directors' experience serving on remuneration committees may add value to their human capital in the labor market and increase their opportunities to attain more outside board seats, which may offset the potential reputational risk incurred following remuneration strikes. This argument is also consistent with the work of Harford and Schonlau (2013), who find that the labor market attaches more weight to the experience of directors serving in an acquiring firm, even if the acquisition is value-decreasing to shareholders. Further analysis in Panel E of Table 7 seems to be consistent with the latter explanation, although we cannot rule out the possibility of the first explanation.

 $^{^{36}}$ The average number of outside directorships is 2.065 for directors in all firms used in the regression analyses, 2.103 for independent directors and 2.097 for the remuneration committee chairs. Thus, compared to non-strike firms, the reduction in outside directorship is 8.7% (0.179/2.065) for directors in minority-strike firms and 29.2% (0.612/2.097) for the remuneration committee chairs.

and Mullainathan (2003) to address the parallel trend assumption. In particular, we use several indicator variables, *Before*⁻², *Before*⁻¹, *After*¹, and *After*²⁺, to represent the year relative to the adoption year.³⁷ Panel A of Table 7 shows that the coefficients on the interaction terms with *Before*⁻² and *Before*⁻¹ are insignificant in all columns. This supports the parallel trend assumption, indicating that the treated firms and the control firms share a similar trend in terms of CEO pay and director career outcomes before the adoption of the two-strikes rule.

[Insert Table 7 here]

4.6 Robustness: Placebo tests

Another concern with our DiD results is that they may capture a general time effect or be driven by chance rather than reflecting the effects of the two-strikes rule. To mitigate this concern, we perform placebo (falsification) tests in which we falsely assume that a treatment and/or exogenous change occurs.³⁸ Panel B of Table 7 shows that all coefficients of the interaction terms between *Post* and *MinorityStrike* are insignificant. This indicates that CEO pay, and director career outcomes are similar for treated and control groups in the placebo periods, and that the true treatment coefficient estimates reported in the above tables represent unlikely events. Thus, these findings support the conclusion that CEO pay and career consequences for directors likely stem from the occurrence of minority strikes due to the adoption of the two-strikes rule in 2011.

4.7 Robustness: Oster tests

While our regression models include firm fixed effects, we further address the concern of omitted variable bias by using the Oster (2019) test to assess the sensitivity of the main results to partially unobservable confounds. Following Bernard et al. (2021), Kim and Valentine (2021) and Martens and Sextroh (2021), we compare the estimated coefficient on *Post*MinorityStrike* (β_1) and the resulting R² of the regression models (1) without control variables but with firm and year fixed effects (uncontrolled model) and (2) with both controls and fixed effects (controlled

³⁷ For example, *Before*⁻² indicates the years that are at least two years before adoption, while *Before*⁻¹ indicates the year prior. *After*¹ indicates the year of adoption (i.e., 2011), while *After*²⁺ indicates the years at least two years after adoption.

³⁸ More specifically, we run simulations that artificially assign strike firms (treatment firms) and non-strike firms (control firms) to our sample firms and randomly select a false year for the adoption of the two-strikes rule over the sample period. We conduct the DiD analyses using the simulated sample and repeat the simulation process 1,000 times.

model). We calculate the Oster " δ " based on the assumption that the R^2 of a regression containing both observable and unobservable variables (R^2_{max}) equals 1.3 times the R^2 of the controlled model. The results (untabulated) show that the coefficient on *Post*MinorityStrike* changes slightly with the inclusion of the additional controls. The coefficient stability is reassuring as it is inconsistent with our controls being previously omitted in a way that would bias the results. The absolute value of δ ranges from 1.073 to 2.947, indicating that unobservable variables would need to be 1.073 to 2.947 times as important as the observable controls to render our results on *Post*MinorityStrike* statistically insignificant. Such an unobservable factor is unlikely. Overall, these results provide increased confidence that endogeneity arising from omitted variables is unlikely to explain our results.

4.8 Robustness: Alternative treatment groups

Because our previous analysis excludes firm-years with a percentage of shareholder dissent that exceeds 50 percent, we examine the robustness of our results to alternative definitions of the treatment group. More specifically, we identify the treatment group as firm-years whose percentage of "no" votes is higher than 50 percent over 2006–2009 and those with a dissent rate higher than 25 percent over 2011–2014. The control group includes all remaining firm-year observations that are not in the treatment group. The results in Panel C of Table 7 remain similar when repeating the DiD analysis for this alternative treatment group.³⁹

4.9 Robustness: Effect of the global financial crisis

Our results may be driven by changes in investor behavior following the global financial crisis, given that the 2011 implementation of the two-strikes rule occurred soon after the crisis in 2008. We conduct the following examinations to address this concern. First, we examine the percentage of dissent votes across years in Panel B of Table 1, and these data suggest no evidence that a shift in shareholder voting behavior occurs after the global financial crisis. For example, the percentage of minority strikes in the pre-strike period is similar to that for the post-strike period. The only exception is 2008, where the percentage of dissent votes in the 25–50% range is 6%, compared to 3% in 2006 and 2007, 4% in 2009 and 3% in 2010. Thus, the high percentage of pseudo-minority strikes in 2008 seems to be idiosyncratic.

³⁹ We also repeat the analyses using a different treatment sample that includes firm-years whose percentage of "no" votes is equal to or higher than 25 percent over 2006–2009 and 2011–2014. The results are similar.

Second, we include firm and year fixed effects to account for possible variations due to the global financial crisis, and use an entropy balanced sample to further control for differences in firm characteristics between the treatment and control samples in all analyses. Third, we revisit the results of falsification tests in Panel B of Table 7 (which randomly assume that a treatment and/or exogenous change occurs) and verify that these estimates also confirm that our findings are not driven by any chance or event (e.g., the global financial crisis) other than the adoption of the two-strikes rule. Fourth, we repeat the analyses after excluding the years subsequent to the financial crisis and before the two-strikes regime (i.e., 2008 and 2009, as 2010 is already excluded). The results in Panel D of Table 7 are qualitatively similar, indicating that our findings are unlikely to be a manifestation of the effect of the global financial crisis.⁴⁰

4.10 Robustness: Different voting thresholds

The 25% voting threshold in the two-strikes rule is ad hoc and controversial in that it is inconsistent with the general requirements for shareholder democracy, even though the subsequent spill vote and director election votes are majority-based. Understanding the effect of different voting thresholds is important as it provides policy implications for regulators and shareholders considering alternative voting thresholds. We examine the effect of different voting thresholds on CEO pay and director career consequences in Panel E of Table 7. We find that the reduction in CEO pay is concentrated among minority strikes in the 25-30%, 35-40% and 45-50% ranges, which have similar effects on CEO pay. Director turnover is largely driven by minority strikes in the 30-35%, 35-40% and 45-50% ranges, while minority strikes in the 25-30% range have no significant impact. Finally, the results for directors' outside board seats are concentrated in the 35-40% range, while those for changes in outside directorships of remuneration committee chair are also evident in the 45–50% range. The effects of minority strikes in the 25–35% ranges are found to be insignificant. Overall, these results suggest that the effects of lower defeat thresholds on CEO pay and director career consequences are evident in different threshold ranges (such as the 35–40% and 45–50% ranges) rather than a single range. The results also suggest that, if the 25% threshold is viewed as being too low and threatening

⁴⁰ Our results (untabulated) are robust when interacting the *Post* variable with each control variable as additional controls in the regression analyses of CEO pay, director turnover and outside directorships.

shareholder democracy, a threshold of 35% or 30% may be a viable alternative for regulatory consideration.

4.11 Robustness: Changes in CEO pay after the adoption of the two-strikes rule

Our previous analysis suggests that, following the adoption of the two-strikes rule, abnormal CEO pay decreases after the receipt of a minority first strike. It is possible that these results are attributable to a market-wide trend in the reduction of CEO pay after 2011. To address this concern, we examine the growth and change in CEO total and abnormal pay in the first year following the adoption of the two-strikes rule. We find a significant *increase* in both the mean and median total CEO pay and abnormal pay after the two-strikes rule is enacted, indicating that our results are not driven by a market-wide reduction in CEO pay.⁴¹ Our findings of increased CEO pay are consistent with the findings of Iliev and Vitanova (2019) for US firms after the adoption of the Dodd-Frank Act but stand in sharp contrast with those of Correa and Lel (2016).

V. ADDITIONAL ANALYSES

5.1 Minority strikes vs. majority and second strikes

Our findings on the effects of a lower voting threshold arising from the two-strikes rule (i.e., from 50 percent to 25 percent) may be contaminated by two separate mechanisms that were introduced simultaneously: namely, (1) the exclusion of voting by related parties on the remuneration report, and (2) the threat of board dismissal after a second strike. To mitigate these concerns, we repeat the analyses of the outcome variables employing three separate indicator variables. *FirstStrike_Minority* (*FirstStrike_Majority*) denotes firm years receiving a first strike with shareholder dissent between 25 percent and 49 percent (50 percent or above). *SecondStrike* indicates firms that receive a second strike. We expect that the coefficient on *Post*SecondStrike* captures the possible impact of the threat of board dismissal following a second strike, while the coefficient on *Post*FirstStrike_Majority* represents, at least partially, the joint effect of the threat of board dismissal and the prevention of related party voting. In other words, after controlling for the effects of majority first strikes and second strikes, the coefficient on *Post*FirstStrike_Minority* is expected to largely capture the effect of lower defeat thresholds.

⁴¹ The median value of changes in CEO total pay in 2011 is \$70,136, while the median value of change in CEO abnormal pay in 2011 over CEO total pay in 2010 is 0.415. All numbers are found to be significantly different from zero.

The results in Panel A of Table 8 are consistent with firms being more responsive to cutting abnormal CEO pay and experiencing a higher independent director turnover rate following a minority first strike. In terms of career consequences, the negative reputation effects of a strike on the outside board seats of independent directors and the remuneration committee chairs are significantly higher following a minority first strike. For majority first strikes, we only find significant evidence of directors losing their focal board seats. By contrast, second strikes are found to have significant impacts on reducing the outside directorships of independent directors. Overall, these results are consistent with the notion that firms are likely to perceive a reduction in CEO pay or change in governance arrangements as more likely to sway the vote of enough shareholders to avoid a second strike when shareholder dissent is lower (i.e., minority strikes).

[Insert Table 8 here]

Our main analysis uses indicator variables representing the occurrence of a strike to draw inferences. However, the occurrence of a strike cannot fully capture the variation in shareholder dissatisfaction above the 25 percent threshold and shareholder sentiment conveyed in the say-on-pay votes. To alleviate these concerns, we use the percentage of votes against the remuneration report to replace the indicators of minority, majority and second strikes in the analysis. The results in Panel B of Table 8 are qualitatively similar to those in the main analysis.

5.2 Impact of a strike on shareholder returns

Prior research documents positive and significant market reactions to the passing of the say-on-pay legislation in the US (Cai and Walkling 2011) and the announcement of say-on-pay regulation in the UK (Ferri and Maber 2013), suggesting that shareholders view say-on-pay as a value-creating mechanism. Cuñat et al. (2016) find that shareholder-sponsored say-on-pay proposals that pass by a small margin yield an abnormal return of 1.8–2.7 percent relative to those that fail by a small margin, consistent with the view that the adoption of say-on-pay enhances firm value. However, Cai and Walkling (2011) also note that the stock prices of targeted firms react positively when say-on-pay proposals are defeated.

If say-on-pay is considered a disciplining device and an ongoing vote of confidence in management (Cuñat et al. 2016), we would expect a negative stock price reaction for firms receiving a strike. Our study is distinguished from previous research in that we analyze shareholders' votes on executive pay rather than the adoption of say-on-pay proposals and

examine the market reactions to announcements of firms receiving strikes at the AGM following the adoption of the two-strikes rule.

We calculate cumulative abnormal returns (*CAR*) based on the market model estimated from 150 days to 30 days prior to a strike announcement. We consider three event windows: [– 10, –2], [–1, +1] and [+2, +10], where day zero is the day on which the AGM voting results are announced.⁴² The results in Panel A of Table 9 show that there are no significant *CARs* over the three-day window of [–1, +1]. However, we find significant and negative abnormal returns over the [–10, –2] event window before and [+2, +10] after the announcement of voting outcomes. The mean value of *CAR* is –1.20 percent over [–10, –2], with 57.1 percent of the strike firms having a negative *CAR*, while the average *CAR* is –2.20 percent over [+2, +10]. When partitioning strikes into minority, majority and second strikes, the results indicate that the significant negative market reaction to a strike is driven by the minority first-strike firms, because there are no significant abnormal returns for a majority first strike or a second strike. Overall, our analyses of short-run returns suggest that the market regards the receipt of a minority first strike as a value-destroying signal, which may be associated with a loss of confidence in executives and directors and/or the perception of weak governance.

[Insert Table 9 here]

As descriptive evidence we next examine stock price performance over the two years following receipt of strikes. These findings should be interpreted cautiously as they are potentially driven by confounding events over the years following strikes and may not be attributable to strikes themselves. When testing the median value of *BHAR*s, we find that firms receiving strikes have a negative *BHAR* of -18.7 percent for the 12 months after the strike and a negative return of -29.9 percent over two years.⁴³ The negative abnormal return of -2.6 percent over the three months after strikes is mainly attributable to the negative market reaction over the first 10 days. Long-run underperformance of strike firms is also driven primarily by firms receiving minority first strikes.

⁴² While the advantage of using of a three-day window to examine market reaction is that the event window is short enough to minimize confounding effects arising due to other events or information, it is also possible that the likely outcome of receiving a strike is known to the market before the AGM, or that the market reacts slowly to the news of a strike being received.

⁴³ The mean BHARs are negative but statistically insignificant, partly due to the effect of outliers.

5.3 The two-strikes rule and firm valuation and performance

Proponents of say-on-pay maintain that it serves as a value-enhancing mechanism, because it can (1) reduce excess executive compensation, (2) better align executive compensation with firm performance, and (3) establish a platform for shareholders to express dissatisfaction and exercise discipline. However, opponents argue that existing corporate choices are the result of value-maximizing contracts between management and shareholders after allowing for variations in firm characteristics. As such, the introduction of a one-size-fits-all say-on-pay regulation may decrease shareholder value.⁴⁴ In untabulated results, we examine the influence of strikes on future firm valuation and accounting performance. After controlling for firm and year fixed effects, the results reveal no significant change in firm valuation or profitability following minority strikes after adoption of the two-strikes rule.

5.4 The two-strikes rule and takeover likelihood

Takeovers are an external source of discipline when internal governance mechanisms are viewed as ineffective (Jensen 1988; Kini, Kracaw, and Mian 2004). The signal of monitoring failures sent by the receipt of strikes may trigger takeover offers from potential bidding firms in an attempt to create value through the improvement of poor governance. Thus, we investigate whether strike firms are more likely to be subject to takeover attempts in the year after receiving strikes. The results (untabulated) indicate that minority strike firms are significantly more likely to be subject to takeover bids, suggesting that potential bidders may seek to take advantage of shareholder discontent by making takeover bids for firms that receive unexpected minority first strikes.

5.5 Pay-for-performance sensitivity after a strike

The adoption of say-on-pay regulation is expected to facilitate better alignment of interests between managers and shareholders. Consistent with this notion, Correa and Lel (2016) find improvement in the sensitivity of CEO pay to firm performance after the introduction of sayon-pay laws around the world. Burns and Minnick (2013) show that, following the receipt of say-on-pay proposals, firms tend to adjust their remuneration structures and improve pay-

⁴⁴ Balachandran, Joos, and Weber (2012) find that shareholder approval of equity-based compensation plans relates positively to future profitability. Cuñat et al. (2016) report that firms adopting say-on-pay experience improved profitability in the following year but fail to find any significant impact of passing say-on-pay proposals on firms' valuations (i.e., Tobin's Q).

performance sensitivity. However, there is scant research assessing whether firms respond to shareholder dissent from say-on-pay votes by improving the pay–performance link. We examine the possible change in pay-performance sensitivity following minority strikes using a regression model, but the untabulated results show no improvement.⁴⁵

5.6 Life after a second strike

The unique feature of the two-strikes rule is that after issuing a second strike to the board, shareholders vote on a spill resolution. If the spill resolution is approved with a majority of 50 percent or more of eligible votes cast, all directors except the CEO must stand for re-election. To provide further insights into the spill resolution, we hand collect information from the ASX website for 51 firms that disclose the voting results of their spill resolutions.

Among these 51 firms, only 12 firms (24 percent) pass the spill resolution with a voting majority of 50 percent or more. The average percentage of votes for the spill meeting is 40 percent, with a minimum of 2 percent and a maximum of 100 percent. A total of 27 companies (53 percent) reject the spill resolution with voting rates higher than 25 percent but lower than 50 percent; in other words, if a lower cut-off threshold of 25 percent had applied to both a strike and the spill resolution, 76 percent of the firms that received second strikes would have passed their spill resolutions and required director to stand for re-election.⁴⁶ The above descriptive analysis casts doubt on the efficacy of the two-strikes rule, particularly after second strikes occur.

Of the 12 firms that pass the spill resolution, nine hold the spill meeting to re-elect directors, while three firms do not due to delisting (one firm), change of control (one firm) and

⁴⁵ We follow Kaplan (1994) and Murphy (1999) and run the following DiD model:

 $[\]Delta CEO \ total \ pay_{t+1} = \alpha + \beta_1 Post * MinorityStrike + \beta_2 \Delta Shareholder \ wealth_{t+1} + \beta_3 Post * MinorityStrike + \beta_4 MinorityStrike * \Delta Shareholder \ wealth_{t+1} + \beta_5 Post * MinorityStrike * \Delta Shareholder \ wealth_{t+1} + \gamma Controls + Firm FE + Year FE + \varepsilon$

where $\triangle CEO$ total pay_{t+1} is the change in CEO total pay in t+1, while $\triangle Shareholder wealth_{t+1}$ represents changes in firm performance, measured as changes in shareholder wealth or shareholder return in year t+1. The variable of interest is the interaction term between *Post*, *MinorityStrike* and $\triangle Shareholder wealth_{t+1}$. A positive and significant coefficient of β_5 would indicate increased pay-performance sensitivity following the receipt of minority strikes.

Controls include financial leverage (*Leverage*), firm size (*Firm size*), stock return volatility (*Volatility*), market-tobook ratio (*MTB*), return on assets (*ROA*), stock return (*Return*), Top 20 ownership (*Top20 ownership*), insider ownership (*Insider ownership*), CEO duality (*CEO duality*), board independence (*Board independence*), board size (*Board size*) and CEO abnormal pay (*CEO abnormal pay*).

⁴⁶ Given the voting requirements of the spill resolution and director re-election, director turnover is unlikely to be an outcome of "board spill" and the direct threat of losing internal board seats arising from a strike is low for directors. However, to the extent that public awareness and media coverage of the strikes are heightened (Hooghiemstra et al., 2015), the indirect effects of the strikes such as the reputation loss for directors of firms receiving a strike might matter, as evidenced by our findings suggesting resignation of directors from the strike firms and the loss of external board seats in other firms.

the resignation of all previous directors (one firm). Among the 12 spilled firms, three firms (25%) change their boards significantly. Among the 53 directors in these 12 firms, 11 directors (21%) leave office around the dates of receiving a strike. Independent directors are more likely to leave their position compared to non-independent directors (36% vs. 7%), consistent with our findings in the analysis of director turnover.

VI. CONCLUSION

While say-on-pay legislation has been introduced in several countries, Australia's version is unique in that it gives shareholders the right to vote on spilling the board when a firm receives 25 percent or more dissent votes on the remuneration report for two consecutive years. We test the proposition that the two-strikes rule has empowered minority shareholders and increased directors' accountability beyond executive pay by substantially lowering the effort required for activists to organize enough votes to threaten managers with a board spill. Consistent with this view, we find that Australian firms respond to minority strikes by curbing total and abnormal CEO pay. We also document that independent director turnover increases, and CEOs and independent directors incur higher reputational costs through the loss of other outside directorships after receiving minority strikes. Moreover, additional tests confirm that many of our findings are largely attributable to lower defeat thresholds rather than other confounding effects, supporting the contention that the two-strikes rule empowers minority shareholders.

Overall, our findings suggest that, after adopting a lower defeat threshold in say-on-pay votes, minority-strike firms respond to shareholder dissent on executive pay by curbing total and abnormal CEO pay in the next period, and independent directors experience reputation penalties in terms of turnover and the loss of outside board seats following a strike. Our study contributes to the literature on executive compensation, along with the emerging literature examining shareholder voting on executive remuneration and other corporate outcomes. In particular, our findings suggest that policy reforms aimed at enhancing the voices of minority shareholders are more likely to result in changes in the remuneration and governance practices of targeted firms and allow say-on-pay regulation to achieve its intended objective of curbing excessive CEO pay. Our findings are relevant to investors, company directors and regulators, particularly those considering the introduction or enhancement of say-on-pay legislation.

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Appendix: Variable measurement Variable	Measurement
Panel A: Strike variables	
Strike	A binary variable set to one if the percentage of the votes against the remuneration report is higher than or equal to 25 percent, and zero otherwise
FirstStrike	A binary variable set to one if a firm recorded a first strike at the remuneration report resolution at the AGM, and zero otherwise
SecondStrike	A binary variable set to one if a firm recorded a second strike at the remuneration report resolution at the AGM, and zero otherwise
MinorityStrike	A binary variable set to one if a firm recorded a strike at the remuneration report resolution at the AGM <i>and</i> the percentage of the votes against the remuneration report is higher than or equal to 25 percent but lower than 50 percent, and zero otherwise
MajorityStrike	A binary variable set to one if a firm recorded a strike at the remuneration report resolution at the AGM <i>and</i> the percentage of the votes against the remuneration report is higher than 50 percent, and zero otherwise
FirstStrike_Minority	A binary variable set to one if a firm recorded a first strike at the remuneration report resolution at the AGM <i>and</i> the percentage of the votes against the remuneration report is higher than or equal to 25 percent but lower than 50 percent, and zero otherwise
FirstStrike_Majority	A binary variable set to one if a firm recorded a first strike at the remuneration report resolution at the AGM <i>and</i> the percentage of the votes against the remuneration report is higher than 50 percent, and zero otherwise
Strike_50to25	A binary variable set to one if the percentage of the votes against the remuneration report is higher than 50 percent during 2006–2010 <i>or</i> higher than or equal to 25 percent during 2011–2014, and zero otherwise
FirstStrike_Minority_Rate	The percentage of shareholder dissent if a firm recorded a first strike at the remuneration report resolution at the AGM <i>and</i> the percentage of the votes against the remuneration report is higher than or equal to 25 percent but lower than 50 percent, and zero otherwise
FirstStrike_Majority_Rate	The percentage of shareholder dissent if a firm recorded a first strike at the remuneration report resolution at the AGM <i>and</i> the percentage of the votes against the remuneration report is higher than 50 percent, and zero otherwise
SecondStrike_Rate	The percentage of shareholder dissent if a firm recorded a second strike at the remuneration report resolution at the AGM, and zero otherwise
Post	A binary variable set to one for years 2011 or after, and zero otherwise
Panel B: CEO compensation variables	
CEO total pay (Ceopaytotal) CEO normal pay (Ceopay_normal)	The level of CEO total pay (in millions) Normal CEO pay (in millions) calculated as the fitted values from estimating the regression model of CEO pay in Core, Guay, and Lorekter (2008)
CEO abnormal pay (Ceopay_abnormal)	Larcker (2008) Abnormal CEO pay (in millions) calculated as the residuals from estimating the regression model of CEO pay in Core, Guay, and Larcker (2008)
$\Delta Shareholder$ wealth	The change in shareholder wealth
Panel C: Directors and CEO characteristics	
Seat	The total number of outside directors' seats
CEO turnover	An indicator variable equal to one if the CEO is dismissed within one year of a strike, and zero otherwise
CEO duality	An indicator variable equal to one if the CEO is also the chairman of the board, and zero otherwise
CEO ownership	The percentage of share ownership held by the CEO

Appendix:	Variable measuremen	t
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CEO age CEO tenure Director tenure Director turnover	The age of the CEO The tenure of the CEO The tenure of the director An indicator variable equal to one if the director leaves the position within one year of a strike, and zero otherwise
Panel D: Ownership and firm characteristics	
Tobin's Q	The ratio of the market value of a company's assets (including the market value of its outstanding equity and the book value of debt) divided by the replacement cost of the company's assets (book value)
ROA	Return on assets equal to net income over total assets
CAR	Cumulated abnormal returns based on the market model estimated from 150 days to 30 days prior to the announcement date, where day 0 is the announcement day of the AGM results
Firm size	The log of total assets
Market capitalization	The log of market capitalization
Sales growth	The sales growth rate
Leverage	Financial leverage measured as the ratio of total debt to total assets
Volatility	Stock return volatility over the past 12 months
MTB	The market-to-book ratio
Return	Stock return over the past 12 months
Firm age	Firm age, measured by the log of the number of months for which a firm appears in the SPPR database
DDIV	An indicator variable equal to one if the firm paid a dividend in the current year, and zero otherwise
Top20 ownership	The percentage of total shareholdings held by the largest 20 shareholders
Number of blockholders	The number of shareholders with higher than or equal to 5 percent shareholdings
Insider ownership	The percentage of share ownership of key management personnel
Board independence	The percentage of independent directors on the board

Figure 1 Two-strikes plus resolution to "spill" board

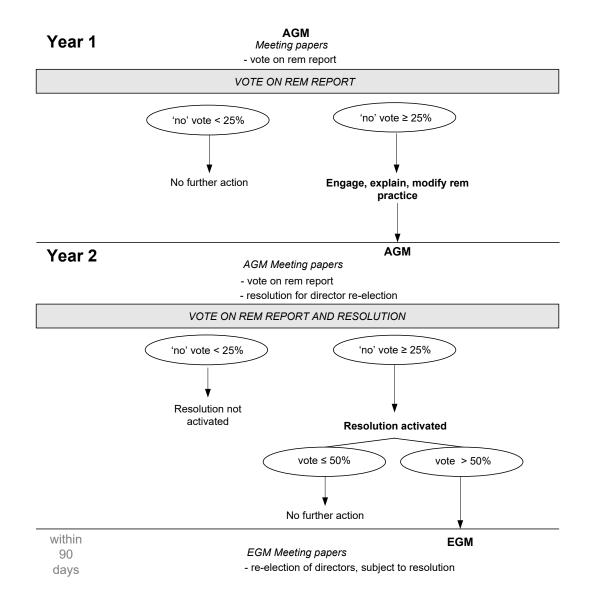


Figure 1 presents the timeline of key events under the two-strikes rules.

Source: Adapted from Productivity Commission (2009).

Table 1 Frequency of strikes

Panel A reports the frequency of strikes from 2011–2014. All variables are defined in the Appendix.

	2011	2012	2013	2014	All years
Strike	102	115	82	70	369
First strike	102	94	59	54	309
Second strike	0	21	23	16	60

Panel B reports the distribution of the percentage of votes against the adoption of remuneration reports at the AGM for non-missing observations from 2006–2014.

Dissent	(0%, 1%)	(1%, 5%)	(5%, 10%)	(10%, 15%)	(15%, 20%)	(20%, 25%)	(25%, 50%)	(50%, 100%)	Total
2006-2010	3,905	2,105	772	356	220	134	295	63	7,850
	50%	27%	10%	5%	3%	2%	4%	1%	
2011-2014	2,133	1,630	717	362	220	164	241	115	5,582
	38%	29%	13%	6%	4%	3%	4%	2%	
All years	6,038	3,735	1,489	718	440	298	536	178	13,432
-	45%	28%	11%	5%	3%	2%	4%	1%	
2006	831	315	95	50	34	19	39	1	1384
	60%	23%	7%	4%	2%	1%	3%	0%	
2007	851	394	127	76	33	22	47	12	1562
	54%	25%	8%	5%	2%	1%	3%	1%	
2008	711	478	191	78	51	33	94	20	1656
	43%	29%	12%	5%	3%	2%	6%	1%	
2009	710	473	174	67	62	33	66	19	1604
	44%	29%	11%	4%	4%	2%	4%	1%	
2010	802	445	185	85	40	27	49	11	1644
	49%	27%	11%	5%	2%	2%	3%	1%	
2011	413	368	182	80	54	47	59	32	1,235
	33%	30%	15%	6%	4%	4%	5%	3%	
2012	531	426	200	100	70	40	75	38	1,480
	36%	29%	14%	7%	5%	3%	5%	3%	
2013	566	424	188	110	52	39	61	21	1,461
	39%	29%	13%	7%	4%	3%	4%	1%	
2014	623	412	147	72	44	38	46	24	1,406
	44%	29%	10%	5%	3%	3%	3%	2%	

Table 2 Summary statistics

		2006–2014 0	excluding 201	0	2006–2009	2011–2014	Test of diff. in mean	2006–2009	2011-2014	Wilcoxon tes of diff.
	Ν	Mean	Median	STD	Mean	Mean	mean	Median	Median	in median
Strike	11,801	0.057	0	0.231	0.048	0.066	4.215***	0	0	-4.212***
FirstStrike	5,595	0.055	0	0.228	-	0.055	-	-	-	-
SecondStrike	5,595	0.011	0	0.103	-	0.011	-	-	-	-
MinorityStrike	11,801	0.041	0	0.200	0.040	0.043	1.800*	0	0	-1.800*
Firm characteristics										
ROA	10,856	-0.188	-0.073	0.396	-0.162	-0.216	-7.131***	-0.051	-0.090	8.225***
MTB	11,713	2.536	1.426	3.391	2.701	2.350	-5.606***	1.646	1.184	17.237***
Leverage	11,801	0.104	0.003	0.157	0.115	0.092	-8.077***	0.008	0	8.313***
Return	11,042	0.051	-0.124	0.783	0.067	0.035	-2.108**	-0.11	-0.137	3.436***
Volatility	11,588	0.187	0.161	0.119	0.184	0.190	2.621***	0.161	0.162	-1.720*
Market capitalization	11,680	17.326	16.983	2.005	17.47	17.163	-8.284***	17.169	16.776	9.941***
Firm size	11,718	17.344	17.014	2.070	17.371	17.313	-1.498	17.066	16.956	1.808*
Sales growth	8,800	5.095	0.089	25.291	4.116	6.183	3.831***	0.133	0.050	7.880***
Firm age	11,801	4.457	4.533	1.187	4.332	4.597	12.194***	4.454	4.605	-11.109***
Governance characteristics										
Top20 ownership	6,699	65.007	66.300	18.516	63.718	66.695	6.541***	65.2	67.82	-5.936***
Number of blockholders	6,699	3.034	3	1.651	2.984	3.093	2.498**	3	3	-2.257**
Insider ownership	6,605	0.245	0.123	0.802	0.278	0.201	-3.870***	0.137	0.106	4.145***
CEO duality	6,771	0.100	0	0.301	0.104	0.095	-1.161	0	0	1.176
Board independence	6,745	0.715	0.750	0.177	0.703	0.730	6.172***	0.75	0.75	-7.556***
CEO total pay	6,171	0.730	0.357	1.276	0.524	1.076	19.245***	0.260	0.579	-34.907***

Panel A: This table reports summary statistics for the sample. All variables are defined in the Appendix.

Panel B: Entropy balanced sample for tests of future compensation practice after a strike

	Before entr	opy balancing	After	entropy bala	ncing
Variable	<i>Treatment</i> Mean	<i>Control</i> Mean	<i>Treatment</i> Mean	<i>Control</i> Mean	Difference
Firm size	18.480	18.470	18.480	18.480	0.000
Leverage	0.138	0.145	0.138	0.138	0.000
Volatility	0.168	0.163	0.168	0.168	0.000
MTB	2.404	2.987	2.404	2.404	0.000
ROA	-0.137	-0.120	-0.137	-0.137	0.000
Return	-0.002	0.173	-0.002	-0.002	0.000
Top20 ownership	64.340	65.010	64.340	64.340	0.000
Insider ownership	0.143	0.222	0.143	0.143	0.000
CEO duality	0.134	0.105	0.134	0.134	0.000
Board independence	0.726	0.713	0.726	0.726	0.000
CEO abnormal pay	0.086	-0.084	0.086	0.086	0.000

Panel C: Entropy balanced	sample for te	ests of CEO	and director	turnover after	r a s	strike
	_					-

	Before entr	opy balancing	After	entropy bala	incing
	Treatment	Control	Treatment	Control	Difference
Variable	Mean	Mean	Mean	Mean	
ROA	-0.082	-0.059	-0.082	-0.082	0.000
Return	-0.042	0.152	-0.042	-0.041	-0.001
Volatility	0.151	0.141	0.151	0.152	-0.001
MTB	2.208	2.799	2.208	2.211	-0.003
Firm size	19.240	19.280	19.240	19.240	0.000
Leverage	0.172	0.175	0.172	0.172	0.000
Sales growth	6.841	4.954	6.841	6.842	-0.001
CEO duality	0.122	0.082	0.122	0.122	0.000
Board independence	0.754	0.741	0.754	0.754	0.000
CEO ownership	0.037	0.050	0.037	0.037	0.000
CEO abnormal pay	0.332	-0.130	0.332	0.332	0.000

Panel D: Entropy balanced sample for tests of outside directorship after a strike

	Before entr	opy balancing	After	entropy bala	ncing
	Treatment	Control	Treatment	Control	Difference
Variable	Mean	Mean	Mean	Mean	
ROA	-0.124	-0.086	-0.124	-0.124	0.000
Return	-0.020	0.168	-0.020	-0.019	-0.001
Firm size	18.990	19.130	18.990	18.990	0.000
Volatility	0.160	0.149	0.160	0.160	0.000
MTB	2.233	2.847	2.233	2.236	-0.003
Leverage	0.155	0.165	0.155	0.155	0.000
DDIV	0.368	0.464	0.368	0.368	0.000
Firm age	52.690	52.980	52.690	52.690	0.000
Director tenure	4.577	4.621	4.577	4.577	0.000
CEO abnormal pay	0.310	-0.120	0.310	0.310	0.000

Table 3 Determinants of occurrence of minority strikes

Panel A reports results from estimating the following panel regression model:

MinorityStrike or *SecondStrike* = $\alpha + \sum \beta^*$ *Determinants* + *Firm FE* + *Year FE* + ε

where *MinorityStrike* is a binary variable set to one if the percentage of the votes against the remuneration report is higher than or equal to 25% but lower than 50%, and zero otherwise; *Secondstrike* is a binary variable set to one if the remuneration report resolution is rejected at the AGM following a first strike in the previous year, and zero otherwise; *Determinants* represents a vector of determinants of receiving a strike. All variables are defined in the Appendix. Standard errors are clustered at the firm level. Figures in parentheses are *t*-statistics. *** (**, *) indicates significance at the 1% (5%, 10%) level for the two-tailed test.

	Full sample	Full sample	Sample	Sample	First strike vs.	Full sample
	2006–2009 & 2011–2014	2006–2009 & 2011–2014	2006-2009	2011-2014	Second strike 2011–2014	2006–2009 & 2011–2014
	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	MinorityStrike	MinorityStrike	MinorityStrike	MinorityStrike	SecondStrike	MinorityStrike
CEO abnormal pay	0.021***	0.020***	0.019***	0.025***	0.092*	0.018**
	(3.83)	(3.37)	(2.59)	(2.82)	(1.73)	(2.19)
CEO normal pay	-0.000	-0.000	0.066*	-0.004	-0.041	-0.001
	(-0.00)	(-0.02)	(1.82)	(-0.15)	(-0.37)	(-0.09)
Insider ownership	-0.013	-0.014	-0.008	-0.012	0.204	-0.014
	(-0.63)	(-0.67)	(-0.34)	(-0.44)	(0.75)	(-0.68)
CEO duality	0.005	0.006	-0.051	0.028	0.053	0.006
-	(0.23)	(0.25)	(-1.62)	(0.78)	(0.35)	(0.26)
Board independence	-0.054	-0.054	-0.168***	-0.058	0.008	-0.035
-	(-1.24)	(-1.24)	(-2.69)	(-0.84)	(0.02)	(-0.60)
Number of blockholders	0.001	0.001	0.007	-0.002	-0.014	0.002
5	(0.35)	(0.35)	(1.22)	(-0.30)	(-0.45)	(0.37)
Top20 ownership	-0.000	-0.000	0.001	-0.001	0.004	-0.000
1 1	(-0.82)	(-0.81)	(1.34)	(-0.96)	(0.98)	(-0.87)
ROA	-0.002	-0.002	-0.002	-0.015	0.172	-0.002
	(-0.68)	(-0.71)	(-0.60)	(-0.61)	(0.96)	(-0.81)
MTB	-0.002**	-0.002**	-0.002*	-0.001	-0.025	-0.002**
	(-2.09)	(-2.03)	(-1.89)	(-1.49)	(-1.14)	(-2.21)
Return	-0.004	-0.003	-0.001	0.001	0.021	-0.003
	(-0.98)	(-0.65)	(-0.24)	(0.12)	(0.41)	(-0.68)
Leverage	0.018	0.022	0.008	0.054	0.133	0.021
Leverage	(0.41)	(0.50)	(0.14)	(0.75)	(0.41)	(0.48)
Firm size	0.005	0.004	0.009	0.001	-0.070	0.005
1 1111 5120	(0.62)	(0.59)	(0.79)	(0.06)	(-1.25)	(0.67)
Post	0.041**	(0.55)	-	(0.00)	(1.23)	-
1 051	(2.51)					
Post*CEO abnormal pay	(2.51)	_	_	_	_	0.009
1 0st CEO abnormat pay	_	_	_	_	_	(0.82)
Post*Board independence						-0.044
1 Osi Boura independence	-	-	-	-	-	(-0.53)
Post*MTB						0.002
TOST MID	-	-	-	-	-	(0.84)
Firm FE	Yes	Yes	Yes	Yes	No	(0.84) Yes
Year FE	No	Yes	Yes	Yes	Yes	Yes
Industry FE	No	No	No	No 2 240	Yes	No 4 455
Observations	4,455	4,455	2,310	2,240	183 0.202	4,455
Adj. R ²	0.139	0.140	0.163	0.187	0.202	0.139

Table 4 Future compensation practice after minority strikes

This table reports the results from estimating the following regression model:

Future CEO pay = $\alpha + \beta_1 Post^*MinorityStrike + \gamma^*Controls + Firm FE + Year FE + \varepsilon$

where *Future CEO pay* represents the one-year ahead CEO total or abnormal pay; *MinorityStrike* is a binary variable set to one if the percentage of the votes against the remuneration report is no less than 25% but lower than 50%, and zero otherwise; *Post* is a binary variable set to one for years 2011 or after, and zero otherwise; *Controls* represents a vector of control variables. All variables are defined in the Appendix. The sample covers the periods 2006–2009 (pre-adoption) and 2011–2014 (post-adoption) after excluding firm-years in 2010 to avoid any confounding effect. Standard errors are clustered at the firm level. Figures in parentheses are *t*-statistics. *** (**, *) indicates significance at the 1% (5%, 10%) level for the two-tailed test.

	Dep var. = CEO t	total pay in t+1	Dep var. = CEO al	bnormal pay in t+1
	Firms with % of	Entropy-	Firms with % of	Entropy-balanced
	votes against the remuneration report	balanced sample	votes against the remuneration	sample
	below 50%		report below 50%	
VARIABLES	(1)	(2)	(3)	(4)
Post*MinorityStrike	-0.243**	-0.270**	-0.193**	-0.141**
	(-2.27)	(-2.07)	(-2.17)	(-1.98)
MinorityStrike	0.044	0.104	0.010	-0.007
	(0.58)	(1.08)	(0.13)	(-0.08)
Firm size	0.301***	0.116***	0.039***	0.049***
	(9.59)	(5.89)	(3.14)	(3.11)
Leverage	0.367**	-0.187	-0.449***	-0.452
	(2.03)	(-0.71)	(-2.82)	(-1.58)
Volatility	-0.073	-0.280	-0.395***	-0.501***
	(-0.60)	(-1.64)	(-3.05)	(-4.60)
MTB	-0.008*	0.001	-0.000	-0.000
	(-1.82)	(0.20)	(-0.02)	(-0.03)
ROA	-0.005	-0.002	0.003	0.004
	(-0.87)	(-0.44)	(0.38)	(0.52)
Return	-0.028**	0.076***	0.042**	0.084***
	(-2.34)	(2.95)	(2.28)	(3.38)
Top20 ownership	-0.001	0.003	0.001	0.002
	(-0.36)	(1.23)	(0.67)	(0.86)
Insider ownership	-0.034	-0.976***	-0.076*	-0.412
	(-0.61)	(-4.22)	(-1.70)	(-1.83)
CEO duality	0.004	-0.037	-0.072	-0.118
	(0.07)	(-0.33)	(-1.13)	(-1.17)
Board independence	0.412***	0.424**	0.176	0.003
	(3.01)	(1.96)	(1.20)	(0.02)
CEO abnormal pay	0.161***	0.125**	0.151***	0.106
	(3.55)	(2.26)	(3.36)	(1.03)
Firm FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Observations	4,178	4,178	3,946	3,946
Adj. R ²	0.690	0.764	0.518	0.664

Table 5 CEO and director turnover after minority strikes

This table reports the results from estimating the following linear probability model:

Probability (CEO turnover or Director turnover) = $\alpha + \beta_1 Post^*MinorityStrike + \gamma Controls + Firm FE + Year FE + \varepsilon$ where CEO turnover (Director turnover) is a dummy variable equal to one if the CEO (director) leaves the office within one year after a strike, and zero otherwise; MinorityStrike is a binary variable set to one if the percentage of votes against the remuneration report is no less than 25% but lower than 50%, and zero otherwise; Post is a binary variable set to one for years 2011 or after, and zero otherwise; Controls represents the control variables. All variables are defined in the Appendix. The sample covers the periods 2006–2009 (pre-adoption) and 2011–2014 (post-adoption) after excluding firm-years in 2010 to avoid any confounding effect. Standard errors are clustered at the firm level. Figures in parentheses are t-statistics. *** (**, *) indicates significance at the 1% (5%, 10%) level for the two-tailed test.

	All	All	All non-	Members of	Independent	Chairs of the	All CEOs
	directors	independent	independent	the	directors of the	remuneration	
		directors	directors	remuneration	remuneration	committee	
				committee	committee		
VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Post*MinorityStrike	0.059***	0.066**	0.060	0.039	0.061**	0.071	0.039
	(3.02)	(2.45)	(1.45)	(0.92)	(2.05)	(1.01)	(0.71)
MinorityStrike	0.005	0.008	0.009	-0.001	-0.004	-0.007	0.004
	(0.38)	(0.44)	(0.37)	(-0.04)	(-0.14)	(-0.13)	(0.12)
ROA	0.001	0.036***	-0.001	0.069***	0.095***	0.055*	0.082
	(0.95)	(3.75)	(-0.71)	(3.11)	(4.00)	(1.70)	(1.26)
Return	-0.005**	-0.004	-0.006	-0.008	0.004	-0.015	0.015
	(-2.00)	(-0.98)	(-1.54)	(-1.21)	(0.64)	(-1.31)	(0.75)
Sales growth	0.000*	-0.000	0.000*	0.000***	0.000***	0.000***	-0.001***
	(1.79)	(-0.01)	(1.90)	(4.08)	(2.61)	(4.32)	(-2.62)
Volatility	-0.061**	-0.030	-0.069	0.038	0.063	-0.109	-0.178
	(-2.15)	(-0.68)	(-1.29)	(0.50)	(0.89)	(-0.87)	(-0.75)
MTB	0.000	0.000	0.000	0.001	0.000	-0.000	0.002
	(1.08)	(0.18)	(0.13)	(0.77)	(0.17)	(-0.14)	(0.29)
Firm size	0.003	0.001	0.002	-0.004	0.001	0.002	0.009
	(0.93)	(0.30)	(0.35)	(-0.48)	(0.10)	(0.18)	(0.21)
Leverage	0.049*	0.063*	0.092**	0.140**	0.166***	0.155*	0.197
	(1.94)	(1.68)	(2.10)	(2.56)	(2.89)	(1.74)	(0.91)
CEO duality	0.020	0.022	0.015	0.057*	0.104***	0.020	0.248**
	(1.57)	(1.08)	(0.60)	(1.82)	(3.02)	(0.34)	(2.47)
Board independence	-0.025	-0.060	-0.010	-0.107	-0.090	-0.115	0.252
	(-1.02)	(-1.49)	(-0.21)	(-1.60)	(-1.32)	(-1.05)	(1.45)
CEO ownership	-0.094***	-0.028	-0.125***	-0.082	-0.002	-0.083	-0.337***
	(-3.36)	(-0.67)	(-2.64)	(-1.38)	(-0.03)	(-0.97)	(-3.11)
CEO abnormal pay	0.007***	0.002	0.013**	0.009*	0.006	0.002	0.015
	(2.78)	(0.64)	(2.36)	(1.70)	(1.15)	(0.19)	(0.89)
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	31,300	13,980	17,320	12,289	7,897	3,326	3,995
Adj. R ²	0.085	0.124	0.065	0.117	0.129	0.145	0.431

Panel A: Firms with a percentage of votes against the remuneration report below 50%

	All	All	All non-	Members of	Independent	Chairs of the	All CEOs
	directors	independent	independent	the	directors of	remuneration	
		directors	directors	remuneration	the	committee	
				committee	remuneration		
					committee		
VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Post*MinorityStrike	0.059***	0.047**	0.026	0.005	0.045***	0.059	0.047
	(3.27)	(2.07)	(0.50)	(0.10)	(2.60)	(0.77)	(0.69)
MinorityStrike	0.031	0.022	0.042	0.034	0.016	0.025	0.008
	(0.95)	(0.77)	(1.25)	(0.79)	(0.42)	(0.40)	(0.20)
ROA	0.002	0.062**	0.003	0.091**	0.082**	0.088	0.091
	(0.67)	(2.56)	(0.76)	(2.17)	(2.11)	(1.35)	(0.88)
Return	-0.017**	-0.013	-0.018*	-0.017	0.001	-0.025	0.053
	(-2.28)	(-1.27)	(-1.73)	(-1.36)	(0.09)	(-1.32)	(1.25)
Sales growth	-0.000**	-0.000	-0.000	-0.001***	-0.000	-0.001*	0.002**
	(-2.16)	(-1.35)	(-1.46)	(-2.77)	(-0.67)	(-1.80)	(2.23)
Volatility	0.049	0.222***	-0.042	0.164	0.288**	0.098	0.202
	(0.88)	(2.58)	(-0.51)	(1.30)	(2.42)	(0.45)	(0.57)
MTB	0.004**	0.004	0.004*	-0.000	-0.002	-0.003	-0.021*
	(2.11)	(1.56)	(1.70)	(-0.11)	(-0.63)	(-0.51)	(-1.68)
Firm size	-0.003	-0.001	-0.004	-0.000	0.008	-0.014	0.270***
	(-0.58)	(-0.11)	(-0.49)	(-0.00)	(0.52)	(-0.58)	(2.77)
Leverage	0.098*	0.171***	0.137	0.193*	0.344***	0.216	0.214
	(1.80)	(2.72)	(1.56)	(1.77)	(4.02)	(1.51)	(0.40)
CEO duality	-0.019	0.008	-0.021	0.024	0.052	0.034	-0.045
	(-0.95)	(0.24)	(-0.64)	(0.56)	(1.02)	(0.40)	(-0.59)
Board independence	-0.033	-0.059	0.031	-0.209	-0.263*	-0.168	-0.266
	(-0.61)	(-0.55)	(0.42)	(-0.97)	(-1.70)	(-0.60)	(-0.77)
CEO ownership	-0.061	-0.047	-0.097	-0.117	-0.048	-0.266*	-0.114
	(-1.40)	(-0.70)	(-1.46)	(-1.13)	(-0.51)	(-1.84)	(-0.62)
CEO abnormal pay	0.013***	0.012**	0.013	0.016**	0.016	0.010	0.000
	(2.68)	(1.98)	(1.23)	(2.12)	(1.47)	(0.92)	(0.01)
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	31,300	13,980	17,320	12,289	7,897	3,326	3,995
Adj. R ²	0.157	0.254	0.162	0.224	0.283	0.326	0.748

Table 6 Outside directorships after minority strikes

This table reports results from estimating the following regression model:

 $\Delta Seat_{t+2} = \alpha + \beta_1 Post^* MinorityStrike + \gamma Controls + Firm FE + Year FE + \varepsilon$

where $\Delta Seat$ is the change in the number of outside directorships two years after a strike; *MinorityStrike* is a binary variable set to one if the percentage of votes against the remuneration report is no less than 25% but lower than 50%, and zero otherwise; *Post* is a binary variable set to one for years 2011 or after, and zero otherwise; *Controls* represents a vector of control variables. The sample covers the periods 2006–2009 (pre-adoption) and 2011–2014 (post-adoption) after excluding firm-years in 2010 to avoid any confounding effect. Standard errors are clustered at the firm level. Figures in parentheses are *t*-statistics. *** (**, *) indicates significance at the 1% (5%, 10%) level for the two-tailed test. All variables are defined in the Appendix.

Dependent variable =	All directors with	All independent	All non-	Members of the	Independent	Chairs of the	CEOs with at leas
ΔSeat_{t+2}	at least one	directors	independent	remuneration	directors of the	remuneration	one outside
	outside		directors	committee	remuneration	committee	directorship
	directorship				committee		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Post*MinorityStrike	-0.179**	-0.144*	-0.143	-0.030	-0.009	-0.612**	-0.235
	(-2.00)	(-2.05)	(-0.79)	(-0.20)	(-0.05)	(-2.19)	(-0.56)
MinorityStrike	0.088	0.037	0.102	0.033	0.003	0.296	0.229
	(1.35)	(0.75)	(0.80)	(0.29)	(0.03)	(1.55)	(0.65)
ROA	0.040	0.070	-0.051	0.090**	0.088**	0.047	0.046
	(1.60)	(1.83)	(-0.91)	(2.26)	(2.40)	(0.93)	(0.38)
Return	0.023	0.020	0.030	0.054*	0.085**	-0.035	-0.050
	(1.54)	(0.62)	(0.98)	(1.72)	(2.31)	(-0.57)	(-0.84)
Firm size	-0.019*	-0.023	0.010	-0.042**	-0.044**	-0.085**	-0.100
	(-1.84)	(-1.89)	(0.34)	(-2.14)	(-2.01)	(-2.07)	(-1.06)
Volatility	0.274*	0.384**	0.145	0.209	0.391	1.105**	1.253**
•	(1.85)	(2.38)	(0.49)	(0.83)	(1.19)	(2.05)	(2.12)
MTB	-0.003	-0.004	-0.002	-0.008*	-0.011*	-0.013**	0.015
	(-1.07)	(-1.54)	(-0.34)	(-1.75)	(-1.87)	(-2.07)	(1.18)
Leverage	0.067	0.037	0.268	0.222	0.182	0.650**	-0.687
-	(0.75)	(0.26)	(1.04)	(1.49)	(1.09)	(2.12)	(-0.83)
DDIV	-0.055	-0.058	-0.047	-0.085	-0.096	-0.065	0.030
	(-1.56)	(-1.89)	(-0.59)	(-1.64)	(-1.51)	(-0.55)	(0.07)
Firm age	0.016	0.033	0.000	0.031	0.020	-0.003	-0.075
0	(0.97)	(0.89)	(0.01)	(1.00)	(0.46)	(-0.08)	(-1.16)
Director tenure	0.008**	0.017***	0.004	0.015**	0.017*	0.019	0.014
	(2.11)	(3.30)	(0.56)	(2.14)	(1.87)	(1.09)	(0.54)
CEO abnormal pay	0.011	0.022***	-0.011	0.017	0.018	0.064*	-0.005
	(1.20)	(2.91)	(-0.40)	(0.98)	(0.99)	(1.75)	(-0.06)
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	8,633	5,404	3,229	4,150	3,084	1,186	1,260
Adj. R ²	0.197	0.212	0.177	0.195	0.182	0.241	0.215

Panel A: Firms with the percentage of votes against the remuneration report below 50%

Dependent variable =	All directors with	All independent	All non-	Members of the	Independent	Chairs of the	CEOs with at leas
ΔSeat_{t+2}	at least one	directors	independent	remuneration	directors of the	remuneration	one outside
	outside		directors	committee	remuneration	committee	directorship
	directorship				committee		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Post*MinorityStrike	-0.178**	-0.144**	-0.150	-0.030	-0.008	-0.611**	-0.216
	(-2.21)	(-2.02)	(-0.82)	(-0.19)	(-0.04)	(-2.19)	(-0.50)
MinorityStrike	-0.007	0.255	0.494	0.196	0.404	-0.002	-0.745
	(-0.02)	(0.90)	(0.41)	(0.23)	(0.48)	(-0.00)	(-0.38)
ROA	0.041	0.069	-0.052	0.089**	0.085**	0.049	0.047
	(1.45)	(1.81)	(-0.92)	(2.21)	(2.28)	(0.96)	(0.40)
Return	0.024	0.016	0.023	0.051	0.077*	-0.029	-0.034
	(0.92)	(0.46)	(0.66)	(1.35)	(1.80)	(-0.43)	(-0.57)
Firm size	-0.019**	-0.022	0.010	-0.042**	-0.044**	-0.085**	-0.102
	(-2.55)	(-1.83)	(0.36)	(-2.13)	(-2.00)	(-2.08)	(-1.08)
Volatility	0.267**	0.400**	0.171	0.218	0.413	1.087**	1.176**
	(2.19)	(2.38)	(0.56)	(0.84)	(1.23)	(1.98)	(2.06)
MTB	-0.003	-0.005	-0.002	-0.008*	-0.012*	-0.012**	0.016
	(-0.89)	(-1.67)	(-0.42)	(-1.76)	(-1.93)	(-1.99)	(1.24)
Leverage	0.068	0.036	0.265	0.222	0.184	0.651**	-0.690
-	(0.56)	(0.26)	(1.04)	(1.49)	(1.10)	(2.13)	(-0.83)
DDIV	-0.052	-0.064**	-0.059	-0.090	-0.109	-0.055	0.076
	(-1.14)	(-2.53)	(-0.67)	(-1.59)	(-1.63)	(-0.44)	(0.16)
Firm age	0.016	0.033	-0.000	0.031	0.020	-0.003	-0.073
0	(0.72)	(0.89)	(-0.00)	(0.99)	(0.46)	(-0.07)	(-1.14)
Director tenure	0.008***	0.017***	0.004	0.015**	0.017*	0.019	0.014
	(2.61)	(3.29)	(0.58)	(2.14)	(1.89)	(1.08)	(0.53)
CEO abnormal pay	0.009	0.028**	-0.003	0.022	0.030	0.056	-0.037
	(0.60)	(2.02)	(-0.09)	(0.67)	(0.86)	(0.96)	(-0.34)
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	8,633	5,404	3,229	4,150	3,084	1,186	1,260
Adj. R ²	0.196	0.212	0.176	0.194	0.182	0.240	0.213

Panel B Firms with the percentage of votes against the remuneration report below 50% using the entropy-balanced sample

Table 7 Robustness tests

Panel A: Parallel trend tests

This table reports the results of parallel trend tests following Bertrand and Mullainathan (2003), which includes four indicator variables representing the year(s) relative to the adoption year, *Before*⁻², *Before*⁻¹, *After*¹, and *After*²⁺, and interact with the *MinorityStrike* indicator. *Before*⁻² equals to 1 for the years that are at least two years before the adoption of the two-strikes rule, and 0 otherwise. *Before*⁻¹ equals to 1 for the year prior to the adoption, and 0 otherwise. *After*¹ indicates the year of adoption (i.e., 2011). *After*²⁺ equals to 1 for the years at least two years after the adoption, and 0 otherwise. The sample covers the periods 2006–2009 (pre-adoption) and 2011–2014 (post-adoption) after excluding firm-years in 2010 to avoid any confounding effect. Standard errors are clustered at the firm level. Figures in parentheses are *t*-statistics. *** (**, *) indicates significance at the 1% (5%, 10%) level for the two-tailed test.

	CEO	CEO		Director turno	ver		ΔS	$Seat_{t+2}$	
	total	abnormal	All	All	Independent	All directors	All	Independent	Chairs of the
	pay in <i>t</i> +1	pay in <i>t</i> +1		independent	directors on	with at least	independent	directors of the	remuneration
				directors	remuneration	one outside	directors	remuneration	committee
					committee	directorship		committee	
Before ⁻² *MinorityStrike	0.068	0.028	-0.018	-0.006	-0.068	0.351	0.152	0.084	-0.390
	(0.72)	(0.28)	(-0.37)	(-0.10)	(-0.79)	(1.69)	(0.77)	(0.17)	(-1.47)
Before ⁻¹ *MinorityStrike	-0.008	-0.029	-0.026	-0.079	-0.062	0.115	0.048	0.266	0.277
	(-0.09)	(-0.29)	(-0.92)	(-1.60)	(-1.44)	(0.73)	(0.20)	(1.27)	(0.87)
After ¹ *MinorityStrike	-0.074	-0.046	0.053**	0.095***	0.102**	0.034	0.068	-0.137	-0.063
	(-0.43)	(-0.25)	(2.42)	(2.64)	(1.97)	(0.31)	(0.54)	(-0.65)	(-1.01)
After ²⁺ *MinorityStrike	-0.274***	-0.268***	-0.034	0.028	0.012	-0.092**	-0.127**	-0.065	-0.391**
	(-4.73)	(-3.67)	(-1.15)	(0.67)	(0.21)	(-2.07)	(-2.40)	(-0.27)	(-2.12)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm & Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4,178	3,946	31,300	13,980	7,897	8,633	5,404	3,084	1,186
Adj. R ²	0.690	0.518	0.090	0.130	0.129	0.180	0.1931	0.181	0.241

Panel B: Placebo tests

This table reports the placebo (falsification) test results for the difference-in-differences analysis. We repeat the simulation process 1,000 times and calculate the average of the coefficients and corresponding *t*-statistics for the main variables of interest, *Post*MinorityStrike*. The sample covers the periods 2006–2009 (pre-adoption) and 2011–2014 (post-adoption) after excluding firm-years in 2010 to avoid any confounding effect. Standard errors are clustered at the firm level. Figures in parentheses are *t*-statistics. *** (**, *) indicates significance at the 1% (5%, 10%) level for the two-tailed test.

	CEO	CEO		Director turne	over		ΔSet	eat_{t+2}	
	total	abnormal	All	All	Independent	All directors	All	Independent	Chairs of the
	pay in t+1	pay in t+1		independent	directors on	with at least	independent	directors of the	remuneration
				directors	remuneration	one outside	directors	remuneration	committee
					committee	directorship		committee	
Post*MinorityStrike	-0.000	-0.002	-0.000	-0.000	0.000	0.001	-0.000	0.001	0.004
	(-0.06)	(-0.81)	(-0.50)	(-0.72)	(0.30)	(0.31)	(-0.21)	(0.30)	(0.89)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm & Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Panel C: Alternative treatment sample: Treatment firms including firms with the percentage of "no" votes higher than 50% over 2006–2009 and firms with the dissent rate higher than 25% over 2011–2014

This table reports the results from estimating each regression model using an alternative strike variable. *Strike_50to25* is a binary variable set to one if the percentage of the votes against the remuneration report is higher than 50% over 2006–2009 or higher than 25% over 2011–2014, and zero otherwise. Standard errors are clustered at the firm level. Figures in parentheses are *t*-statistics. *** (**, *) indicates significance at the 1% (5%, 10%) level for the two-tailed test.

	CEO	CEO		Director turnov	ver		ΔS	Seat _{t+2}	
	total pay in <i>t</i> +1	abnormal pay in <i>t</i> +1	All	All independent directors	Independent directors on remuneration committee	All directors with at least one outside directorship	All independent directors	Independent directors of the remuneration committee	Chairs of the remuneration committee
Post*Strike_50to25	-0.243** (-2.27)	-0.193** (-1.99)	0.059*** (3.02)	0.066** (2.45)	0.061** (2.05)	-0.179** (-2.00)	-0.142* (-1.92)	-0.009 (-0.05)	-0.612** (-2.19)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm & Year FE Observations Adj. R ²	Yes 4,322 0.690	Yes 4,181 0.518	Yes 32,322 0.085	Yes 14,373 0.124	Yes 8,117 0.124	Yes 8,819 0.197	Yes 5,503 0.212	Yes 3,133 0.182	Yes 1,328 0.241

Panel D: Excluding the sample period affected by the Global Financial Crisis

This table reports the results from estimating each regression model for the sample period of 2006–2007 and 2011–2014, after excluding the sample period of 2008 and 2009. Standard errors are clustered at the firm level. Figures in parentheses are *t*-statistics. *** (**, *) indicates significance at the 1% (5%, 10%) level for the two-tailed test.

	CEO	CEO		Director turnov	ver		ΔS	$Seat_{t+2}$	
	total pay in <i>t</i> +1	abnormal pay in <i>t</i> +1	All	All independent directors	Independent directors on remuneration committee	All directors with at least one outside directorship	All independent directors	Independent directors of the remuneration committee	Chairs of the remuneration committee
Post*MinortiyStrike	-0.294** (-2.56)	-0.258*** (-3.25)	0.127*** (5.00)	0.088** (2.48)	0.124** (2.51)	-0.454*** (-3.12)	-0.239** (-2.15)	-0.297 (-1.25)	-0.321** (-2.47)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm & Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,744	2,586	26,186	12,150	6,403	5,916	3,764	2,139	865
Adj. R ²	0.692	0.535	0.111	0.157	0.155	0.283	0.302	0.276	0.300

Panel E: The effect of different minority strikes based on different voting thresholds

This table reports the results from estimating each regression model using different voting thresholds. *Strike25to30* is a binary variable set to one if the percentage of the votes against the remuneration report is higher than or equal to 25% but lower than 30%, and zero otherwise. *Strike30to35* is a binary variable set to one if the percentage of the votes against the remuneration report is higher than or equal to 30% but lower than 35%, and zero otherwise. *Strike30to40* is a binary variable set to one if the percentage of the votes against the remuneration report is higher than or equal to 35% but lower than 40%, and zero otherwise. *Strike40to45* is a binary variable set to one if the percentage of the votes against the remuneration report is higher than or equal to 35% but lower than 40%, and zero otherwise. *Strike40to45* is a binary variable set to one if the percentage of the votes against the remuneration report is higher than or equal to 40% but lower than 45%, and zero otherwise. *Strike40to45* is a binary variable set to one if the percentage of the votes against the remuneration report is higher than or equal to 50% but lower than 45%, and zero otherwise. *Strike40to45* is a binary variable set to one if the percentage of the votes against the remuneration report is higher than or equal to 40% but lower than 45%, and zero otherwise. *Strike40to45* is a binary variable set to one if the percentage of the votes against the remuneration report is higher than or equal to 45% but lower than 50%, and zero otherwise. *Strike45to50* is a binary variable set to one if the percentage of the votes against the remuneration report is higher than or equal to 45% but lower than 50%, and zero otherwise. The sample covers the periods 2006–2009 (pre-adoption) and 2011–2014 (post-adoption) after excluding firm-years in 2010 to avoid any confounding effect. Standard errors are clustered at the firm level. Figures in parentheses are *t*-statistics. *** (**, *) indicates significance at the 1% (5%, 10%) level for th

	CEO	CEO		Director turno	ver		ΔS	$beat_{t+2}$	
	total	abnormal	All	All	Independent	All directors	All	Independent	Chairs of
	pay in t+1	pay in <i>t</i> +1		independent	directors on	with at least	independent	directors of the	the
				directors	remuneration	one outside	directors	remuneration	remuneratio
					committee	directorship		committee	n committee
Post*Strike25to30	-0.386***	-0.287***	0.001	-0.030	-0.022	-0.071	0.031	0.276	-0.271
	(-2.71)	(-2.63)	(0.03)	(-0.80)	(-0.41)	(-0.58)	(0.44)	(1.06)	(-0.56)
Post*Strike30to35	-0.053	-0.065	0.104***	0.103**	0.107*	-0.107	-0.036	0.019	-0.545
	(-0.23)	(-0.29)	(3.31)	(2.36)	(1.93)	(-0.83)	(-0.38)	(0.09)	(-1.51)
Post*Strike35to40	-0.297**	-0.253***	0.117***	0.122***	0.122**	-0.467***	-0.554***	-0.628	-0.901*
	(-2.04)	(-2.61)	(3.84)	(2.86)	(2.00)	(-2.90)	(-7.36)	(-1.34)	(-1.78)
Post*Strike40to45	-0.065	0.095	-0.028	0.004	0.029	-0.363**	-0.292	-0.087	-0.317
	(-0.48)	(1.38)	(-0.83)	(0.08)	(0.45)	(-2.18)	(-1.13)	(-0.23)	(-0.79)
Post*Strike45to50	-0.334***	-0.431***	0.131***	0.250***	0.106	-0.031	-0.144	0.400	-1.600***
	(-3.20)	(-2.94)	(3.32)	(4.49)	(1.43)	(-0.16)	(-0.57)	(0.86)	(-2.83)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm & Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4,178	3,946	31,300	13,980	7,897	8,633	5,404	3,084	1,186
Adj. R ²	0.690	0.518	0.126	0.204	0.239	0.197	0.213	0.185	0.242
p-value for testing equality of coefficients									
Post*Strike25to30 = Post*Strike30to35?	0.165	0.386	0.005***	0.008***	0.048**	0.807	0.290	0.390	0.607
Post*Strike25to30 = Post*Strike35to40?	0.601	0.459	0.001***	0.002***	0.044**	0.025**	0.001***	0.074*	0.329
Post*Strike25to30 = Post*Strike40to45?	0.045**	0.003***	0.456	0.544	0.495	0.103	0.268	0.400	0.932
Post*Strike25to30 = Post*Strike45to50?	0.711	0.488	0.003***	0.000 * * *	0.125	0.853	0.526	0.808	0.056*
Post*Strike30to35 = Post*Strike35to40?	0.318	0.397	0.740	0.724	0.835	0.050**	0.003***	0.178	0.523
Post*Strike30to35 = Post*Strike40to45?	0.959	0.455	0.001***	0.097*	0.290	0.174	0.360	0.789	0.619
Post*Strike30to35 = Post*Strike45to50?	0.207	0.079	0.565	0.022**	0.991	0.728	0.644	0.431	0.088*
Post*Strike35to40 = Post*Strike40to45?	0.148	0.003***	0.000***	0.043**	0.236	0.620	0.316	0.345	0.284
Post*Strike35to40 = Post*Strike45to50?	0.782	0.337	0.767	0.038**	0.848	0.066*	0.154	0.110	0.331
Post*Strike40to45 = Post*Strike45to50?	0.036**	0.012**	0.001***	0.000***	0.388	0.168	0.672	0.398	0.046**

Table 8 Minority vs. majority and second strikes

This table reports the results from estimating each regression model using three separate variables based on the percentage of shareholder dissent on the remuneration report. *FirstStrike_Minority* (*FirstStrike_Majority*) is a binary variable set to one if a firm recorded a first strike at the remuneration report resolution and the percentage of "no" votes is no less than 25% but lower than 50% (higher than 50%), and zero otherwise; *SecondStrike* is a binary variable set to one if the remuneration report resolution is rejected at the AGM following a first strike, and zero otherwise; *FirstStrike_Minor_Rate (FirstStrike_Major_Rate)* is the percentage of shareholder dissent if a firm recorded a first strike when the percentage of "no" votes is no less than 25% but lower than 50% (higher than 50%), and zero otherwise; *SecondStrike_Rate* is the percentage of shareholder dissent if the remuneration report resolution was rejected at the AGM following a first strike, and zero otherwise; *Controls* is consistent with those used in previous tables. The sample covers the periods 2011–2014 (post-adoption). Standard errors are clustered at the firm level. Figures in parentheses are *t*-statistics. *** (**, *) indicates significance at the 1% (5%, 10%) level for the two-tailed test. All variables are defined in the Appendix.

	CEO	CEO		Director turnov	ver		ΔS	$Seat_{t+2}$	
	total pay in <i>t</i> +1	abnormal pay in <i>t</i> +1	All	All independent directors	Independent directors on remuneration committee	All directors with at least one outside directorship	All independent directors	Independent directors of the remuneration committee	Chairs of the remuneration committee
Post*FirstStrike_Minority	-0.241** (-2.36)	-0.166** (-2.01)	0.068*** (3.62)	0.059** (2.28)	0.045* (1.71)	-0.151** (-2.11)	-0.122* (-1.80)	0.003 (0.01)	-0.620** (-2.35)
Post*FirstStrike_Majority	-0.009 (-0.07)	-0.105	0.085*** (3.75)	0.043 (1.20)	-0.000 (-0.00)	-0.009 (-0.08)	-0.207 (-0.94)	-0.203 (-1.02)	0.136 (0.49)
Post*SecondStrike	0.047 (0.32)	-0.036 (-0.33)	-0.026 (-0.39)	0.069 (0.77)	0.124 (0.99)	-0.365 (-1.13)	-0.612 (-1.62)	-0.893** (-2.39)	-0.424 (-0.85)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm & Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations Adj. R ²	4,322 0.669	4,181 0.527	32,322 0.0860	14,373 0.124	8,117 0.132	8,819 0.194	5,503 0.209	3,133 0.181	1,328 0.242

Panel A: Empirical results using indicator variables for first minority, first majority and second strikes

Panel B: Empirical results using the percentages of shareholder dissent for first minority, first majority and second strikes

Full sample	CEO	CEO		Director turnov	ver		Δ	Seat _{t+2}	
	total	abnormal	All	All	Independent	All directors	All	Independent	Chairs of the
	pay in <i>t</i> +1	pay in		independent	directors in	with at least	independent	directors of the	remuneration
		t+1		directors	remuneration	one outside	directors	remuneration	committee
					committee	directorship		committee	
Post*FirstStrike_Minority_Rate	-0.637**	-0.498**	0.168***	0.201***	0.204*	-0.510**	-0.434**	0.005	-1.905**
	(-2.32)	(-2.05)	(3.03)	(2.62)	(1.94)	(-2.38)	(-1.98)	(0.01)	(-2.45)
Post*FirstStrike_Majority_Rate	-0.249	-0.358	0.104	0.153	-0.012	0.391	0.328	0.435	0.436
	(-0.76)	(-1.88)	(1.46)	(1.58)	(-0.15)	(1.33)	(0.96)	(0.94)	(1.11)
Post*SecondStrike_Rate	-0.061	-0.330	-0.001	0.243	0.200	-0.100	-0.689	-1.395**	0.135
—	(-0.15)	(-0.57)	(-0.01)	(1.41)	(1.31)	(-0.17)	(-1.16)	(-2.23)	(0.12)
Controls	YES	YES	YES	YES	YES	YES	YES	YES	YES
Firm & Year FE	YES	YES	YES	YES	YES	YES	YES	YES	YES
Observations	4,322	4,181	32,322	14,373	8,117	8,819	5,503	3,133	1,328
Adj. R ²	0.691	0.520	0.0850	0.124	0.132	0.194	0.209	0.182	0.244

Table 9 Market reaction and long-run performance after the announcement of a first and second strike on remuneration reports

All strikes		strikes	Minority first strikes (25, 50%)		5 5	first strikes , 100%)	Second strikes	
Event window	Mean CAR	Median CAR	Mean CAR	Median CAR	Mean CAR	Median CAR	Mean CAR	Median CAF
[-10, -2]	-0.012*	-0.014**	-0.014*	-0.014**	-0.005	-0.015	0.005	-0.021
	(-1.76)	(-2.45)	(-1.71)	(-2.24)	(-0.33)	(-0.89)	(0.23)	(-0.75)
[-1, 1]	-0.000	-0.001	0.006	0.001	-0.012	-0.013	-0.008	-0.013
	(-0.05)	(-0.34)	(1.18)	(0.42)	(-1.13)	(-1.24)	(-0.43)	(-0.58)
[2, 10]	-0.022***	-0.018***	-0.031***	-0.021***	-0.016	-0.014	-0.022	-0.024
	(-2.99)	(-2.67)	(-3.72)	(-2.89)	(-0.95)	(-0.84)	(-0.90)	(-0.83)

Panel A: Cumulative abnormal returns (CAR) around the announcement of a strike where remuneration report resolution is rejected at the AGM

Panel B: Buy-and-hold abnormal returns (BHAR) after the announcement of a strike on remuneration reports

	Alls	strikes	5	y first strikes Majority first strikes (5,50%) (50%, 100%)		2	Seco	ond strikes
	Mean BHAR	Median BHAR	Mean BHAR	Median BHAR	Mean BHAR	Median BHAR	Mean BHAR	Median BHAR
	(bootstrap <i>t</i> -stat.)	(Wilcoxon signed-	(bootstrap <i>t</i> -stat.)	(Wilcoxon signed-	(bootstrap t-	(Wilcoxon signed-	(bootstrap t-	(Wilcoxon signed-
Event window		rank test (z-stat.))		rank test (z-stat.))	stat.)	rank test (z-stat.))	stat.)	rank test (z-stat))
[0, 3 months]	-0.022	-0.026*	-0.063***	-0.035**	0.019	-0.039	0.088	0.013
	(-0.97)	(-1.66)	(-3.66)	(-2.34)	(0.32)	(-0.91)	(1.04)	(0.44)
[0, 12 months]	-0.050	-0.187***	-0.079	-0.233***	-0.046	-0.152	0.086	-0.005
	(-0.98)	(-5.17)	(-1.21)	(-5.48)	(-0.52)	(-1.38)	(0.79)	(-0.06)
[0, 24 months]	0.032	-0.299***	0.002	-0.348***	0.107	-0.352***	0.008	-0.032
-	(0.44)	(-4.34)	(0.02)	(-3.82)	(0.63)	(-2.87)	(0.06)	(-0.26)

*** (**, *) indicates significance at the 1% (5%, 10%) level for the one-tailed test. All variables are defined in the Appendix.