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Shareholder Voting and Disclosure in M&As

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Abstract

We examine the effect of voting requirements in M&A transactions on managerial disclosure, information asymmetries, and voting outcomes. We find that voting requirements lead firms to provide more disclosure and in a timelier manner, including disclosure of the merger agreement, information on expected synergies, and post-merger earnings forecasts. We document a larger reduction in information asymmetries in deals subject to vote. More disclosure in the presence of voting requirements also triggers more sales from transient institutional investors. Lower information asymmetries and more transient institutional sales are associated with higher voting support and a higher likelihood that the deal is completed. Our results suggest that disclosure induced by voting requirements is informative and affects voting outcomes by changing the market valuation of the deal and the shareholder base. Evidence from falsification tests and a regression discontinuity design supports the causal interpretation of our results.

Keywords: shareholder voting, disclosure, information asymmetry, M&As

JEL Classifications: G14, G34, G38

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Shareholder voting and disclosure in M&As*

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January 21, 2023

Abstract

We examine the effect of voting requirements in M&A transactions on managerial disclosure, information asymmetries, and voting outcomes. We find that voting requirements lead firms to provide more disclosure and in a timelier manner, including disclosure of the merger agreement, information on expected synergies, and post-merger earnings forecasts. We document a larger reduction in information asymmetries in deals subject to vote. More disclosure in the presence of voting requirements also triggers more sales from transient institutional investors. Lower information asymmetries and more transient institutional sales are associated with higher voting support and a higher likelihood that the deal is completed. Our results suggest that disclosure induced by voting requirements is informative and affects voting outcomes by changing the market valuation of the deal and the shareholder base. Evidence from falsification tests and a regression discontinuity design supports the causal interpretation of our results.

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1 Introduction

A series of recent regulations, laws, and court rulings have given more power to shareholders, spurring the academic debate on the effectiveness of shareholder voting (Cox et al., 2019; Levit et al., 2022; Becht et al., 2021).[1] Theoretical studies in favor of shareholder voting argue that it increases value by aligning the interests of shareholders and managers (Bebchuk, 2004; Harris and Raviv, 2010). Empirical studies in the merger and acquisition (M&A) literature find that shareholder voting adds value for acquirer shareholders by affecting firm cash flows positively. Specifically, voting makes managers choose targets with greater synergies and offer lower premiums (Becht et al., 2016; Li et al., 2018). In contrast, opponents of shareholder voting argue that allowing shareholders to vote may not always lead to optimal outcomes because shareholders lack the specific information that managers possess (Bainbridge, 2005; Matsusaka and Ozbas, 2017).

In this paper, we study whether managers modify their behavior when shareholders can vote upon important decisions, and if so, what actions they take in response to that. Specifically, building on the assumption that managers care about voting outcomes, we explore whether managers communicate their private information to shareholders to influence their voting decisions. We also study whether disclosure has consequences for voting outcomes and firm value. To examine these issues, we take advantage of shareholder voting requirements in the U.S. M&As provide an excellent setting to understand how shareholder voting requirements influence disclosure given the particularly high investors' demand for disclosure surrounding such operations, and the large cross-sectional variation in voting requirements.[2]

Corporate disclosure is shaped by costs and benefits (Beyer et al., 2010). The benefits include the reduction of information asymmetries between managers and shareholders which leads to greater incentive alignment and lower cost of capital (Leuz and Verrecchia, 2000; Balakrishnan et al., 2014); while disclosure costs include production costs, proprietary costs, or litigation risk (Verrecchia, 1983; Ali et al., 2014; Bourveau et al.,

[1] These rulings include the NYSE's *2009 Amendment of Rule 452* that limits the ability of brokers to vote using shares held in customers' brokerage accounts, the *Dodd–Frank Act of 2010* that requires (non-binding) shareholder votes on executive compensation, the *2017 EU Shareholder Rights Directive II* that requires intermediaries to transmit relevant information to facilitate the exercise of shareholder rights and ensures shareholders' right to vote on remuneration, and the *2018 Amendments to Canada Business Corporations Act* that requires annual elections of directors with a separate vote for each candidate and majority voting for directors in uncontested elections.

[2] In the absence of variation in shareholder voting requirements, it is difficult to examine effects on corporate policies, hence many papers indirectly study the impact of shareholder voting outcomes on corporate policies (Armstrong et al., 2013).

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2018). We add to this literature by identifying potential further net benefits of disclosure in the M&A context.

In the M&As context, directors and managers can improve voting outcomes of M&As proposals by disclosing information in at least two ways. First, given the highly asymmetric and complex information in M&As, disclosing deal information such as estimates of synergies and post-merger earnings can help investors to better understand and value the transaction. Hence, increased disclosure can reduce information asymmetries and uncertainty, raising investors' valuation of the deal, and the approval rate. Second, timely disclosure, i.e. before the record date,[3] can trigger trades that alter the shareholder base towards a more supportive one, as unsupportive investors sell their shares to more supportive shareholders. As a result, we expect that firms with voting requirements disclose more information and do so on a timelier basis than firms not subject to voting. The benefits of disclosure are supported by prior anecdotal evidence,[4] as well as the work of Bahreini et al. (2019) that reviews over 2,500 deals between 2013 and 2018 and finds that an often cited reason for deal termination is mismatched expectations about synergies and value creation.

However, disclosing information may also come with costs. Indeed, acquirers subject to voting may come under closer scrutiny from the market, peers, and regulators, which can exacerbate proprietary costs and litigation risk. In that case, acquirers subject to voting might provide less disclosure than those without voting requirements. In addition, managers may want to pursue their own private benefits and undertake M&A transactions that are not in the best interest of shareholders (Morck et al., 1990). Under heightened market attention brought by voting requirements, managers may be less inclined to disclose information that would reveal their expropriation purposes.

To empirically investigate how shareholder voting requirements affect disclosure, we exploit the U.S. stock exchange rule that acquirers are subject to shareholder voting if they intend to issue more than 20% of the shares outstanding to finance their deals.[5] We hand collect data on a large sample of U.S. M&A transactions for the period from 1995

[3]Only shareholders who hold shares by the record date are eligible to vote. Disclosure and resulting trades after the record date do not matter for the shareholder-voter base. In our sample, the record date is typically in the middle of the transaction period.

[4]McKinsey & Company supports this view when discussing the 2015 Royal Dutch Shell's acquisition of BG Group (see Bahreini et al., 2019). According to McKinsey & Company, the offer was attractive to the target, but Royal Dutch Shell leaders understood that their own shareholders might disagree with the transaction. They took care to *share* with stakeholders the potential synergies calculations and the strategic rationale for the proposal. They also offered real-time updates on the process with about 15 press releases. The offer was approved with acceptance rates well above 80%.

[5]There are exceptions to this rule. We discuss them in Section 2.1 where we provide the institutional setting details.

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to 2019. In our main tests, we compare the amount and timeliness of disclosure of firms subject to shareholder voting to that of firms without voting requirements. We find that acquirers subject to voting (about 40% of our sample) provide more 8-K filings during the transaction period, i.e., from the merger announcement to the closing date. These firms are also more likely to provide: (i) timely disclosure of the merger agreement, (ii) information about expected synergies, and (iii) post-merger earnings forecasts. We also find that the greater the disclosure incentives, discretion, and effectiveness, the stronger the positive association between voting requirements and disclosure.

We face two identification challenges that may bias our estimates: the potential influence of unobservable omitted variables and reverse causality. We address the first problem by including a battery of fixed effects in our estimations. Still, we may omit firm-level unobserved heterogeneity such as managerial quality that is not captured by our fixed effects. We run a set of falsification tests to address these endogeneity concerns. Specifically, we run our main regression model using target firms (instead of acquirer firms) or acquirers' past disclosure activity. We do not find evidence of an effect of shareholder voting on disclosure in these tests. To further address the omitted variable as well as the reverse causality issues, we exploit the 20% regulatory threshold using a fuzzy regression discontinuity design (RDD) in a sample of all-stock deals. As we will argue, managers of acquirer firms do not have *precise* control over the percentage of shares to be issued in these deals; hence, being just above the threshold and subject to voting (*versus* being just below and not subject to voting) is plausibly exogenous. We confirm our evidence of a positive and economically significant effect of shareholder voting on disclosure using the RDD. In sum, our findings indicate that voting requirements are a strong driver of firm disclosure.

We next address the question of how valuable the disclosed information is to investors. A concern surrounding the documented additional disclosure issued when a proposal is subject to voting is that such disclosure does not include relevant information. For instance, 8-K filings may contain trivial information about the transaction or information that is already known by the market. Irrelevant information disclosure is unlikely, as the costs of providing such information likely offset the benefits, and existing empirical evidence indicates that 8-K filings are in general informative to financial market participants (Lerman and Livnat, 2010; Bird and Karolyi, 2016).[6] Still, we explore

[6]Another potential concern is that increased disclosure is a source of low quality information that misleads investors, for example, by providing overoptimistic valuations and forecasts, to influence investors towards agreeing with the proposal. However, the theoretical literature seems to argue against this idea: managers have incentives to provide reliable information because overoptimistic information could attract product market competition (Gigler, 1994) or harm managers' reputation (Stocken, 2000).

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whether this is the case in the context of M&A transactions and voting requirements. We expect irrelevant information to have no influence on investors' trading and voting decisions.

We run several analyses to test the above prediction. First, we study the information content of M&A-related disclosures such as post-merger earnings forecasts. Since this information is, to a large extent, verifiable *ex-post*, we are able to assess whether the information provided is valuable to investors before the vote. We find that the disclosure of earnings forecasts is positively related to better post-merger earnings performance, and this association is stronger for firms subject to voting. Hence, our findings suggest that disclosure by acquirers subject to voting is more informative than disclosure by acquirers without voting. Second, to further assess the informativeness of disclosed information, we study how the stock market reacts when such information is disclosed. Specifically, we explore the relationship between 8-K filings and average bid-ask spreads. If disclosure has relevant information content, asymmetric information is reduced, and thus, the bid-ask spread should be lower.[7] We find that more 8-K disclosure is related to lower bid-ask spreads for acquirers subject to voting. Exploiting stock price movements, we also find that more disclosure is related to higher buy-and-hold abnormal returns for firms subject to voting. These results are consistent with information-relevant disclosure. Finally, we examine stock trading volume. More informative disclosure should trigger more trading. We find that the relationship between 8-K disclosure and share turnover is positive and significant for acquirers subject to voting relative to those without voting. Overall, our results support our hypothesis that disclosure is more informative for transactions subject to voting.

An important and unexplored consequence of disclosure in a setting where voting is required is that disclosure may induce changes to the shareholder-voter base. We study heterogeneity in institutional investors' trading in response to 8-K filings by acquirers that are subject to vote relative to acquirers that are not subject to voting. Following the classification of Bushee (1998), we distinguish between transient, dedicated, and quasi-indexer institutional investors. We find that 8-K disclosure by acquirers of transactions subject to vote triggers more sales from transient institutional investors, which is consistent with these investors caring about short-term value rather than value-enhancing acquisitions that yield returns in the long term.[8] We do not find a similar pattern for

[7] A number of papers (e.g. Glosten and Milgrom, 1985; Leuz and Verrecchia, 2000), have used bid-ask spreads as measures of asymmetric information and uncertainty in the financial markets.

[8] Another possible explanation in line with existing empirical evidence is that retail investors are typically more management-friendly and hence likely to support managers' M&A proposals while institutional investors are less management-friendly and more likely to take opposing actions, e.g. voting with their feet in this case (Malenko and Shen, 2016; Lee and Souther, 2020; Brav et al., 2022).

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quasi-indexer and dedicated investors probably because their investment strategies are less sensitive to news than those of transient investors. This result provides additional support for our previous findings indicating that disclosure has information content. Importantly, this result also suggests that, since information disproportionately affects a determined group of investors in the market, releasing relevant information may change companies' shareholder base. Such changes in the composition of institutional investors may affect the voting support and whether the deal goes through.

In our final analysis, we test whether reductions in information asymmetry and associated sales from transient investors are related to better voting outcomes. We find that lower spreads and more transient institutional sales are associated with a larger percentage of votes in favor of the transaction and a higher likelihood of deal completion. Overall, our results suggest that disclosure by acquirer firms subject to voting is more informative and has the potential to improve voting outcomes through increasing investors' valuation of deals and altering the shareholder base towards a more supportive one.

We make a number of contributions. First, our paper adds to the literature on shareholder voting and corporate governance (Yermack, 2010; Iliev et al., 2015). While certain benefits from strong shareholder voting rights have been documented, commentators and theorists are still concerned that, due to shareholders' lack of information about the firm, shareholder voting outcomes depart from the superior choices that managers would otherwise make. Our paper addresses this concern and documents evidence that, subject to voting, managers have incentives to provide useful information to shareholders prior to voting. This evidence resonates with Harris and Raviv (2010)'s theoretical emphasis on communication of private information between managers and shareholders when considering who should have control over corporate decisions. Becht et al. (2016) and Li et al. (2018) find that shareholder voting adds value for acquirer shareholders by affecting firm cash flows positively. Our results suggest that shareholder voting can add value through another channel: by inducing high quality disclosure which reduces asymmetric information between firms and investors.

Second, we contribute to the literature on disclosure. While prior work traditionally focuses on disclosure motives such as capital market transactions and equity-based compensation, our paper adds to an emerging strand of literature that examines voting outcomes concerns (Dimitrov and Jain, 2011; Baginski et al., 2014; Lee and Souther, 2020). In a contemporaneous paper, Mukhopadhyay and Shivakumar (2020) find that firms provide more information on key performance indicators in their proxy materials following the say-on-pay mandate. We propose and provide evidence on a novel

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mechanism for how disclosure can influence voting outcomes. Our evidence suggests that disclosure triggers trades and shifts the shareholder-voter base towards a more supportive one. In addition, by studying the M&A setting, we are able to exploit rare cross-sectional variation in shareholder voting and examine context-specific disclosure such as merger agreements, expected synergies, and post-merger earnings.

Third, we contribute to the work on the role of financial reporting and disclosure in M&As.[9] The studies closest to ours are those investigating acquirers' use of earnings management (Erickson and Wang, 1999) or press releases (Ahern and Sosyura, 2014; Kim et al., 2020) before the announcement to influence stock prices. Shalev (2009) examines acquirers' disclosure of the deals in 10-K filings. Our paper adds to this literature by examining the use of a different set of disclosures from the announcement onward for the purpose of influencing voting outcomes.

Our results also have regulatory implications. In many countries, shareholder approval is required for only a subset of acquirers, potentially resulting in shareholder losses in acquisitions not subject to approval (Iliev et al., 2015; Becht et al., 2021). Taken together with recent evidence on shareholder voting, our results offer initial support that institutional reforms that enhance shareholder voting rights can be beneficial in the context of M&As, particularly when information asymmetry is large. Disclosure regulations such as the SEC (2020)'s consideration of mandating more disclosure in M&As, for example regarding the inclusion of more information about synergies, should also take into account that significant voluntary disclosure is already provided as a by-product of the shareholder voting requirement.

2 Institutional setting, theoretical background, and hypotheses development

2.1 Institutional setting

In the U.S., a corporate combination is structured as a merger or a tender offer. We focus on mergers for three main reasons. First, mergers account for the vast majority of the transactions. Second, shareholder voting is common in mergers but rare in tender

[9] See Raman et al. (2013), Marquardt and Zur (2015), McNichols and Stubben (2015), Francis et al. (2016), Chen et al. (2018), Chen (2019), and Bonetti et al. (2020).

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offers. Third, mergers have unique disclosure timelines that we exploit in our tests.[10] In a merger, boards of directors of the acquirer and the target agree on a price, and the target's shareholders then vote upon whether or not to approve the proposal. While shareholder approval is required for all targets, it is not always required for acquirers. According to the listing rules of the NYSE, AMEX, and NASDAQ, when an acquirer intends to issue more than 20% new shares to finance a deal, shareholder approval is required prior to the issuance.[11] Most states in the U.S. adopted the same rule in their corporate law except for Alaska, Louisiana, Missouri, and New York. Before adopting the 20% threshold in 2015, Louisiana required shareholder approval if the acquirer issued 15% or more new shares of its existing shares outstanding. The other three states mandate shareholder approval for stock deals regardless of the amount issued.[12]

Figure 1 illustrates the timeline of a typical M&A deal. The median duration of the transaction period from the *announcement date* to the *closing date* is 132 days. Firms provide a variety of public disclosure during this period. In general, after a confidential negotiation period, the acquirer and target sign a merger agreement and jointly issue a press release announcing the deal to the public. The date when this press release is issued is the *announcement date*. This short press release includes basic information about the deal and parties involved and often, it also contains forward-looking information such as expected synergies and earnings post mergers. Managers may also organize a conference call to discuss the deal with investors and analysts.[13]

Within four business days after entry into the merger agreement, firms are required to file a current report (8-K) to timely inform investors about the event, setting forth material terms and conditions of the agreement. The full merger agreement, which typically spans 50-100 pages, offers substantial additional details compared with the shorter Form 8-K. The merger agreement may be filed as an exhibit to this 8-K. If not filed together with the 8-K, the merger agreement must be included in a periodic report

[10] In a tender offer, the acquirer offers to buy shares from the target's shareholders, who then choose whether or not to sell at the offer price. Mergers and tender offers are also different in many dimensions such as motives, execution and public disclosure. By excluding tender offers, we compare a more homogeneous group of acquisition deals.

[11] Certain deals may be subject to exceptions or voting requirements due to other conditions. For instance, AMEX and NASDAQ require shareholder voting if any director, officer, or significant shareholder of the acquirer company has a 5% or greater interest in the target. AMEX also considers that a series of closely related transactions may be regarded as one transaction for the purpose of voting policy. Exceptions may be made upon application to NYSE/NASDAQ when (i) the delay in securing stockholder approval would seriously jeopardize the financial viability of the enterprise and (ii) reliance by the company on this exception is expressly approved by the audit committee.

[12] In the data, the 20% rule explains almost all variation while state laws contribute little.

[13] Press releases and conference call transcripts are typically filed as part of 8-K filings, hence our 8-K variables also capture to a great extent the information disclosed via those media.

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(10-Q or 10-K) covering the period in which the agreement is entered into. Several weeks or months after the announcement, the target and acquirer file their proxy statements if shareholder approval is required. Typically, only shareholders who hold shares by the *record date* are eligible to vote on the matter at the special or annual *meeting*.

2.2 Theoretical background and hypotheses development

Directors and managers care about the outcomes of shareholder voting on M&A proposals because the outcome of the vote is binding. Hence, firms need shareholder approval to complete the M&A deals. Firm charters and state laws of incorporation can make it harder to pass a deal by considering a quorum and/or supermajority instead of majority, and/or voting rights instead of vote cast (Burch et al., 2004; Kamar, 2006). In addition, managers may want to avoid large disapproval rates, even when the deal is approved, because significant dissenting votes can have serious implications in terms of job security and career progress (Cai et al., 2009; Fischer et al., 2009; Aggarwal et al., 2019). We argue that, as a result, managers may employ various strategies to influence voting outcomes, including disclosure.

Managers have considerable discretion over disclosure. The provision, amount, and timelines of disclosure ultimately hinges on its costs and benefits. The costs and benefits of disclosure are summarized in prior work (Beyer et al., 2010). Disclosure entails the following costs: the production of reports and documents to disclose information (production costs); revealing crucial information to competitors in product markets, labor unions, or regulators (proprietary costs), and the threat of litigation from individuals and entities due to the forward-looking information revealed (litigation risk) (Verrecchia, 1983; Johnson et al., 2001; Ali et al., 2014; Bourveau et al., 2018). In contrast, the main benefit of disclosure is the reduction of information asymmetries between managers and shareholders. The literature shows that lower information asymmetries generally lead to increased stock market liquidity and a lower cost of capital (Leuz and Verrecchia, 2000; Balakrishnan et al., 2014).

In the context of M&A proposals, both the costs and benefits of disclosure may be larger when the deal is subject to shareholder approval. Regarding the costs, acquirers subject to voting may come under closer scrutiny from the market, peers, and regulators, precisely because a vote is required. The increased scrutiny can increase the cost of disclosure in terms of proprietary costs or litigation risk. Evidence suggests that with higher attention, market participants are more likely to be aware of, to acquire, and to process

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firms' disclosure carefully (Drake et al., 2015; Blankespoor et al., 2020). Concerned with the heightened proprietary costs and litigation risk, managers of firms subject to voting may provide less disclosure than those without the voting requirement. Another reason why managers may want to disclose less information is to undertake M&A transactions that are privately beneficial at the detriment of shareholder value (Morck et al., 1990). Under higher market attention brought by the voting requirement, managers may be less inclined to disclose information because doing so would risk revealing their expropriation purposes.

But disclosure also comes with benefits. Indeed, by reducing information asymmetries, disclosure can help improve voting outcomes. In the presence of information asymmetries, if information is not disclosed, investors may apply large discounts to the value of the deal and reject it. In that case, managers might be better off by disclosing information to signal about the deal quality because, even if disclosure comes with costs, it increases the likelihood that the transaction is approved (Verrecchia, 1983).[14] Consistent with the idea that firms provide shareholders with more information to gain their voting support, Mukhopadhyay and Shivakumar (2020) find that firms provide more information on key performance indicators in their proxy materials following the say-on-pay mandate. Also, Iliev et al. (2015) find significantly lower levels of shareholder support for managers and boards' proposals in countries with lower levels of corporate disclosure.

It is worth noting that information asymmetry can be interpreted broadly in the presence of information processing costs (Blankespoor et al., 2020). While a large amount of information will eventually become available prior to voting in mandatory disclosure (e.g. proxy statements), the high costs of processing such sheer complexity and volume of information can hinder investors' ability to evaluate the deal effectively and make an informed vote.[15] Theory suggests that in such instances managers provide voluntary disclosure, especially information that facilitates estimation of the deal value such as

[14]The seminal paper by Milgrom (1981) (and similarly Grossman (1981)) develops an unravelling model in which the seller benefits from revealing all the (verifiable) information to a buyer. The reasoning is as follows. If the buyer sees no information, she rationally interprets the withholding of information as bad news. The pessimistic beliefs of the buyer upon receiving no information provide incentives to the seller to reveal information of average quality. Knowing this strategy from the seller, the buyer is even more pessimistic when receiving no information. Continuing this logic, the paper shows that in equilibrium sellers make full disclosure by revealing all the information they know. Hence, in the context of M&As, if managers have good information about the transaction, they should disclose it all to increase the approval rate.

[15]Proxy statements provided to investors prior to voting, for instance, are very lengthy, typically between 100-200 pages plus additional exhibits. Complex transactions such as M&As often have high processing costs because of their idiosyncrasy, the special knowledge required, and the quantity and detail of information involved (Blankespoor et al., 2020).

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management forecasts and guidance, to help investors evaluate the deal.[16] Guay et al. (2016) indeed find that firms provide more voluntary disclosure in the form of 8-K filings, management forecasts, and press releases to deliver information that would be otherwise costly to extract from complex financial statements. Overall, we expect voting requirements to induce more disclosure in the context of M&As.

We also argue that *timely* disclosure of information is essential. First, timely disclosure before the record date is likely to influence voting outcomes more because only shareholders holding shares by the record date are eligible to vote. Second, since it takes time for shareholders to process the amount and complexity of information in M&A deals before making voting decisions, providing information earlier is likely to affect voting outcomes positively. Hence, if managers aim to maximize the chances that the proposal is accepted, we expect voting requirements to induce timelier disclosure.

According to our previous arguments regarding the provision, amount, and timelines of disclosure, we state our first hypothesis as follows:

> ***H1:*** *Firms subject to shareholder voting on M&As provide higher quality disclosure than firms not subject to shareholder voting.*

Our assumption is that managers disclose information in M&As to increase the voting approval rate. One reason why the approval rate may increase is because the information disclosed can trigger trades that change the shareholder base towards a more supportive one. Levit et al. (2022) analytically show that when shareholders expect a high likelihood of approval of a given proposal, unsupportive shareholders sell their shares to supportive shareholders, resulting in a more supportive shareholder base. As a consequence, proposals are approved more often. This effect is likely to take place in the case of M&As, where shareholders can expect *ex ante* a high approval rate, as managers would probably propose a deal to the public only when there is a reasonable chance of successful completion.[17] Cox et al. (2019) find that targets in M&A deals experience substantial ownership changes after the deal announcement. In their study, the extent to which ownership changes is positively associated with the likelihood of deal completion. Hence, we expect disclosure in voting firms to increase trading and induce changes in the shareholder base.

[16] Grossman and Stiglitz (1980) and Kim and Verrecchia (1991) show that higher information processing costs result in lower average precision of investors' beliefs about future cash flow, which incentivizes managers to provide voluntary disclosure (Jung and Kwon, 1988; Verrecchia, 1990).

[17] Indeed, as we later discuss statistics in Table 2, about 80% of M&A proposals are approved and completed.

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Moreover, if the reason behind information disclosure in M&A transactions subject to vote is to increase the approval rate, we should observe that more disclosure induces a larger share of investors to vote in favor of the deal. However, this will only be the case if the information provided is relevant and conveys good news about the deal. Given the costs of disclosure and the fact that information related to M&A transactions such as earnings is, to a large extent, verifiable *ex post*, we expect the information disclosed to convey managers' true estimation of the value of the deal. In other words, we expect disclosure by firms subject to voting requirements to be more informative than disclosures made by firms without the voting requirements. As a result, we expect disclosure to increase the likelihood that shareholders vote in favor of the deal, thereby increasing the deal's approval rate.

The above arguments lead to the following hypotheses:

> ***H2a:*** *Disclosure by firms subject to shareholder voting on M&As affects shareholders' trading decisions.*
> ***H2b:*** *Disclosure by firms subject to shareholder voting on M&As affects shareholders' voting decisions.*

Alternatively, managers might provide irrelevant information about the M&A transactions. If that is the case, such disclosure will likely be ignored by investors and hence, it will have no economic consequences on shareholders' trading and voting decisions.[18]

3 Data

3.1 Data sources and sample

We begin our data collection with a sample of M&As between U.S. public companies that we obtain from the SDC database. Deals with undisclosed deal value or unknown outcome are excluded. As we focus on (statutory/one-step) mergers, we filter out tender offers, spinoffs, recapitalizations, self-tenders, exchange offers, repurchases, acquisitions of minority or remaining interest, and privatizations. We also require that both the

[18]Disclosure may be a form of cheap talk through which managers disclose overoptimistic and non-verifiable information to influence investors. Then, we would expect that disclosure is not informative because it does not reveal managers' private information and investors also respond by ignoring the disclosure (Stocken, 2000). Theoretical work, however, suggests this is unlikely, because providing overoptimistic information can attract product market competition or harm managers' reputation, so managers have incentives to provide reliable information (Gigler, 1994; Stocken, 2000).

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acquirer and the target companies are covered in CRSP, and that the entry into the merger agreement is verified with EDGAR filings. This leaves us with 3,278 deals for the period 1995-2019. We detail our sample collection and cleaning process in Table A1. We collect data on shareholder voting requirements and disclosure from EDGAR filings. We describe our data gathering process in Appendix A.2.

3.2 Variables

Table 1 provides definitions of all variables. As previously noted, shareholder approval is not required for all acquirer firms. We manually verify whether a deal is subject to the acquirer's shareholder approval in various EDGAR filings. With this information, we set the variable *Vote* equal to 1 if the acquirer is subject to shareholder voting and to 0 otherwise.

We construct several variables that capture various characteristics of discretionary disclosure, such as the provision of voluntary disclosure, the amount of information in mandatory forms, and the timeliness of disclosure. For each firm, we count the number of 8-K filings during the transaction period to capture overall discretionary disclosure by managers. As 8-K filings are *current* reports, they reflect not only the quantity but also the timeliness of disclosure.[19] The variable *Ln_8k* is the natural logarithm of 1 plus the number of 8-K filings. We also construct the variable *Size_8k*, which is the natural logarithm of 1 plus the total file size of those 8-K filings and captures variation in the amount of disclosure across filings. With these variables, we count both 8-K filings about the deal and 8-K filings about other matters as we believe that an 8-K filing need not be specifically about the deal in order to affect shareholders' voting decision and outcome. Nonetheless, we create another variable, *Ln_8k_rlt*, which measures disclosure related to the merger by counting only 8-K filings mentioning the other company's name.

In addition, we construct variables capturing specific disclosures that are crucial in M&As. For each firm, the variable *Agmt_filing* is equal to 1 if the acquirer files the merger agreement within 15 days since the entry into the agreement, and 0 otherwise.[20]

[19] Prior work uses 8-K filings to measure corporate disclosure (e.g. Bird and Karolyi, 2016; Guay et al., 2016; Bao et al., 2019). Companies may also file Form 425 to provide certain prospectuses and communications in connection with business combination transactions. We observe (i) an large overlap in the information content in this filing and 8-Ks and (ii) the trend of switching to use 8-K filings only.

[20] In some cases, firms use other types of filings instead of Form 8-K. We use 15 days because before 2004, firms can have up to 15 days to file an 8-K since the event date. Firms may not file merger agreements soon after the announcement for various reasons, including proprietary costs. For example, Asarco and Cyprus announced their entry into the merger agreement on July 15th, 1999. Asarco filed an 8-K on July 20th without the agreement attached. In a letter sent to CEOs of Asarco and Cyprus

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This variable captures the timely disclosure of the merger agreement, one of the most important materials in M&As (Coates et al., 2019).

We also create a dummy variable that captures the disclosure of expected synergies generated by the deal. The variable *Exp_synergies* is equal to 1 if the announcement press release includes one of the synergy-related words, namely *synergy*, *synergies*, or *cost saving(s)*.[21] The importance of synergy information is emphasized by industry professionals as illustrated in McKensey's discussion of Royal Dutch Shell's acquisition of BG Group (Bahreini et al., 2019). The SEC also proposed to mandate synergy disclosure in the amendments to its financial disclosure requirements relating to business acquisitions and dispositions, to make M&A disclosure more useful and to increase issuers' accountability for their synergy estimates (SEC, 2020). However, the final rule by the SEC made it optional, due to concerns about the uncertainty and subjectivity of synergy expectations, the burden of preparing the disclosure and the potential liability, among other reasons.

While synergy information is useful for investors to understand the deal quality and value creation behind the transaction, it has some drawbacks. It is not straight-forward for unsophisticated investors and not easy to verify *ex post*. For these reasons, we also analyze whether managers provide post-merger earnings forecasts. We construct a binary variable, *E_forecasts*, equal to 1 if the announcement press release contains word combinations conveying information about post-merger earnings. For this purpose, we use the dictionary proposed by Amel-Zadeh and Meeks (2019).[22]

Control variables include deal and firm characteristics. Specifically, we control for deal value relative to firm market capitalization, whether the deal is financed entirely

on August 11th to propose a three-way combination, Phelps Dodge Corp said: "We are disappointed that you have declined to meet with us.[...] Since your merger agreement has not been publicly filed, we have not had the opportunity to review its terms".

[21] Following the recommendation by Loughran and McDonald (2014), we choose one of the simplest, yet most powerful, approaches to textual analysis and target a few specific words or phrases. This is because "large word lists are much more prone to error when compared to tests focusing on a few unambiguous words or phrases." Moreover, from our experience reviewing press releases, those words are often accompanied by quantitative estimates, which increase disclosure credibility. For example, the press release announcing the 2019 merger between Rubicon Project and Telaria states: *"The merger creates both revenue and cost synergies, with expected annual run rate cost synergies of approximately $15-20 million."* In the press release of another deal, *"SouthBanc and Heritage estimate cost savings opportunities between the companies to equal 40% of Heritage's annualized operating expenses, or approximately $1.6 million pre-tax, primarily as a result of the elimination of employee benefit plans."* We obtain qualitatively the same results if we use SDC data on the disclosure of synergy estimates. Data on this information is, however, not available in SDC during early years of the sample.

[22] An example is the combination "earnings"+"acrretive." In the press release announcing the acquisition of MainSource Financial Group, *"First Financial expects the transaction to be accretive to 2018 diluted earnings per share by $0.09 or 5%, and total 2019 diluted earnings per share by $0.17 or 9%."*

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with cash, whether the deal is between firms from the same industry, and the duration of the transaction period. We also control for firm characteristics in the quarter before the merger, including stock return and volatility, institutional ownership, analyst coverage, market-to-book ratio, return on assets, whether firms have losses, and financial leverage, as these variables may affect disclosure and deal approval.

3.3 Summary Statistics

Figure 2 plots the distribution of 8-K filings from 7 days before to 150 days after the deal announcement, as well as 8-K filings for the same period in the previous year. The number of 8-K filings is stable throughout the period in the previous year. In the transaction year, however, there is a sharp increase in the number of filings on the announcement date and the following week. The number of filings after that week is also higher compared with the previous year, albeit the difference becomes less noticeable.

Table A2 presents the information content of 8-K filings during the transaction period. Not surprisingly, many filings contain items that seem directly related to M&As such as "Entry into a Material Definitive Agreement" or "Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers". Other items that appear frequently include "Financial Statements and Exhibits," "Other Events," "Regulation FD Disclosure," and "Results of Operations and Financial Condition".

Table 2 reports summary statistics for acquirer firms.[23] We can see that on average acquirers file six 8-K filings during the transaction period of 5 months. Around three quarters of acquirers provide timely disclosure of the merger agreement; 40.6% of them discuss synergies in their announcement press releases. About 65.6% of press releases talk about future earnings post mergers. Acquirers are subject to shareholder approval in 41.3% of the deals. Among these deals, there are 984 deals for which we are able to collect data on voting outcomes. The average percentage of votes in favor over the total vote cast has a high mean of 96.4% which is consistent with the mean approval rate of 95% reported in Burch et al. (2004). We also observe that while most deals subject to voting are approved, there are a number of deals rejected or narrowly passed or even withdrawn before the vote. This suggests that votes on M&A proposals provide credible threats and managers do face some uncertainty over the voting outcome.

[23] Table A3 reports statistics for target firms. Compared with acquirers, targets tend to be smaller, followed by less analysts, and have lower operating performance.

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4 Empirical analysis

We conduct our baseline empirical analysis in this section. We start by examining the relationship between voting requirements and disclosure estimating a simple OLS model. Using the same model, we also uncover the effects of disclosure on changes in asymmetric information by looking at the stock market reaction. Finally, we study the effect of disclosure on the voting outcome. We address endogeneity concerns in the next section.

4.1 Shareholder voting and disclosure

We first examine how between-deal variation in the shareholder approval requirement explains acquirers' disclosure. Figure 3 displays the distribution of 8-K filings per firm around the announcement. The figure shows that acquirers with voting requirements file, on average, more 8-Ks on the announcement date and several days after than those without voting requirements. In Table 3 we provide non-parametric tests of differences in our main disclosure variables and control variables between acquirers with and without voting requirements. The results indicate that companies subject to voting disclose a larger number of 8-K filings and filings of larger size. These companies are also more likely to provide timely disclosure of the merger agreement, and to provide more information about expected synergies and post-merger earnings in the disclosed documents. Interestingly, deals in which acquirers are subject to voting have a lower completion rate, which sheds some light on the efficacy of shareholder voting in preventing (potentially bad) transactions from being executed. It is also worth noting that the two groups are different along several other dimensions. Acquirers in deals subject to voting are larger compared to companies that are not. Also, deals from companies subject to voting are more likely to be financed with stocks (rather than cash) and these deals take more time to close. Moreover, acquirers that are subject to vote tend to be smaller, have less institutional ownership and are followed by less analysts, on average, among other things. Hence, controlling for deal and firm characteristics in our tests is important to isolate the effect of voting on disclosure.

We estimate the following multivariate regression model using OLS:

$$Disclosure_d = \alpha_0 + \beta_1 Vote_d + \gamma' X + \lambda_t + \delta_j + \epsilon_d \tag{1}$$

Disclosure is one of our measures of acquirers' disclosure for a given deal d. The main

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explanatory variable of interest is *Vote*, which is equal to 1 if the acquirer is subject to the shareholder approval requirement and 0 otherwise. We include a vector of control variables ($\gamma' X$) to isolate the effect of voting on disclosure. We also include quarter-year (λ_t) and industry (δ_j) fixed effects. Quarter-year fixed effects control for time-varying factors that affect all deals in the same quarter-year, such as crises or merger waves. The industry fixed effects help eliminate biases from omitted industry time-invariant characteristics. In all estimations, standard errors are robust and clustered by industry.

Table 4 reports the regression results. The dependent variable in columns (1) and (2) is *Ln_8k*, which captures the number of 8-K filings by the acquirer firm. The coefficient on the variable of interest, *Vote*, is positive and statistically significant at the 1% level in both columns. The estimate in column (2) indicates that acquirers subject to shareholder approval file about 10% more reports than those without the voting requirement. The dependent variable in columns (3) and (4) is the size of 8-K filings. Results in these columns are also positive and statistically significant at the 1% level, providing further support for the positive relationship between shareholder voting and disclosure. Specifically, the size of disclosed documents in companies subject to voting is 84% larger than that in companies not subject to voting. Finally, columns (5) and (6) use the number of 8-K filings that explicitly mention the name of the target firm. The coefficient of our main variable *Vote* is also positive and statistically significant at the 1% level, indicating that the information contained in the 8-K filings is more likely to refer to the merger event when the transaction is subject to vote than when it is not.

Regarding the control variables, all of them have the expected signs. There are more and longer 8-K filings in deals that have higher relative value for acquirers, that take longer time to close, and that involve other forms of finance than just cash. Also, acquirers that are bigger and are followed by more analysts disclose more information during the transaction period. These results indicate that companies subject to vote are more willing to provide information when that information has a higher potential of reaching the public market due to its exposure, i.e. either because the company involved is large or because it is followed by more analysts. Finally, companies with higher institutional ownership also disclose more, indicating that companies understand the need to convince those investors who have the largest stakes and therefore the largest potential to block a deal.

We examine several specific disclosures that are crucial in M&As, namely, the merger agreement, expected synergies, and post-merger earnings. We include the results of our estimations in Table 5. The dependent variable is *Agmt_filing* in columns (1) and (2), *Exp_synergies* in columns (3) and (4), and *E_forecasts* in columns (5) and (6). The

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coefficient of our variable of interest, *Vote*, is positive and statistically significant at 1% level in all six columns. In columns (1) and (2), the results indicate that the probability of timely disclosure of the agreement is larger in companies subject to vote. Specifically, these companies' probability of issuing the agreement in a timely manner is 15.9 percentage points larger than for those companies not subject to vote (column (2)). This increment corresponds to an increase of 22% with respect to the unconditional mean. Regarding disclosure of information about synergies, the increase is of 14.4 percentage points (column (4)), equivalent to about one third of the unconditional mean (40.5%). Finally, the probability of issuing information about earnings forecasts is 7.9 percentage points larger for voting firms, which translates into a 12% increase over the unconditional mean.

Overall, the results from Table 4 and Table 5 support H1. The results indicate that the voting requirement has an economically and statistically significant impact on the provision, amount, and timeliness of information disclosed for M&A transactions and that the information disclosed is indeed related to the M&A deal.[24]

4.2 Heterogeneity in acquirer disclosure

In our next set of tests we study heterogeneity across acquirer firms regarding disclosure in merger events. If managers disclose information with the intention of affecting shareholders' votes in favor of the transaction, we should observe that managers disclose more information when they have more discretion or incentives to do so, or when the disclosed information is more effective in influencing the voting outcome. Empirically, we test these ideas by introducing an interaction term in Equation (1). Specifically, we interact our main variable of interest *Vote* with several proxies for managerial discretion and incentives, and the effectiveness of disclosure.

First, ownership concentration may affect the effectiveness of disclosure and therefore managers' willingness to inform. Indeed, when ownership is concentrated in the hands of a few shareholders, managers may seek direct support from those shareholders via private negotiations before the deal announcement. The possibility of private negotiations makes it less likely that managers use public disclosure to influence voting because, by

[24] Table A4 shows that results are robust to (i) other measures such as the number of voluntary 8-K filings, the number of 8-K items or the number of exhibits, (ii) count data and Poisson model instead of log transformation following Cohn et al. (2022), and (iii) controlling for past disclosure. We also conduct some tests regarding the tone of words included in the 8-K's. As we report in Table A7, there seem to be no significant differences in the use of tone in the 8-K documents between acquirers with and without the voting requirement.

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relying on private negotiations, managers are able to avoid production costs of disclosure, as well as proprietary and litigation costs.[25] Prior work supports this prediction: Malenko and Shen (2016) find that recommendations by proxy advisor firms such as the ISS have a weaker effect on voting outcomes of firms with high institutional ownership concentration. In contrast, when ownership is more disperse, managers may rely on votes by many small investors and hence, disclose more information to reach those investors. Previous literature suggests that indeed ownership dispersion increases the importance of public information. The paper by Lee and Souther (2020) finds that managers choose to deliver a full set of proxy materials instead of just a notice to increase the turnout and supporting votes from retail investors. We measure the concentration of institutional owners' stock holdings (*Instown_hhi*) using the Herfindahl-Hirschman index. We expect that the effect of voting requirements on disclosure is weakerfor acquirers with more concentrated institutional ownership.

Second, one crucial way in which information is disseminated is through financial analysts. Due to their experience and expertise, financial analysts are better able than other market participants to process the complex information released by firms and transmit that information to investors (Guo et al., 2019; Blankespoor et al., 2020).[26] Not only that, analysts are also able to verify *ex post* the information previously disclosed by firms. As a result, managers of firms followed by more financial analysts have more incentives *ex ante* to disclose accurate and relevant information to the market (Healy and Palepu, 2001). We capture analysts' influence with the variable *Ln_analysts*, which is the (natural logarithm of one plus the) number of analysts that follow a firm. We expect that, in companies with voting requirements and more analyst coverage, managers are inclined to disclose more information about the deal.

Finally, we explore heterogeneity regarding the type of deal. First, we consider *Relative_value*, which is the transaction value divided by the market value of the acquirer firm the quarter before the transaction. Our conjecture is that voting requirements induce more managerial disclosure specially for relatively smaller deals. The reason is that managers may have less disclosure discretion when a deal is large relative to the value of the firm. In those deals, disclosure is expected and demanded by the market due to the importance of the transaction, irrespectively of whether a vote is

[25] When announcing the acquisition of Sprint Corp, T-Mobile reported that Deutsche Telekom, who was holding 63.5% of T-Mobile shares, had agreed to deliver a written consent in favor of the deal, which would essentially constitute the shareholder approval. See https://www.sec.gov/Archives/edgar/data/1283699/000110465918028086/a18-12444_18k.htm

[26] Livnat and Zhang (2012) find evidence suggesting that investors value more highly analysts' ability to interpret public disclosures (than their ability for information discovery), especially when processing costs of complex disclosure are high (Lehavy et al., 2011; Huang et al., 2018)

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required or not. In contrast, for relatively small deals, disclosure is largely at managers' discretion and hence the voting requirement can play a more important role in driving disclosure. Second, we use the variable *Relative_ROA*, which captures the difference between the target and the acquirer's return on assets. We conjecture that the effect of voting requirements is stronger when there is a greater need for managers to justify their proposals; for instance, when the target has low current performance relative to the performance of the acquiring firm. In that case, investors may question the value added and the synergies brought by such deals, making it necessary for managers to provide detailed information about the transaction and its future expected gains.

We use the following model to assess cross-sectional heterogeneity:

$$Disclosure_d = \alpha_0 + \beta_1 Vote_d + \beta_2 Moderator + \beta_3 Vote_d \times Moderator + \gamma' X + \lambda_t + \delta_j + \epsilon_d, \tag{2}$$

where *Moderator* corresponds to the four variables explained above and the coefficient of interest, β_3, captures the differential effect of voting requirements on disclosure for high *vs.* low levels of the *Moderator* variable. Table 6 reports the results of our heterogeneity tests.[27] In panel A, the coefficient of the interaction term is negative and significant in most specifications. This suggests that the positive association between voting requirements and disclosure is less strong when institutional ownership concentration is high (i.e. above the mean). In other words, managers have more incentives to disclose information about M&A transactions to affect the voting outcome when ownership is more dispersed. This result is in line with our previous conjecture that, when ownership is concentrated in the hands of a few blockholders, discussions and negotiations about the deal might occur even before the deal is announced.[28] Panel B reports the results for *Ln_analysts*. The coefficient on the interaction term is positive and significant in most specifications. These results indicate, as expected, that managers use relatively more public disclosure to influence voting outcomes when there are more information-processing intermediaries between firms and shareholders.

In Panel C, we present the results for *Relative_value*, which captures how important the deal is to the acquirer. We find evidence that the positive association between the voting requirement and disclosure is attenuated by the relative deal size. In other words, the effect of voting on disclosure appears stronger among relatively small deals in which managers arguably have greater leeway over disclosure policies. Finally, in Panel

[27] All moderator variables are standardized to have a mean of 0 and a standard deviation of 1 in order for a meaningful interpretation of the (stand alone) coefficient of *Vote*, i.e. the effect of voting requirements on disclosure when the moderator is equal to the mean (0).

[28] The result is also consistent with the finding in Ge et al. (2021) that institutional ownership concentration is negatively associated with voluntary disclosure.

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D, we report the results where *Vote* is interacted with *Relative_ROA*. Supporting our conjecture, the effect of voting requirements on disclosure is stronger when managers experience greater pressure to justify their proposals due to larger differences between the performance of the acquirer and the target firm.

Overall, the cross-sectional tests indicate heterogeneity in manager's disclosure of information to shareholders when M&A transactions are subject to voting. Such heterogeneity occurs with respect to both the market environment and the type of deals involved in the transaction. These findings suggest that managers adapt their disclosure efforts by disclosing more information when it is more useful and effective. Therefore, the intention of managers when disclosing information is, a priori, to inform. We explore this idea further in the next section.

4.3 Informativeness of disclosure

So far, we have documented a strong positive association between shareholder voting requirements and disclosure in the context of M&As. However, the information disclosed may not be informative. Managers could produce more and longer 8-K documents, but the information disclosed therein could have the same information content and relevance than that of firms in which deals are not up for vote. In other words, managers increased disclosure in some type of deals could just be a sideshow to influence investor sentiment and noise traders, without including any relevant news about fundamentals. In this section, we study the quality and relevance of the information provided to shareholders in the 8-Ks.

As we explained in the development of hypothesis H2, we expect information to be more relevant to the market when transactions are subject to voting. Hence, after observing that firms disclose more, we should observe that the market reacts in accordance with the information provided. We first test this hypothesis by examining the stock market reaction to the documents disclosed, comparing the reaction between firms that are required to vote and those that are not. We estimate the following regression model using OLS:

$$MarketOutcome_d = \alpha_0 + \beta_1 Vote_d + \beta_2 Disclosure_d + \beta_3 Vote_d \times Disclosure_d + \gamma' X + \lambda_t + \delta_j + \epsilon_d. \tag{3}$$

In this model, the dependent variable corresponds to several proxies for the market reaction to the information disclosed. According to hypothesis H2a and the mecha-

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nisms discussed in Section 2, when disclosure is relevant, it should lower information asymmetries between firms and the market and this should affect stock prices, trading volume, and stock returns. The variable *MarketOutcome* in Equation (3) corresponds to the following proxies for the market reaction: *Spread* is the natural logarithm of one plus the average relative bid-ask spread during the transaction period, *Volume* is the total trading volume during the transaction period divided by the average number of shares outstanding,*Revisions* is the total number of analyst revisions scaled by the number of estimates during the transaction period, *BHAR30*, *BHAR60*, and *BHAR90* are buy-and-hold abnormal returns for the trading period that goes from the day before the announcement to 30, 60, and 90 days after the announcement, respectively.

If disclosure by acquirers subject to shareholder voting is more informative, we expect the coefficient β_3 to be negative in regressions where the outcome corresponds to the bid-ask spread, denoting lower information asymmetries. This coefficient should be positive in regressions where the market outcome variable corresponds to trading volume and analyst revisions, because less asymmetric information due to increased disclosure usually translates into more liquidity and more analysts' revisions corresponding to information updates. Finally, we expect β_3 to be positive for the outcome variables of abnormal returns, again pointing to lower information asymmetries due to increased disclosure in those transactions subject to voting.

Table 7 reports the results of our estimations. In columns (1) to (6), the disclosure variable corresponds to the number of 8-K documents filed, and it corresponds to the size of the 8-K documents in the rest of columns. As expected, β_3 is negative and statistically significant at 1% level when the dependent variable is *Spread* (column (1)), which indicates that bid-ask spreads are lower for acquirers that disclose information on deals subject to vote relative to acquirers that disclose information but their transactions are not subject to vote. β_3 is positive and significant in the regressions where the dependent variable is trading volume and analyst revisions. These results also indicate that 8-K filings by acquirers subject to voting are more informative as they trigger more investor trading and more analyst revisions.[29] Regarding the *BHAR* variables, β_3 is positive and statistically significant for abnormal returns in the 31-day and 61-day windows. The coefficient remains positive although not significant in the 91-days window. These results are consistent with reduced asymmetric information when information is disclosed for

[29] Table A8 provides further evidence on the incremental informativeness of voting-induced 8-K disclosure using 8-K level analyses. Specifically, 8-K filings of acquirers subject to voting are on average associated with stronger market reactions captured by the absolute cumulative abnormal return, and the association is stronger for filings with more items or more exhibits. Figure A2 supports the causal interpretation with 8-K filings by acquirers just above the threshold having larger average market reactions than those by acquirers just below.

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transactions subject to vote. Interestingly, the magnitude of the coefficients and their significance decrease when we use 61-day and 91-day windows. If markets are efficient, i.e. information is immediately incorporated into prices, these results suggest that the most relevant information disclosure takes place shortly after the announcement date.

4.4 Changes in the shareholder base after disclosure

We next study the trading behavior of institutional investors. We exploit the fact that different institutional investors have different trading behaviors to learn about changes in institutional ownership prompted by the information released. Specifically, if some investors have more discretion in the way they can trade relative to others, we expect information to cause a larger effect on their trades if the information disclosed is relevant. To test this conjecture, we classify institutional investors according to the classification of Bushee (1998), which distinguishes among three types of institutional investors: quasi-indexers, dedicated, and transient. Quasi-indexer investors trade in accordance to an index that they benchmark. Dedicated investors usually have a long-term focus on firms and therefore lower stock turnover. Transient investors are the ones with more freedom to trade according to information. As a result, we expect the latter to be more affected by information disclosed by firms subject to vote.

We estimate the model in Equation (3), where the dependent variables correspond to: *Sale*, which is the absolute value of the total negative change in institutional holdings from the previous quarter to the announcement quarter, scaled by the number of shares outstanding; and *Net Sale*, which is the total net change in institutional holdings from the previous quarter to the announcement quarter scaled by the number of shares outstanding, all multiplied by -1. We estimate these regressions using the sales of transient, quasi-indexer, and dedicated institutional investors, one at a time.

Table 8 reports the results. In Panel A, we examine changes in the holdings by transient institutional investors relative to the other two groups. The coefficient of the interaction term is positive and statistically significant in all columns. This result indicates that the information disclosed by acquirers subject to voting triggers significantly more sales from transient institutional investors. Interestingly, these investors sell shares rather than buying them. This result might be in line with existing empirical papers which argue that, while retail investors are typically more management-friendly and hence likely to support managers' M&A proposals; institutional investors are less management-friendly and more likely to take opposing actions, i.e. voting with their

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feet in this case (Malenko and Shen, 2016; Lee and Souther, 2020; **?**). Panels B and C show the results for quasi-indexer and dedicated institutional investors. None of the coefficients of the interaction terms are significant, which is consistent with the fact that the investment strategies of these investors are less sensitive to news. Overall, the above results provide further support for the hypothesis that the information disclosed includes relevant information content.

4.5 Deal outcomes

Results in the previous section suggest that transient institutional investors sell their shares, on average, after information about merger transactions is disclosed. But when transient investors sell, other investors must be buying. Since, from our results, neither the quasi-indexer investors nor the dedicated institutional investors are buying more shares after disclosure, the share purchases must come from retail investors. If investors vote with their feet by trading their shares based on the information released, it is likely that the pool of voting shareholders in the firm changes before the record date in a way that a larger portion of them votes in favor of the deal. If that is the case, we should observe better voting outcomes and a greater probability of deal completion after disclosure. We explore this conjecture in this section.

We define two new variables. *Votes_for* is the percentage of votes in favor of the M&A deal over total votes cast and *Completed* is an indicator variable equal to one if the deal is completed and equal to zero if the transaction is withdrawn. We test a regression model where the dependent variable is either *Votes_for* or *Completed*, and the main independent variables correspond to the proxy for information asymmetry, *Spread*, and the proxy for changes in the shareholder base, *(Transient) Sale* which are the sales from transient investors used in the previous section. We also include our usual controls, quarter-year and industry fixed effects. Standard errors are robust and clustered at the industry level.

Table 9 Panel A reports the results. We find that lower spreads, and therefore, lower information asymmetries, are associated with more votes in favor of the deal (column (1)), although the coefficient is not statistically significant. Also, in column (3), more sales from transient investors is related to more votes in favor. The effect is significant at the 5% level. The estimate indicates that an increase of 4 percentage points (i.e. one standard deviation) in transient institutional sales is related to an increase of 0.4 percentage points of votes in favor.

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Regarding deal completion, in columns (2) and (4), we find that *Spread* is negatively and significantly associated with the probability of deal completion, suggesting that lower asymmetric information leads to a higher probability of closing the deal. *(Transient) Sale* is positively related to the probability of deal completion. The estimate is significant at the 5% level. Overall, these results suggest that reduced information asymmetry and the associated sales from unsupportive shareholders help to increase voting support for the transaction and the probability of executing the deal.[30]

Next, we examine whether the increased disclosure due to voting requirements indeed affects the likelihood of deal completion through the two channels, which are reduced information asymmetries and sales from unsupportive shareholders. We employ a triple-interaction method, where we interact the variable *Vote* with 8-K disclosure variables and with either the measure of information asymmetries or sales from transient institutions. To facilitate interpretation, we transform *Spread* into a dummy variable, *High_spread*, equal to 1 if the spread is above the median and 0 otherwise. We also stardardize our variable *Sale* which becomes *Std_sale*. This variable has a mean of 0 and a standard deviation of 1. We also standardize the 8-K disclosure variables so that coefficients represent the effects for a typical deal with an average level of disclosure.

Table 9 Panel B reports the results. Column (1) reports interactions between *Vote*, *Ln_8k* and *High_spread* and column (2) shows the interactions between *Vote*, *Size_8k* and *High_spread*. The negative estimate on *Vote* in column (2) is significant at the 5% level, suggesting that a deal with an average level of disclosure and relatively low information asymmetries is 6.0 percentage points less likely to be completed if it is subject to voting. The estimate on *Vote* $\times$ *Size_8k* is 0.067 and significant at the 1% level, which suggests that increasing disclosure and the associated reduction in asymmetric information (*High_spread* $= 0$) attenuates the previous negative effect and helps improve the likelihood of deal completion. This benefit of disclosure is, however, smaller when the information asymmetries are still relatively large (as the estimate on the triple interaction term is equal to -0.070 and significant at 1% level). In fact, the estimates suggest that increasing disclosure without lowering information asymmetries, that is, when disclosure is not informative, the negative effect is not reduced. Indeed, the effect is 0.067 - 0.070 = -0.003, which is statistically not significant.

Column (3) reports interactions between *Vote*, *Ln_8k* and *Std_sale* and column (4) interactions between *Vote*, *Size_8k* and *Std_sale*. Estimates in column (4) also suggest that voting lowers the likelihood of deal completion for deals with an average level of dis-

[30]Relatedly, Table A9 shows that higher market reaction (*BHAR30/60/90*) precedes higher voting support and the likelihood of deal completion.

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closure and sales from transient institutions. The estimate on *Vote* × *Size_8k* is positive but not significant, suggesting that increasing disclosure and the associated (average) sale of stock from transient investors does not really help attenuate the reduced probability of completion. However, the negative effect is attenuated when disclosure triggers more substantial transient sales as reported by the positive and significant estimate on the triple interaction term. Overall, the evidence provides further support for our argument that the increased disclosure due to voting requirements improves the probability of deal completion via reducing information asymmetries and triggering sales from less supportive shareholders.

4.6 Post-merger performance

Underlying our hypotheses development is the argument that managers use voluntary disclosure as a credible signal about the deal quality to garner shareholders' voting support. In this section we examine whether the information released by managers is indeed credible, that is, if managers' forecasted performance is verified ex-post. Specifically, we test whether the disclosed earnings forecasts are indeed associated with larger post-merger performance, as measured by earnings matrices.[31] We estimate an OLS model where the dependent variable corresponds to various measures of firm performance and the independent variable of interest is earnings forecasts released upon the merger announcement. Our model includes our usual controls and fixed effects, and errors are robust and clustered at the industry level.

Table 10 reports the regression results. In columns (1) and (2), the dependent variables are ROA one and two years after the merger, respectively. In columns (3) and (4), we examine profit margins. In Panel A, all the coefficients on *E_forecasts* are positive. The effects become economically large and statistically significant two years after the merger. These results suggest that managerial post-merger earnings forecasts credibly signal the deal's (good) quality and this is reflected in better *ex post* earnings ratios and profit margins, particularly in the second year after the merger. Our findings are in line with the results in Shalev (2009) which indicate that acquirers' performance following M&As increases with their level of disclosure about deals in 10-Ks. In Panel B, we interact *E_forecasts* with our indicator of voting requirements *Vote*. We find that the positive association between earnings forecasts disclosure and realized earnings is

[31] We focus on disclosure of post-merger earnings forecasts because the mapping of earnings forecasts with *ex post* earnings matrices provides a powerful test. When mapping *ex post* earnings matrices with other disclosure measures such as the aggregate 8-K filings, which are arguably noisier for this test, we obtain marginally significant results.

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driven by firms subject to voting. This result suggests that when a deal is up for a vote, managers have strong incentives to reveal truthful earnings forecasts because these are associated with the actual *ex-post* performance. Since investors are able to anticipate that, the earnings forecasts provide a credible signal about the quality of the deal and help increase shareholders' voting support.

5 Endogeneity

In our models, we include a battery of fixed effects to control for sources of unobserved heterogeneity that could contaminate our results. However, we cannot entirely discard that time-varying sources of endogeneity play a role in our findings. Therefore, in this section, we take further steps towards addressing potential endogeneity issues.

5.1 Entropy balancing

One concern is that acquirers with and without shareholder voting requirements are different along unobservable characteristics associated with *both* voting requirements and disclosure.[32] If these characteristics vary over time, they would not be absorbed by our fixed effects. To address this concern, we use the entropy balancing method in Hainmueller (2012). This method allocates weights to acquirer firms without shareholder voting requirements to obtain a control group that is more comparable to the treatment group composed of acquirers with voting requirements. As Hainmueller (2012) points out, entropy balancing has several advantages over matching methods: it keeps valuable information by allowing for more flexible weighing and offers superior covariate balance. In addition, since our initial sample is not very large, a matching strategy could result in a small sample without ensuring covariate balance. Table A5 shows that characteristics of firms in the treatment and control groups have more similar distributions in terms of mean, variance, and skewness after entropy balancing. Our results using weights obtained from entropy balancing (reported in the same table) confirm that the point estimates of our main variable of interest *Vote* are positive, statistically significant, and of similar magnitude compared to the ones in our baseline regressions.

[32]For example, some acquirers may have a more conservative managerial style that induces management to avoid voting and be less willing to disclose at the same time.

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5.2 Falsification and robustness tests

In this section we address endogeneity due to omitted variables. Specifically, we conduct falsification and robustness tests by incorporating target firms into the analysis. We use the combined sample of target and acquirer firms in the following regression model:

$$Disclosure_{i,d} = \alpha_0 + \beta_1 Vote_d + \beta_2 Vote_d \times Acquirer_{i,d} + \beta_3 Acquirer_{i,d} + \gamma' X + FEs + \epsilon_{i,d}, \tag{4}$$

where *Disclosure* is one of the firm-deal-level disclosure measures, namely 8-K and merger agreement filings, for firm i in deal d. The variable *Acquirer* is equal to 1 if a firm is the acquirer and 0 if it is the target. The coefficient β_1 captures the difference in disclosure between targets of deals with and without acquirers' shareholder voting requirements. Since all targets are subject to shareholder approval, we do not expect significant differences in their disclosure and, hence, the coefficient β_1 should not be significant. The coefficient β_2, which corresponds to the interaction term, captures (i) the difference in disclosure between acquirers in deals with and without acquirers' shareholder voting and (ii) the difference in disclosure between targets. Since we expect the former difference to be positive and significant and the latter to be not significant, β_2 should be positive.

Table 11 reports results of these tests. In columns (1)-(4), the dependent variables are *Agmt_filing*, *Ln_8k*, *Size_8k* and *Ln_8k_rlt*, respectively. As expected, three estimates of β_1 are not significant and only the estimate in column (3) is marginally significant. Meanwhile, all four estimates of β_2 are positive and significant at 1% level.

We conduct a second falsification test in which the dependent variable is 8-K filings in the same period one year *before* the M&As. We call this variable *Ln_8k_ybf*. If acquirers with and without voting are fundamentally different in some omitted variable such as (sticky) governance structure and this difference explains variation in corporate disclosure, it is likely that we also observe differences between the two groups' level of disclosure one year before the deal. The results in column (4) show that none of the estimates of interest is significant. This evidence again mitigates the concern that some omitted variable such as governance quality causes our baseline results to be biased.[33]

[33] In a robustness test, we further attempt to explicitly control for some additional governance characteristics in addition to institutional ownership included in the main specification. Table A6 shows results when we add board independence and CEO duality. Results are qualitatively the same despite the fact that the sample is substantially reduced.

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5.3 Exogenous variation

Another potential concern is selection. Shareholder voting may *ex ante* perfectly deter value-destroying deals from being announced, and hence, the observed sample of deals subject to voting may contain only value-adding deals (Becht et al., 2016). In that case, we would observe more disclosure among acquirers with voting than among those without, but this would be merely due to the selection effect, i.e. managers disclose more because the deals are good, rather than a causal effect. Following Li et al. (2018), we exploit a plausibly exogenous source of variation in the distance to the 20% threshold in all-stock deals to provide evidence on the causal effect of shareholder voting on disclosure. Figure 4 shows that there is indeed a discontinuity in the probability of shareholder voting around the 20% threshold. Specifically, there is about a 50-percentage-point increase in the probability of a shareholder vote for firms just above the cutoff relative to firms just below the cutoff. We exploit this discontinuity in a fuzzy Regression Discontinuity Design (henceforth, RDD).

The central assumption of a valid RDD is that whether a firm is just above or just below the cutoff is random. In other words, firms cannot *precisely* manipulate the running variable and hence, firms just above and just below the threshold are comparable in all their other characteristics. In our setting, the running variable corresponds to the percentage of shares to be issued for the transaction. We assume that, in all-stock deals, it is difficult for the acquirer manager to have absolute control over the percentage of shares to be issued. This is because this percentage also depends on other factors such as the negotiation with other parties and the estimate of the target's number of shares to be converted (Li et al., 2018). We conduct two tests to validate the no-manipulation assumption. First, we test for a discontinuity in the density of the running variable using McCrary (2008) procedure. If acquirers attempt to plan their shares issuance to be just below 20% to avoid voting, the distribution should present a discontinuity at the threshold due to an abnormally high (low) number of firms to the left (right) of the threshold. Figure A1 shows the distribution is smooth. The absolute value of the McCrary test statistic is 0.72, which is not statistically significant at any conventional level. Both visual inspection and the statistical test thus suggest that the density of the running variable is smooth around the cutoff. Second, we examine if other firm and deal characteristics are balanced around the threshold. Table A10 shows that none of the control variables exhibit any discontinuity at the threshold.

Figure 5 plots the distribution of various disclosure variables around the threshold. We can see increases in 8-K disclosure, timely filing of the merger agreement, and provi-

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sion of earnings forecasts for firms just above the threshold relative to firms just below the threshold. The pattern is less clear regarding the disclosure of synergy information. To formally present the causal effect of shareholder voting on disclosure, we conduct a two-stage least-squares (2SLS) procedure by estimating the following set of equations:

$$Vote_d = \alpha_0 + \beta_1 Above_d + \beta_2 Shares_tbissued_d + \beta_3 Above_d \times Shares_tbissued_d + \gamma' X + \epsilon_d \tag{5}$$

$$Disclosure_d = \alpha_0 + \beta_1 \widehat{Vote}_d + \beta_2 Shares_tbissued_d + \beta_3 Above_d \times Shares_tbissued_d + \gamma' X + \epsilon_d \tag{6}$$

In equations (5) and (6), the variable *Shares_tbissued* is the percentage of shares to be issued centered at 20%, and *Above* is an indicator equal to 1 if the percentage of shares to be issued is above 20% and 0 otherwise. In equation (6), the variable $\widehat{Vote}$ is the fitted value of *Vote* from the first-stage regression. We estimate local linear regressions using small bandwidths around the threshold.

Panel A of Table 12 reports results of the first-stage regressions. Column (1) uses a fixed bandwidth of 10%. The estimate indicates that the probability of a shareholder vote for firms just above the threshold is 60 percentage points higher than for firms just below the threshold. The estimate is also highly statistically significant with a F-statistic of 55.794. In columns (2)-(5), we use the Calonico et al. (2014) procedure to calculate optimal data-driven bandwidths whose values depend also on disclosure variables in the second stage. Data-driven bandwidths range from 4.2%-7.3%. The trade-off in choosing the bandwidth is that a larger bandwidth increases precision by including more observations, but introduces an additional bias. In the second stage, we use bias-corrected robust standard errors for inference proposed by Calonico et al. (2014). Panel B reports RD estimates using both a fixed bandwidth of 10% and data-driven bandwidths. Results confirm patterns observed in Figure 5. The RD estimates are statistically significant for *Size_8k*, *Agmt_filing* and *E_forecasts*, but not for *Exp_synergies*. The RD estimates are about double the OLS estimates for the full sample, suggesting a significant local average treatment effect of shareholder voting on disclosure around the 20% threshold.

6 Conclusion

Regulators have initiated several reforms that empower shareholders through voting. While there are certain benefits from strong shareholder voting rights, such as the supervision and monitoring of managerial decisions, one major concern remains. Share-

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holders often lack specific information about the firm and their voting decisions may lead to inferior outcomes compared to the outcomes that are achieved when managers, with superior information, have the power to make decisions on their own. We address this concern and examine whether shareholder voting requirements in M&As induce managers to disclose information that is used by shareholder-voters to make an informed vote.

We find that acquirers subject to shareholder voting provide more 8-K disclosure during the transaction period of M&As, more timely disclosure of the merger agreement, and more information on the deals' synergies and post-merger earnings forecasts. These associations are stronger when it is more necessary, discretionary, or effective to use public communication to increase the shareholder turnout and voting support.

We also find that disclosure reduces information asymmetries between managers and shareholders for firms subject to voting, as captured by lower bid-ask spreads. Moreover, more disclosure increases the stock sales from transient institutional investors in firms with voting requirements, indicating that the information disclosed triggers a market reaction and hence it is informative and relevant. Also, lower bid-ask spreads and higher transient institutional sales are associated with higher voting support and a higher likelihood of deal completion. Hence, by providing information to the market, managers are able to achieve better outcomes *ex-post*. These better outcomes *ex-post* are what promote managers' incentives to provide the information *ex-ante*. Evidence from falsification and RDD tests provide confirmatory evidence of a significant causal effect of shareholder voting on disclosure.

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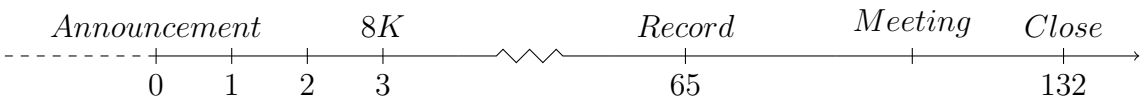
Figure 1: M&A timeline



This figure plots the timeline of an typical deal. Important dates during the transaction period include the public announcement date, record and meeting dates if voting is required, and closing date (completion or withdrawal). The median duration of the transaction period is 132 calendar days. There are 2,412 (out of 3,278) acquirers that file the 8-K filing of the merger agreement, and the median lag is 3 days after the announcement. Record dates are available in SDC database for only 650 (out of 3,278) deals, and the median gap from the announcement is 65 calendar days.

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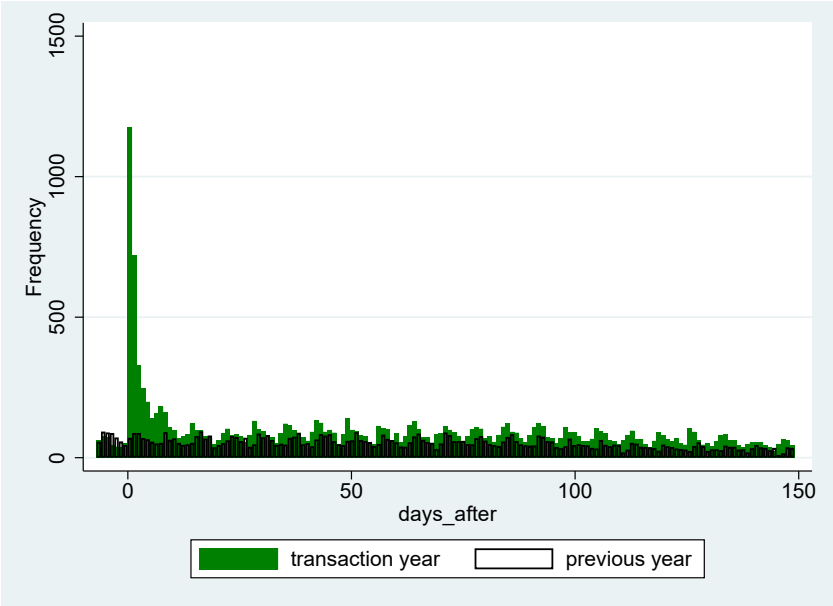
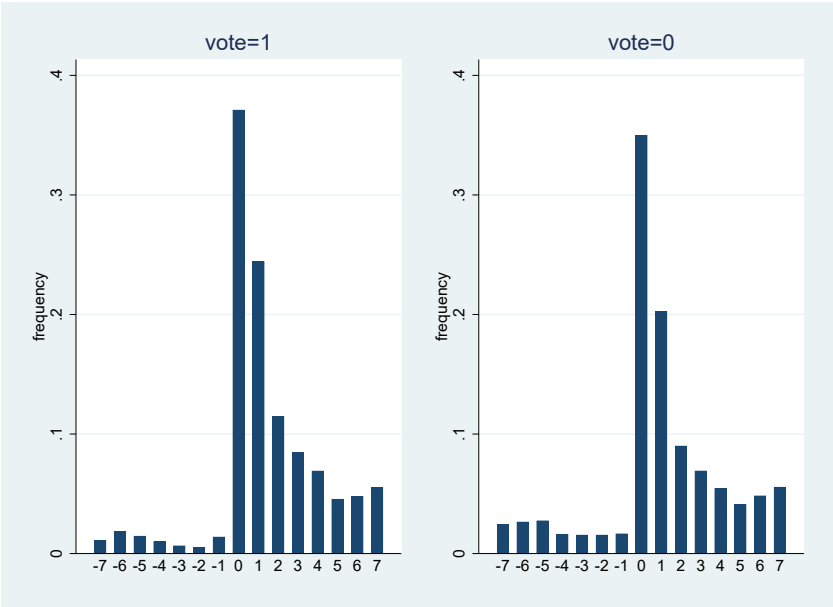
Figure 2: Distribution of 8-K filings in the transaction year and previous year



This figure plots the distribution of 8-K filings by acquirers of 3,278 deals from 7 days before to 150 days after the announcement. Green bars denote filings in the transaction year; the white bars with the black outline denote filings in the previous year.

Figure 3: Distribution of average 8-K filings per firm around the announcement



This figure plots the distribution of average 8-K filings per firm by acquirers of 3,278 deals from 7 days before to 7 days after the announcement. On the left (right) is the distribution for acquirers (not) subject to shareholder voting.

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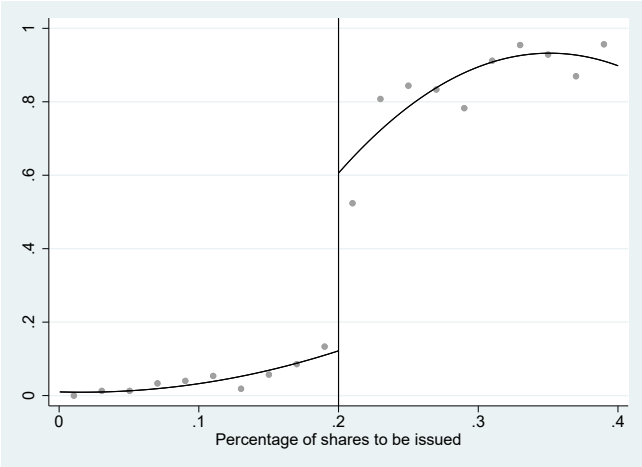
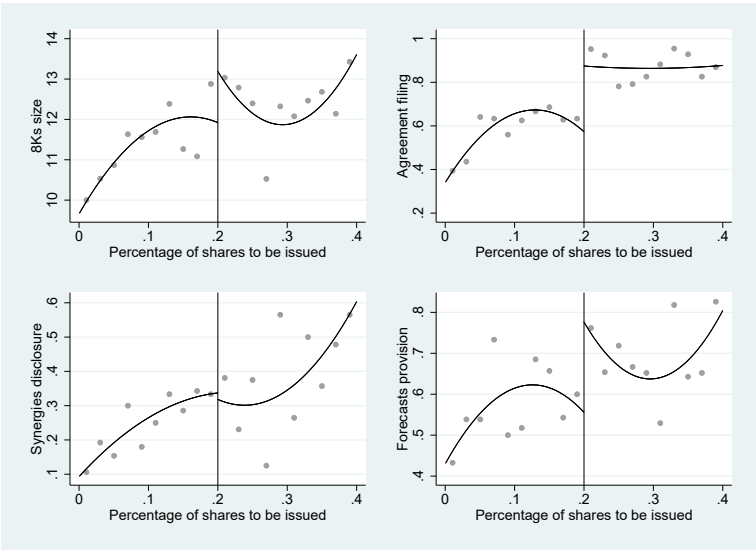
Figure 4: Probability of a shareholder vote around the 20% threshold



This figure plots the distribution of shareholder votes around the 20% threshold. The x-axis presents the forcing variable - the number of shares to be issued over the number shares outstanding. The y-axis corresponds to the probability of a shareholder vote. Each dot represents the average probability of a shareholder vote in bins of 2%. The solid lines represent the fitted values from a second-degree polynomial of the percentage of shares to be issued. The sample consists of 822 all-stock deals with the percentage of shares to be issued between 0-40%.

Figure 5: Disclosure around the 20% threshold



This figure plots the distribution of disclosure around the 20% threshold. The x-axis presents the forcing variable- the number of shares to be issued over the number shares outstanding. The y-axis corresponds to one of the four disclosure variables. Each dot represents the average value of the disclosure variable in bins of 2%. The solid lines represent the fitted values from a second-degree polynomial of the percentage of shares to be issued. The sample consists of 822 all-stock deals with the percentage of shares to be issued between 0-40%.

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Table 1: Variable definitions

Name	Definition	Data Source
Ln_8k	Logarithm of 1 plus the number of 8-K filings during the transaction period (*N_8k*)	EDGAR, SDC
Ln_8k_rlt	Logarithm of 1 plus the number of 8-K filings mentioning the name of the other party during the transaction period (*N_8k_rlt*)	EDGAR, SDC
Ln_8k_ybf	Logarithm of 1 plus the number of 8-K filings one year before the deal during the same time interval as the transaction period (*N_8k_ybf*)	EDGAR, SDC
Size_8k	Logarithm of 1 plus the total size of all 8-K filings during the transaction period	EDGAR, SDC
Agmt_filing	An indicator equal to 1 for timely filing of the merger agreement within 15 days since the entry into the agreement, and 0 otherwise	EDGAR, SDC
Exp_synergies	An indicator equal to 1 if the announcement press release includes synergy-related words, namely *synergy, synergies, cost saving(s)*	EDGAR
E_forecasts	An indicator equal to 1 if the announcement press release includes word combinations conveying earnings forecasts proposed by Amel-Zadeh and Meeks (2019)	EDGAR
Vote	An indicator equal to 1 if the acquirer is subject to shareholder approval and 0 otherwise	EDGAR
Acquirer	An indicator equal to 1 if the firm is the acquirer, 0 if the target	SDC
Relative_value	Value of the transaction divided by market value of a firm at the end of the quarter before the deal	SDC, CRSP
Ln_days	Logarithm of 1 plus the number of days in the transaction period (*N_days*)	SDC
Cash_payment	An indicator equal to 1 if the deal is financed by cash only	SDC
Horizontal	An indicator equal to 1 if the deal is between firms of the same industry (same 2-digit SIC code)	SDC
Size	Ln(SHROUT*PRC)	CRSP
Return	Buy-and-hold stock return in the quarter before the deal	CRSP
Volatility	Standard deviation of daily stock return in the quarter before the deal	CRSP
Instown	Percentage of institutional ownership	Thomson Reuters
Instown_hhi	Institutional ownership concentration	Thomson Reuters
Ln_analysts	Logarithm of 1 plus the number of analysts provide earnings forecasts for a firm (*N_analysts*)	IBES
MTB	SHROUT*PRC/ATQ	CRSP, Compustat
ROA	IBQ/ATQ	Compustat
Leverage	(DLCQ + DLTTQ)/ATQ	Compustat
Loss	An indicator equal to 1 if NIQ is negative and 0 otherwise	Compustat
Relative_ROA	Target's ROA minus acquirer's ROA	Compustat
ROA1(2)	ROA of the first (second) year after the merger	Compustat
Margin1(2)	Net profit margin of the first (second) year after the merger	Compustat
Spread	Logarithm of 1 plus average relative bid-ask spread during the transaction period	CRSP
Volume	Total trading volume during the transaction period divided by the average number of shares outstanding	CRSP
Revisions	The total number of analysts' revisions scaled by the average number of estimates during the transaction period	IBES
BHAR30/60/90	Buy-and-hold abnormal return from one day before to 30/60/90 days after the announcement date calculated using the market-adjusted model	SDC, CRSP
Sale	Absolute value of the total negative change in institutional holdings from the previous quarter to the announcement quarter scaled by the number of shares outstanding	Thomson Reuters
Net Sale	-1 times the total net change in institutional holdings from the previous quarter to the announcement quarter scaled by the number of shares outstanding	Thomson Reuters
Votes_for	The number of votes in favor of the deal divided by total votes cast	EDGAR
Completed	An indicator equal to 1 if the deal is completed and 0 if withdrawn	SDC
Shares_tbissued	The number of shares to be issued divided by the number of shares outstanding centered at 20%	SDC, EDGAR
Above	An indicator equal to 1 if the percentage of shares to be issued is above 20%	SDC, EDGAR

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Table 2: Summary statistics

VARIABLES	(1) N	(2) mean	(3) sd	(4) p5	(5) p25	(6) p50	(7) p75	(8) p95
N_8k	3,216	5.986	7.013	0	2	4	8	18
Size_8k	3,216	13.040	3.589	0	12.849	13.947	14.721	15.488
Agmt_filing	3,216	0.734	0.442	0	0	1	1	1
Exp_synergies	3,216	0.406	0.491	0	0	0	1	1
E_forecasts	3,216	0.656	0.475	0	0	1	1	1
Vote	3,216	0.413	0.492	0	0	0	1	1
Votes_for	984	96.440	7.309	84.685	96.699	98.771	99.497	99.897
Completed	3,216	0.937	0.244	0	1	1	1	1
Relative_value	3,216	0.488	0.684	0.010	0.077	0.257	0.645	1.623
Cash_payment	3,216	0.191	0.393	0	0	0	0	1
Horizontal	3,216	0.390	0.488	0	0	0	1	1
N_days	3,216	151.835	87.960	60	93	133	182	318
Size	3,216	7.528	2.045	4.247	6.087	7.481	8.920	11.190
Instown	3,216	0.535	0.276	0.054	0.321	0.557	0.755	0.947
N_analysts	3,216	10.092	8.530	0	3	8	15	27
Return	3,216	0.037	0.233	-0.343	-0.075	0.026	0.140	0.425
Volatility	3,216	0.026	0.017	0.010	0.015	0.021	0.032	0.062
MTB	2,862	2.022	1.741	0.964	1.075	1.355	2.221	5.499
ROA	2,862	0.004	0.040	-0.053	0.002	0.006	0.019	0.043
Loss	2,862	0.150	0.357	0	0	0	0	1
Leverage	2,862	0.210	0.175	0	0.065	0.184	0.307	0.547

This table presents summary statistics of main variables. The variable *N_8k* is the number of 8-K filings during the transaction period, *Size_8k* is logarithm of 1 plus the total size of all 8-K filings during the transaction period, *Agmt_filing* is an indicator equal to 1 for timely filing of the merger agreement within 15 days since the entry into the agreement, *Exp_synergies* is an indicator equal to 1 if the announcement press release includes synergy-related words, *E_forecasts* is an indicator equal to 1 if the announcement press release includes word combinations conveying earnings forecasts, *Vote* is an indicator equal to 1 if the acquirer is subject to shareholder approval, *Votes_for* is the percentage of votes in favor of the deal over the total vote cast (in %), *Completed* is an indicator equal to 1 if the deal is completed and 0 if withdrawn, *Relative_value* is transaction value divided by market capitalization, *N_days* is the number of days in the transaction period, *Cash_payment* is an indicator equal to 1 if the deal is financed by cash only, *Horizontal* is an indicator equal to 1 if the deal is between firms of the same industry, *Size* is logarithm of market capitalization, *Instown* is percentage of institutional ownership, *N_analysts* is the number of analysts following, *Return* is buy-and-hold stock return, *Volatility* standard deviation of daily stock return, *MTB* is market capitalization divided by total assets, *ROA* is income before extraordinary items divided by total assets, *Loss* is an indicator equal to 1 if net income is negative, and *Leverage* is total long-term debt divided by total assets.

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Table 3: Univariate analysis

	Vote=0	Vote=1	Difference
N_8k	5.622	6.509	-0.887***
Size_8k	12.037	12.852	-0.815***
Agmt_filing	0.638	0.870	-0.231***
Exp_synergies	0.340	0.498	-0.158***
E_forecasts	0.623	0.705	-0.082***
Completed	0.958	0.906	0.052***
Relative_value	0.224	0.864	-0.640***
Cash_payment	0.311	0.019	0.292***
Horizontal	0.355	0.440	-0.085***
N_days	141.332	166.787	-25.455***
Size	8.101	6.711	1.390***
Instown	0.571	0.483	0.088***
N_analysts	11.793	7.671	4.122***
Return	0.035	0.041	-0.006
Volatility	0.024	0.030	-0.006***
MTB	2.086	1.927	0.160**
ROA	0.009	-0.002	0.010***
Loss	0.111	0.207	-0.095***
Leverage	0.208	0.213	-0.005

This table compares the characteristics of two acquirer samples with and without shareholder voting. Column (1) reports the mean of variables in the sample with shareholder voting and column (2) without shareholder voting. Column (3) report the difference in mean between the two samples. ***, **, and * denote statistical significance of the T-test at 1%, 5% and 10% level, respectively.

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Table 4: Shareholder voting and 8K disclosure

VARIABLES	(1) Ln_8k	(2) Ln_8k	(3) Size_8k	(4) Size_8k	(5) Ln_8k_rlt	(6) Ln_8k_rlt
Vote	0.091***	0.106***	0.842***	0.846***	0.124***	0.125***
	(0.021)	(0.020)	(0.107)	(0.110)	(0.034)	(0.034)
Relative_value	0.095***	0.088***	0.356***	0.355**	0.125***	0.123***
	(0.022)	(0.025)	(0.104)	(0.137)	(0.029)	(0.038)
Ln_days	0.626***	0.608***	1.277***	1.232***	0.217***	0.211***
	(0.025)	(0.030)	(0.210)	(0.229)	(0.033)	(0.034)
Cash_payment	-0.159***	-0.147***	-0.552**	-0.424**	-0.147***	-0.140***
	(0.027)	(0.023)	(0.221)	(0.185)	(0.033)	(0.033)
Horizontal	0.042**	0.049***	0.160	0.219*	0.047	0.049
	(0.017)	(0.018)	(0.103)	(0.114)	(0.033)	(0.033)
Size	0.048***	0.053***	0.051	0.117**	0.016	0.015
	(0.012)	(0.011)	(0.049)	(0.048)	(0.009)	(0.011)
Return	0.014	0.024	0.425	0.623*	0.068	0.058
	(0.050)	(0.056)	(0.316)	(0.339)	(0.069)	(0.070)
Volatility	2.332***	2.208**	11.338	7.325	0.685	1.140
	(0.805)	(0.933)	(8.125)	(8.129)	(0.764)	(1.372)
Instown	0.141***	0.157***	0.913***	0.987***	0.116	0.102
	(0.043)	(0.040)	(0.317)	(0.305)	(0.075)	(0.083)
Ln_analysts	0.064**	0.058**	0.308**	0.229**	0.018	0.030
	(0.028)	(0.026)	(0.119)	(0.099)	(0.024)	(0.027)
MTB		-0.003		-0.038		0.006
		(0.005)		(0.067)		(0.008)
ROA		-0.233		-4.514		0.174
		(0.317)		(3.108)		(0.431)
Loss		0.061*		0.339		0.002
		(0.032)		(0.305)		(0.040)
Leverage		0.122		0.361		0.132
		(0.084)		(0.461)		(0.092)
Observations	3,216	2,862	3,216	2,862	3,216	2,862
Adjusted R-squared	0.620	0.624	0.389	0.396	0.249	0.255
Quarter-Year FE	yes	yes	yes	yes	yes	yes
Industry FE	yes	yes	yes	yes	yes	yes

This table presents regression results for the models examining the relationship between shareholder voting and 8-K disclosure. The dependent variable in columns (1) and (2) is *Ln_8k*, logarithm of 1 plus the number of 8-K filings during the transaction period, in columns (3) and (4) *Size_8k*, logarithm of 1 plus the total size of all 8-K filings during the transaction period, and in columns (5) and (6) *Ln_8k_rlt*, logarithm of 1 plus the number of 8-K filings mentioning the name of the other party during the transaction period. Robust standard errors clustered by industry are in parentheses. ***, **, and * denote statistical significance at 1%, 5% and 10% level, respectively.

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Table 5: Shareholder voting and specific disclosure

VARIABLES	(1) Agmt_filing	(2) Agmt_filing	(3) Exp_synergies	(4) Exp_synergies	(5) E_forecasts	(6) E_forecasts
Vote	0.164***	0.159***	0.155***	0.144***	0.088***	0.079***
	(0.016)	(0.017)	(0.024)	(0.024)	(0.015)	(0.016)
Relative_value	0.048***	0.060***	0.054***	0.065***	0.033**	0.040**
	(0.013)	(0.015)	(0.016)	(0.015)	(0.015)	(0.017)
Ln_days	0.021	0.021	0.018	0.012	0.071***	0.071***
	(0.021)	(0.022)	(0.017)	(0.018)	(0.016)	(0.019)
Cash_payment	-0.109***	-0.097***	-0.086***	-0.089***	-0.037	-0.037
	(0.032)	(0.030)	(0.024)	(0.027)	(0.026)	(0.025)
Horizontal	0.031*	0.036*	0.031**	0.034**	-0.007	-0.004
	(0.017)	(0.020)	(0.015)	(0.015)	(0.019)	(0.018)
Size	-0.019***	-0.023***	-0.003	0.006	-0.018*	-0.018**
	(0.005)	(0.005)	(0.008)	(0.009)	(0.009)	(0.008)
Return	0.075***	0.077***	0.021	0.044	0.097**	0.092**
	(0.021)	(0.024)	(0.037)	(0.043)	(0.037)	(0.035)
Volatility	1.173	1.404*	-1.130**	-0.558	-3.475***	-1.676*
	(0.706)	(0.703)	(0.496)	(0.663)	(1.028)	(0.984)
Instown	0.132***	0.117**	0.014	0.023	0.164**	0.114
	(0.038)	(0.050)	(0.044)	(0.040)	(0.066)	(0.068)
Ln_analysts	-0.008	-0.007	0.050***	0.045**	0.051**	0.050**
	(0.017)	(0.020)	(0.015)	(0.018)	(0.019)	(0.019)
MTB		0.005		-0.028***		-0.005
		(0.005)		(0.005)		(0.009)
ROA		0.279		0.275		0.333*
		(0.277)		(0.236)		(0.180)
Loss		-0.017		0.060*		-0.082**
		(0.030)		(0.031)		(0.031)
Leverage		-0.063		-0.018		0.034
		(0.057)		(0.058)		(0.072)
Observations	3,216	2,862	3,216	2,862	3,216	2,862
Adj. R-squared	0.158	0.160	0.231	0.236	0.095	0.088
Quarter-Year FE	yes	yes	yes	yes	yes	yes
Industry FE	yes	yes	yes	yes	yes	yes

This table presents regression results for the models examining the relationship between shareholder voting and specific disclosure. The dependent variable in columns (1) and (2) is *Agmt_filing*, an indicator equal to 1 for timely filing of the merger agreement within 15 days since the entry into the agreement, in columns (3) and (4) *Exp_synergies*, an indicator equal to 1 if the announcement press release includes synergy-related words, in columns (5) and (6) *E_forecasts*, an indicator equal to 1 if the announcement press release includes word combinations conveying earnings forecasts. Robust standard errors clustered by industry are in parentheses. ***, **, and * denote statistical significance at 1%, 5% and 10% level, respectively.

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Table 6: Heterogeneous effect of shareholder voting on disclosure

Panel A. Ownership concentration

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Ln_8k	Size_8k	Ln_8k_rlt	Agmt_filing	Exp_synergies	E_forecasts
Vote	0.107***	0.853***	0.126***	0.161***	0.146***	0.081***
	(0.020)	(0.107)	(0.035)	(0.018)	(0.023)	(0.017)
Vote × Instown_hhi	-0.020	0.007	-0.047*	-0.034***	-0.058***	-0.044**
	(0.028)	(0.117)	(0.027)	(0.011)	(0.012)	(0.020)
Observations	2,862	2,862	2,862	2,862	2,862	2,862
Adjusted R-squared	0.624	0.397	0.255	0.162	0.238	0.091

Panel B. Analyst following

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Ln_8k	Size_8k	Ln_8k_rlt	Agmt_filing	Exp_synergies	E_forecasts
Vote	0.111***	0.857***	0.136***	0.169***	0.152***	0.087***
	(0.021)	(0.107)	(0.036)	(0.019)	(0.023)	(0.019)
Vote × Ln_analysts	0.053**	0.100	0.105***	0.092***	0.071**	0.074***
	(0.022)	(0.090)	(0.027)	(0.014)	(0.032)	(0.022)
Observations	2,862	2,862	2,862	2,862	2,862	2,862
Adjusted R-squared	0.624	0.396	0.258	0.169	0.240	0.093

Panel C. Relative value

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Ln_8k	Size_8k	Ln_8k_rlt	Agmt_filing	Exp_synergies	E_forecasts
Vote	0.098***	0.805***	0.121***	0.149***	0.138***	0.072***
	(0.022)	(0.138)	(0.036)	(0.017)	(0.029)	(0.017)
Vote × Relative_value	-0.082***	-0.469**	-0.045	-0.119***	-0.068**	-0.084**
	(0.030)	(0.196)	(0.046)	(0.028)	(0.033)	(0.035)
Observations	2,862	2,862	2,862	2,862	2,862	2,862
Adjusted R-squared	0.625	0.397	0.255	0.170	0.238	0.092

Panel D. Relative performance

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Ln_8k	Size_8k	Ln_8k_rlt	Agmt_filing	Exp_synergies	E_forecasts
Vote	0.092***	0.744***	0.117***	0.150***	0.143***	0.076***
	(0.021)	(0.131)	(0.034)	(0.017)	(0.024)	(0.019)
Vote × Relative_ROA	-0.061***	-0.398**	0.021	-0.008	-0.048***	-0.032*
	(0.021)	(0.179)	(0.025)	(0.017)	(0.018)	(0.018)
Observations	2,681	2,681	2,681	2,681	2,681	2,681
Adjusted R-squared	0.625	0.399	0.255	0.159	0.236	0.095

This table presents regression results for the models examining the heterogeneous effect of shareholder voting on disclosure. All regressions include control variables, quarter-year and industry FEs. Variables interacted with *Vote* are standardized. In panel A, *Instown_hhi* is a measure of institutional ownership concentration. In panel B, *Ln_analysts* is logarithm of 1 plus the number of analysts following a firm. In panel C, *Relative_value* is transaction value divided by market value of a firm at quarter end before the deal. In panel D, *Relative_ROA* is the difference between the target's and acquirer's ROA; the sample is reduced due to some missing values in targets' ROA. Robust standard errors clustered by industry are in parentheses. ***, **, and * denote statistical significance at 1%, 5% and 10% level, respectively.

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Table 7: Shareholder voting, disclosure and information asymmetry

VARIABLES	(1) Spread	(2) Volume	(3) Revisions	(4) BHAR30	(5) BHAR60	(6) BHAR90	(7) Spread	(8) Volume	(9) Revisions	(10) BHAR30	(11) BHAR60	(12) BHAR90
Ln_8k	-0.004	0.010	0.112***	-0.013	-0.014	-0.015						
	(0.007)	(0.020)	(0.034)	(0.008)	(0.011)	(0.012)						
Vote × Ln_8k	-0.034***	0.128**	0.161**	0.026***	0.021*	0.019						
	(0.012)	(0.049)	(0.066)	(0.009)	(0.011)	(0.014)						
Size_8k							-0.000	-0.008	-0.014**	-0.002	-0.001	-0.000
							(0.001)	(0.005)	(0.006)	(0.001)	(0.002)	(0.002)
Vote × Size_8k							-0.011***	0.022**	0.018**	0.007***	0.006*	0.006
							(0.003)	(0.009)	(0.009)	(0.002)	(0.003)	(0.004)
Observations	2,856	2,862	2,647	2,818	2,818	2,818	2,856	2,862	2,647	2,818	2,818	2,818
Adjusted R-squared	0.686	0.499	0.571	0.070	0.051	0.027	0.688	0.497	0.566	0.071	0.052	0.028
Controls	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Quarter-Year FE	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Industry FE	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes

This table presents regression results of models examining the relationship between shareholder voting, disclosure and information asymmetry. The dependent variable *Spread* is logarithm of 1 plus average relative bid-ask spread during the transaction period. *Volume* is total trading volume during the transaction period divided by the average number of shares outstanding. *Revisions* is the total number of analysts' revisions scaled by the average number of estimates during the transaction period. *BHAR30*, *BHAR60*, and *BHAR90* are buy-and-hold abnormal return for trading periods (-1,30), (-1,60), and (-1,90) around announcement dates, respectively. Robust standard errors clustered by industry are in parentheses. ***, **, and * denote statistical significance at 1%, 5% and 10% level, respectively.

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Table 8: Shareholder voting, disclosure and institutional trading

Panel A. Transient institutional investors

VARIABLES	(1) Sale	(2) Net Sale	(3) Sale	(4) Net Sale
Ln_8k	0.008	-0.322*		
	(0.111)	(0.183)		
Vote × Ln_8k	0.265**	0.602***		
	(0.120)	(0.214)		
Size_8k			-0.005	-0.040*
			(0.017)	(0.021)
Vote × Size_8k			0.055**	0.130***
			(0.023)	(0.048)

Panel B. Quasi-indexer institutional investors

VARIABLES	(1) Sale	(2) Net Sale	(3) Sale	(4) Net Sale
Ln_8k	0.229	0.211		
	(0.300)	(0.253)		
Vote × Ln_8k	-0.383	-0.211		
	(0.305)	(0.285)		
Size_8k			0.006	-0.010
			(0.021)	(0.025)
Vote × Size_8k			-0.052	-0.038
			(0.040)	(0.050)

Panel C. Dedicated institutional investors

VARIABLES	(1) Sale	(2) Net Sale	(3) Sale	(4) Net Sale
Ln_8k	0.012	-0.119		
	(0.032)	(0.083)		
Vote × Ln_8k	-0.057*	-0.051		
	(0.031)	(0.076)		
Size_8k			0.000	-0.019**
			(0.007)	(0.007)
Vote × Size_8k			-0.003	-0.005
			(0.007)	(0.012)

This table presents regression results for the models examining the relationship between shareholder voting, disclosure and institutional trading. Institutional investor classifications are from Brian Bushee. The dependent variable *Sale* is the absolute value of the total negative change in institutional holdings from the previous quarter to the announcement quarter scaled by the number of shares outstanding. The variable *Net Sale* is -1 times the total net change in institutional holdings from the previous quarter to the announcement quarter scaled by the number of shares outstanding. All regressions include control variables, Industry and Quarter-Year fixed effects using 2,840 observations. Robust standard errors clustered by industry are in parentheses. ***, **, and * denote statistical significance at 1%, 5% and 10% level, respectively.

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Table 9: Information asymmetry, institutional trading and deal outcomes

Panel A. Channels and deal outcomes

VARIABLES	(1) Votes_for	(2) Completed	(3) Votes_for	(4) Completed
Spread	-0.426	-0.030*		
	(0.800)	(0.018)		
(Transient) Sale			0.099**	0.003**
			(0.045)	(0.001)
Observations	846	2,856	837	2,840
Adjusted R-squared	0.053	0.025	0.046	0.028
Controls	yes	yes	yes	yes
Quarter-Year FE	yes	yes	yes	yes
Industry FE	yes	yes	yes	yes

Panel B Disclosure, channels and deal outcomes

VARIABLES	(1) Completed	(2) Completed	(3) Completed	(4) Completed
Vote	-0.016	-0.060**	-0.030	-0.034*
	(0.019)	(0.026)	(0.019)	(0.020)
Vote × Ln_8k	-0.002		0.000	
	(0.017)		(0.011)	
Vote × Size_8k		0.067***		0.016
		(0.025)		(0.014)
Vote × Ln_8k × High_spread	0.002			
	(0.021)			
Vote × Size_8k × High_spread		-0.070***		
		(0.023)		
Vote × Ln_8k × Std_sale			0.032***	
			(0.012)	
Vote × Size_8k × Std_sale				0.059***
				(0.015)
Observations	2,856	2,856	2,840	2,840
Adjusted R-squared	0.024	0.027	0.033	0.034
Controls	yes	yes	yes	yes
Quarter-Year FE	yes	yes	yes	yes
Industry FE	yes	yes	yes	yes

This table presents regression results for the models examining the relationship between information asymmetry (institutional trading) and deal outcomes. In panel A, the dependent variable in columns (1) and (3) is *Votes_for*, the percentage of votes in favor of the deal over the total vote cast (in %), in columns (2) and (4) *Completed*, an indicator equal to 1 if the deal is completed and 0 if withdrawn. *Spread* is logarithm of 1 plus average relative bid-ask spread during the transaction period. *(Transient) Sale* the absolute value of total negative change in transient institutional holdings from the previous quarter to the announcement quarter scaled by the number of shares outstanding. In panel B, we transform variables to facilitate interpretation: *High_spread* equals 1 if *Spread* is above median and 0 otherwise; *Std_sale* is *(Transient) Sale* standardized to have a mean of 0 and a standard deviation of 1; *Ln_8k* and *Size_8k* are also standardized. Robust standard errors clustered by industry are in parentheses. ***, **, and * denote statistical significance at 1%, 5% and 10% level, respectively.

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Table 10: Shareholder voting, earnings forecasts disclosure and post-merger profitability

Panel A. Average link

VARIABLES	(1) ROA1	(2) ROA2	(3) Margin1	(4) Margin2
E_forecasts	0.012	0.014*	0.050	0.063**
	(0.009)	(0.007)	(0.035)	(0.025)
Observations	2,450	2,264	2,447	2,262
Adjusted R-squared	0.329	0.261	0.321	0.256
Controls	yes	yes	yes	yes
Quarter-Year FE	yes	yes	yes	yes
Industry FE	yes	yes	yes	yes

Panel B. Heterogeneity

VARIABLES	(1) ROA1	(2) ROA2	(3) Margin1	(4) Margin2
E_forecasts	0.004	0.001	0.030	0.021
	(0.010)	(0.005)	(0.032)	(0.020)
Vote × E_forecasts	0.023	0.038**	0.060	0.130***
	(0.024)	(0.016)	(0.059)	(0.048)
Observations	2,450	2,264	2,447	2,262
Adjusted R-squared	0.329	0.263	0.321	0.261
Controls	yes	yes	yes	yes
Quarter-Year FE	yes	yes	yes	yes
Industry FE	yes	yes	yes	yes

This table presents regression results for the models examining the relationship between shareholder voting, earnings forecasts disclosure, and post-merger profitability. Dependent variables in columns (1) and (2) are return on asset of the first (*ROA1*) and second (*ROA2*) year after the merger, respectively. Dependent variables in columns (3) and (4) are profit margin of the first (*Margin1*) and second (*Margin2*) year after the merger, respectively. Robust standard errors clustered by industry are in parentheses. ***, **, and * denote statistical significance at 1%, 5% and 10% level, respectively.

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Table 11: Shareholder voting and disclosure: Falsification and robustness

VARIABLES	(1) Agmt_filing	(2) Ln_8k	(3) Size_8k	(4) Ln_8k_rlt	(5) Ln_8k_ybf
Vote	-0.021	0.010	0.287*	0.007	-0.008
	(0.027)	(0.018)	(0.156)	(0.024)	(0.024)
Vote × Acquirer	0.237***	0.175***	0.842***	0.191***	-0.007
	(0.026)	(0.026)	(0.204)	(0.041)	(0.027)
Acquirer	-0.163***	0.024	-0.165	-0.111*	0.026
	(0.032)	(0.035)	(0.215)	(0.057)	(0.030)
Relative_value	0.024***	0.032***	0.176**	0.049***	0.003
	(0.007)	(0.008)	(0.072)	(0.015)	(0.011)
Ln_days	0.017	0.550***	0.991***	0.201***	0.638***
	(0.013)	(0.022)	(0.119)	(0.023)	(0.024)
Cash_payment	-0.042	-0.081***	-0.336***	-0.117***	-0.083***
	(0.025)	(0.015)	(0.111)	(0.028)	(0.020)
Horizontal	0.012	0.026**	0.009	-0.014	0.016
	(0.010)	(0.011)	(0.097)	(0.021)	(0.012)
Size	-0.015**	0.060***	0.175***	0.020**	0.066***
	(0.006)	(0.009)	(0.034)	(0.009)	(0.012)
Return	0.039**	-0.011	0.343**	0.070**	-0.002
	(0.019)	(0.029)	(0.148)	(0.034)	(0.035)
Volatility	0.124	0.834*	-0.668	0.475	2.761***
	(0.481)	(0.427)	(3.093)	(0.609)	(0.416)
Instown	0.155***	0.177***	1.034***	0.066	0.074
	(0.032)	(0.029)	(0.197)	(0.042)	(0.049)
Ln_analysts	0.008	0.042	0.178	0.029*	0.065**
	(0.008)	(0.026)	(0.141)	(0.017)	(0.027)
MTB	0.007*	-0.004	-0.048	0.003	-0.022***
	(0.003)	(0.005)	(0.042)	(0.007)	(0.007)
ROA	-0.044	-0.357*	-3.337***	0.166	-0.226
	(0.152)	(0.192)	(1.237)	(0.303)	(0.243)
Loss	0.011	0.024	0.195	-0.005	0.061**
	(0.015)	(0.023)	(0.159)	(0.036)	(0.024)
Leverage	-0.016	0.143***	0.752***	0.042	0.275***
	(0.032)	(0.050)	(0.252)	(0.054)	(0.051)
Observations	5,897	5,897	5,897	5,897	5,897
Adjusted R-squared	0.156	0.644	0.367	0.221	0.637
Quarter-Year FE	yes	yes	yes	yes	yes
Industry FE	yes	yes	yes	yes	yes

This table presents regression results for falsification and robustness tests using the pooled sample of both acquirers and targets. The variable *Acquirer* is equal to 1 if a firm is the acquirer and 0 if the target. The dependent variable in columns (1) is *Agmt_filing*, an indicator equal to 1 for timely filing of the merger agreement within 15 days since the entry into the agreement, in column (2) *Ln_8k*, logarithm of 1 plus the number of 8-K filings during the transaction period, in column (3) *Size_8k*, logarithm of 1 plus the total size of all 8-K filings during the transaction period, in column (4) *Ln_8k_rlt*, logarithm of 1 plus the number of 8-K filings mentioning the name of the other party during the transaction period, in column (5) *Ln_8k_ybf*, logarithm of 1 plus the number of 8-K filings one year before the deal during the same time interval as the transaction period. Robust standard errors clustered by industry are in parentheses. ***, **, and * denote statistical significance at 1%, 5% and 10% level, respectively.

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Table 12: Effect of shareholder voting on disclosure: Fuzzy RDD

Panel A. First stage

	(1)	(2)	(3)	(4)	(5)
Bandwidth	0.100	.073	.062	.060	.042
Above	0.605***	0.432***	0.418***	0.425***	0.324**
	(0.081)	(0.095)	(0.114)	(0.119)	(0.162)
Shares_tbissued	-0.290	1.038	0.560	0.530	1.619
	(0.865)	(1.391)	(2.051)	(2.212)	(4.627)
Above × Shares_tbissued	2.025	4.895**	6.189**	5.956*	9.905
	(1.346)	(2.083)	(2.911)	(3.140)	(6.190)
Observations	295	206	165	158	100
Adjusted R-squared	0.590	0.635	0.578	0.558	0.482
IV F-stat	55.794	20.813	13.526	12.723	4.003
Controls	yes	yes	yes	yes	yes

Panel B. Second stage

	(1) Size_8k	(2) Agmt_filing	(3) Exp_synergies	(4) E_forecasts
Bandwidth	0.100	0.100	0.100	0.100
Estimate	1.922***	0.511***	-0.339	0.182**
p-value	0.006	0.000	0.464	0.035
N	295	295	295	295
Bandwidth	0.073	0.062	0.060	0.042
Estimate	5.437**	0.936***	-0.492	0.573
p-value	0.021	0.003	0.237	0.454
N	206	165	158	100

This table presents results for the models examining effect of shareholder voting on disclosure using a fuzzy RDD. Panel A presents results of the first-stage regressions in which the dependent variable is *Vote*. The variable *Shares_tbissued* is the percentage of shares to be issued centered at 20%. The variable *Above* is equal to 1 if the percentage to be issued is above 20%. Panel B presents RD estimates using a fixed bandwidth of 10% or data-driven bandwidths proposed by Calonico et al. (2014). In both cases, p-values are constructed using bias-correction with robust standard errors as derived in Calonico et al. (2014). ***, **, and * denote statistical significance at 1%, 5% and 10% level, respectively.

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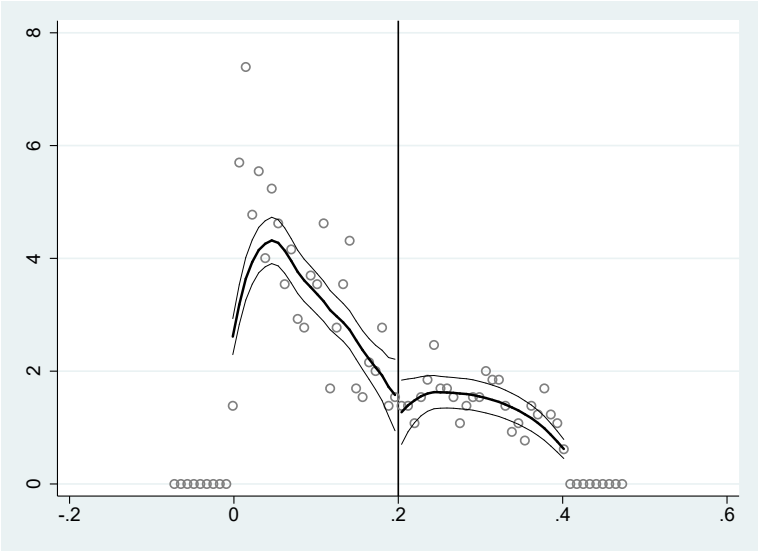
A Appendix

A.1 Figures and Tables

Figure A1: Density function of the percentage of shares to be issued



The figure shows the histogram, estimated density, and 95% confidence intervals of the percentage of shares to be issued. The sample consists of 822 all-stock deals with the percentage of shares to be issued between 0-40%. The absolute value of the McCrary (2008) test statistic is 0.72, which is not statistically significantly different from zero at any conventional level.

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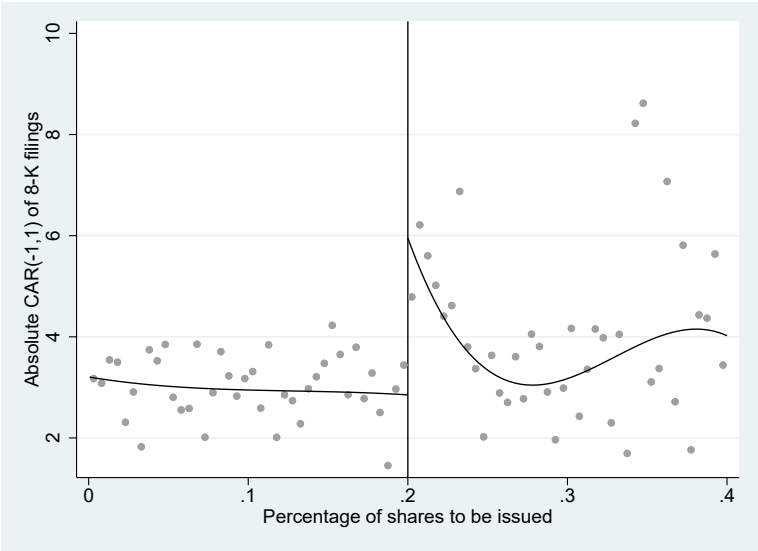
Figure A2: Disclosure informativeness around the 20% threshold



This figure plots the distribution of the market reaction to 8-K filings around the 20% threshold. The x-axis presents the forcing variable - the number of shares to be issued over the number shares outstanding. The y-axis presents the absolute CAR(-1,1) of 8-K filings. Each dot represents the average value of the absolute CAR(-1,1) in bins of 0.5%. The solid lines represent the fitted values from a third-degree polynomial of the percentage of shares to be issued. The sample consists of 3,484 8-K filings belonging to 822 all-stock deals with the percentage of shares to be issued between 0-40%.

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Table A1: Sample construction

Requirement	N	
Announcement date between 01/01/1995-31/12/2019		
US target	283,221	deals
Public target	43,742	deals
US acquirer	39,692	deals
Public acquirer	30,060	deals
Known deal status	29,815	deals
Deal type: NOT undisclosed value, tender offers, spinoffs, recapitalizations, self-tenders, exchange offers, repurchases, acquisitions of minority or remaining interest, and privatizations	5,611	deals
Available NCUSIP of both acquirer and target upon announcement	3,739	deals
Entry into the merger agreement verified in EDGAR filings	3,278	deals
CRSP variables in previous quarter, at least two firms per industry	3,216	acquirers
	3,240	targets

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Table A2: Content of 8-K filings during the transaction period

Panel A. Before August 23, 2004 (N = 6,278)

	Percentage
Item 1 Changes in Control of Registrant	0.061
Item 2 Acquisition or Disposition of Assets	0.112
Item 3 Bankruptcy or Receivership	0.003
Item 4 Changes in Registrant's Certifying Accountant	0.007
Item 5 Other Events	0.784
Item 6 Resignation of Registrant's Directors	0.001
Item 7 Financial Statements and Exhibits	0.762
Item 8 Change in Fiscal Year	0.003
Item 9 Regulation FD Disclosure	0.068
Item 10 Amendments to the Registrant's Code of Ethics	0.000
Item 11 Temporary Suspension of Trading Under Registrant's Employee Benefit Plan	0.001
Item 12 Results of Operations and Financial Condition	0.042

Panel B. After August 23, 2004 (N = 12,789)

	Percentage
Item 1.01 Entry into a Material Definitive Agreement	0.213
Item 1.02 Termination of a Material Definitive Agreement	0.013
Item 1.03 Bankruptcy or Receivership	0.000
Item 1.04 Mine Safety - Reporting of Shutdowns and Patterns of Violations	0.000
Item 2.01 Completion of Acquisition or Disposition of Assets	0.037
Item 2.02 Results of Operations and Financial Condition	0.182
Item 2.03 Creation of a Direct Financial Obligation or an Obligation under an Off-Balance Sheet Arrangement of a Registrant	0.054
Item 2.04 Triggering Events That Accelerate or Increase a Direct Financial Obligation or an Obligation under an Off-Balance Sheet Arrangement	0.001
Item 2.05 Costs Associated with Exit or Disposal Activities	0.003
Item 2.06 Material Impairments	0.003
Item 3.01 Notice of Delisting or Failure to Satisfy a Continued Listing Rule or Standard; Transfer of Listing	0.004
Item 3.02 Unregistered Sales of Equity Securities	0.010
Item 3.03 Material Modification to Rights of Security Holders	0.012
Item 4.01 Changes in Registrant's Certifying Accountant	0.003
Item 4.02 Non-Reliance on Previously Issued Financial Statements or a Related Audit Report or Completed Interim Review	0.001
Item 5.01 Changes in Control of Registrant	0.001
Item 5.02 Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers	0.114
Item 5.03 Amendments to Articles of Incorporation or Bylaws; Change in Fiscal Year	0.030
Item 5.04 Temporary Suspension of Trading Under Registrant's Employee Benefit Plans	0.002
Item 5.05 Amendment to Registrant's Code of Ethics, or Waiver of a Provision of the Code of Ethics	0.002
Item 5.06 Change in Shell Company Status	0.000
Item 5.07 Submission of Matters to a Vote of Security Holders	0.039
Item 5.08 Shareholder Director Nominations	0.000
Item 7.01 Regulation FD Disclosure	0.190
Item 8.01 Other Events	0.446
Item 9.01 Financial Statements and Exhibits	0.800

This table presents frequency of each 8-K item in 8-K filings during the transaction period by acquirers of 3,278 deals.

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Table A3: Summary statistics for targets

VARIABLES	(1) N	(2) mean	(3) sd	(4) p5	(5) p25	(6) p50	(7) p75	(8) p95
N_8k	3,240	4.402	5.189	0	1	3	6	14
Size_8k	3,240	11.773	4.255	0	12.076	12.788	13.960	15.941
Agmt_filing	3,240	0.830	0.376	0	1	1	1	1
Relative_value	3,240	1.651	0.776	0.939	1.219	1.446	1.811	3.123
Cash_payment	3,240	0.190	0.392	0	0	0	0	1
Horizontal	3,240	0.389	0.488	0	0	0	1	1
N_days	3,240	151.892	87.878	61	93	132	182.500	318
Size	3,240	5.486	1.875	2.623	4.109	5.336	6.732	8.778
Instown	3,240	0.421	0.306	0.013	0.151	0.375	0.683	0.940
N_analysts	3,240	4.821	6.034	0	0	3	7	18
Return	3,240	0.042	0.272	-0.395	-0.095	0.027	0.164	0.509
Volatility	3,240	0.034	0.022	0.011	0.018	0.027	0.043	0.083
MTB	3,035	1.782	1.495	0.865	1.031	1.227	1.914	4.530
ROA	3,035	-0.008	0.056	-0.113	-0.002	0.003	0.013	0.038
Loss	3,035	0.276	0.447	0	0	0	1	1
Leverage	3,035	0.198	0.203	0	0.023	0.144	0.311	0.616

This table presents summary statistics of main variables the target sample. The variable *N_8k* is the number of 8-K filings during the transaction period, *Size_8k* is logarithm of 1 plus the total size of all 8-K filings during the transaction period, *Agmt_filing* is an indicator equal to 1 for timely filing of the merger agreement within 15 days since the entry into the agreement, *Relative_value* is transaction value divided by market capitalization, *N_days* is the number of days in the transaction period, *Cash_payment* is an indicator equal to 1 if the deal is financed by cash only, *Horizontal* is an indicator equal to 1 if the deal is between firms of the same industry, *Size* is logarithm of market capitalization, *Instown* is percentage of institutional ownership, *N_analysts* is the number of analysts following, *Return* is buy-and-hold stock return, *Volatility* standard deviation of daily stock return, *MTB* is market capitalization divided by total assets, *ROA* is income before extraordinary items divided by total assets, *Loss* is an indicator equal to 1 if net income is negative, and *Leverage* is total long-term debt divided by total assets.

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Table A4: Shareholder voting and disclosure: Alternative specifications

VARIABLES	(1) Agmt_tlness	(2) Ln_vol8k	(3) Ln_items	(4) Ln_exhibits	(5) N_8k	(6) Ln_8k
Vote	0.252***	0.122***	0.137***	0.181***	0.076***	0.117***
	(0.043)	(0.024)	(0.026)	(0.028)	(0.024)	(0.018)
Relative_value	0.094***	0.071***	0.110***	0.137***	0.102***	0.079***
	(0.029)	(0.023)	(0.030)	(0.031)	(0.026)	(0.021)
Ln_days	0.012	0.578***	0.662***	0.620***	0.796***	0.374***
	(0.066)	(0.028)	(0.039)	(0.047)	(0.035)	(0.022)
Cash_payment	-0.291***	-0.147***	-0.176***	-0.214***	-0.125***	-0.106***
	(0.080)	(0.026)	(0.027)	(0.038)	(0.037)	(0.023)
Horizontal	0.086**	0.064***	0.077***	0.062**	0.018	0.048**
	(0.041)	(0.015)	(0.023)	(0.024)	(0.025)	(0.020)
Size	-0.068***	0.050***	0.041***	0.072***	0.079***	0.029***
	(0.020)	(0.010)	(0.014)	(0.026)	(0.017)	(0.008)
Return	0.123**	-0.006	0.057	0.027	0.015	0.031
	(0.048)	(0.057)	(0.070)	(0.073)	(0.090)	(0.054)
Volatility	-2.978**	2.251**	2.691**	5.437***	2.334*	1.116
	(1.403)	(0.887)	(1.143)	(1.446)	(1.229)	(0.863)
Instown	0.299***	0.120**	0.263***	0.262***	0.121***	0.119***
	(0.090)	(0.052)	(0.052)	(0.088)	(0.045)	(0.042)
Ln_analysts	0.020	0.062*	0.076***	0.027	0.031	0.030
	(0.030)	(0.031)	(0.027)	(0.030)	(0.039)	(0.021)
MTB	0.005	-0.003	-0.004	-0.000	-0.015	0.005
	(0.014)	(0.005)	(0.008)	(0.015)	(0.010)	(0.005)
ROA	0.474	-0.420	-0.398	-0.618	-0.070	-0.104
	(0.372)	(0.316)	(0.384)	(0.437)	(0.363)	(0.280)
Loss	-0.039	0.055	0.077*	0.124**	0.134***	0.049
	(0.062)	(0.039)	(0.042)	(0.053)	(0.048)	(0.036)
Leverage	-0.100	0.052	0.116	0.168	0.232***	0.020
	(0.150)	(0.076)	(0.105)	(0.123)	(0.085)	(0.071)
Ln_8k_ybf						0.347***
						(0.016)
Observations	2,862	2,862	2,862	2,862	2,862	2,862
Adjusted R-squared	0.353	0.563	0.634	0.492		0.676
Pseudo R-squared					0.454	
Quarter-Year FE	yes	yes	yes	yes	yes	yes
Industry FE	yes	yes	yes	yes	yes	yes

This table presents regression results for the models examining the relationship between shareholder voting and 8-K disclosure using alternative specifications. Column (1) uses a measure of timeliness of the merger agreement disclosure, *Agmt_tlness*, defined as -1 times the logarithm of 1 plus (i) the number of days between the announcement and filing date if the agreement is filed within 15 days or (ii) 16 days if the agreement is not filed within 15 days. Columns (2), (3) and (4) use alternative 8-K disclosure measures: *Ln_vol8k*, logarithm of 1 plus the number of 8-K filings during the transaction period with at least one voluntary item, *Ln_items*, logarithm of 1 plus the number items in 8-K filings during the transaction period, and *Ln_exhibits*, logarithm of 1 plus the number of exhibits in 8-K filings during the transaction period. Column (5) uses Poisson pseudo-maximum-likelihood estimator for the count variable *N_8k*. Column (6) uses *Ln_8k*, logarithm of 1 plus the number of 8-K filings during the transaction period, as the dependent variable and includes *Ln_8k*, logarithm of 1 plus the number of 8-K filings during the the same period as the transaction period in the year before, to control for past disclosure. Robust standard errors clustered by industry are in parentheses. ***, **, and * denote statistical significance at 1%, 5% and 10% level, respectively.

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Table A5: Shareholder voting and disclosure: Entropy balancing

Before	Treatment:mean	variance	skewness	Control:mean	variance	skewness
Relative_value	0.838	0.522	3.089	0.203	0.155	6.766
Ln_days	5.003	0.233	0.372	4.816	0.253	0.278
Cash_payment	0.020	0.019	6.892	0.317	0.217	0.786
Horizontal	0.444	0.247	0.227	0.362	0.231	0.576
Size	6.759	3.676	0.214	8.125	3.773	0.000
Return	0.043	0.065	0.681	0.033	0.045	0.698
Volatility	0.029	0.000	1.790	0.023	0.000	2.152
Instown	0.485	0.082	0.028	0.577	0.069	-0.314
Ln_analysts	1.781	0.934	-0.414	2.266	0.777	-0.830
MTB	1.925	2.894	3.230	2.086	3.106	2.945
ROA	-0.002	0.002	-3.671	0.009	0.001	-5.082
Loss	0.206	0.164	1.455	0.111	0.099	2.471
Leverage	0.214	0.035	0.872	0.208	0.028	1.096

After	Treatment:mean	variance	skewness	Control:mean	variance	skewness
Relative_value	0.838	0.522	3.089	0.838	2.118	2.054
Ln_days	5.003	0.233	0.372	5.003	0.228	0.141
Cash_payment	0.020	0.019	6.892	0.020	0.020	6.830
Horizontal	0.444	0.247	0.227	0.444	0.247	0.227
Size	6.759	3.676	0.214	6.759	4.045	-0.236
Return	0.043	0.065	0.681	0.043	0.055	0.964
Volatility	0.029	0.000	1.790	0.029	0.000	1.452
Instown	0.485	0.082	0.028	0.485	0.086	0.131
Ln_analysts	1.781	0.934	-0.414	1.781	0.965	-0.446
MTB	1.925	2.894	3.230	1.925	3.736	3.345
ROA	-0.002	0.002	-3.671	-0.002	0.002	-4.110
Loss	0.206	0.164	1.455	0.206	0.164	1.455
Leverage	0.214	0.035	0.872	0.214	0.038	1.454

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Ln_8k	Size_8k	Ln_8k_rlt	Agmt_filing	Exp_synergies	E_forecasts
Vote	0.086***	0.608***	0.136***	0.147***	0.162***	0.055***
	(0.023)	(0.113)	(0.047)	(0.015)	(0.022)	(0.017)
Relative_value	0.113***	0.450***	0.122***	0.075***	0.029**	0.056***
	(0.029)	(0.122)	(0.045)	(0.015)	(0.012)	(0.019)
Ln_days	0.545***	1.019***	0.181***	-0.027	-0.005	0.046**
	(0.034)	(0.258)	(0.049)	(0.025)	(0.017)	(0.021)
Cash_payment	-0.033	-0.404	0.006	-0.011	-0.033	-0.097
	(0.074)	(0.446)	(0.106)	(0.024)	(0.042)	(0.070)
Horizontal	0.042**	0.194*	0.048	0.043**	0.006	-0.014
	(0.019)	(0.111)	(0.034)	(0.021)	(0.021)	(0.018)
Size	0.086***	0.200***	0.055***	0.002	0.023*	-0.000
	(0.011)	(0.052)	(0.010)	(0.008)	(0.012)	(0.009)
Return	-0.018	0.276	0.082	0.049	-0.002	0.094**
	(0.072)	(0.380)	(0.078)	(0.030)	(0.035)	(0.038)
Volatility	-0.047	6.549	1.787	1.489**	-0.033	-2.212**
	(1.306)	(8.180)	(1.793)	(0.689)	(0.782)	(0.974)
Instown	0.104	0.722*	0.018	0.035	-0.031	0.070
	(0.083)	(0.376)	(0.114)	(0.060)	(0.037)	(0.065)
Ln_analysts	0.019	0.113	0.018	-0.004	0.052***	0.024
	(0.034)	(0.169)	(0.028)	(0.016)	(0.016)	(0.016)
MTB	-0.013**	-0.076	-0.015	0.001	-0.029***	0.010
	(0.006)	(0.058)	(0.011)	(0.006)	(0.005)	(0.011)
ROA	-0.232	-2.437	1.037*	0.472	0.372*	-0.028
	(0.309)	(2.903)	(0.588)	(0.329)	(0.211)	(0.211)
Loss	0.091	0.481	0.107	0.035	0.045	-0.096***
	(0.061)	(0.328)	(0.070)	(0.037)	(0.039)	(0.030)
Leverage	0.172	0.472	0.221	0.036	-0.068	0.071
	(0.122)	(0.528)	(0.138)	(0.078)	(0.063)	(0.105)
Observations	2,862	2,862	2,862	2,862	2,862	2,862
Adjusted R-squared	0.664	0.477	0.307	0.226	0.310	0.154
Quarter-Year FE	yes	yes	yes	yes	yes	yes
Industry FE	yes	yes	yes	yes	yes	yes

This table presents comparisons of firm and deal characteristics before and after entropy balancing, and results of WLS estimation of models examining the relationship between shareholder voting and disclosure using weights from entropy balancing. Robust standard errors clustered by industry are in parentheses. ***, **, and * denote statistical significance at 1%, 5% and 10% level, respectively.

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Table A6: Shareholder voting and disclosure: Additional governance controls

VARIABLES	(1) Ln_8k	(2) Size_8k	(3) Ln_8k_rlt	(4) Agmt_filing	(5) Exp_synergies	(6) E_forecasts
Vote	0.057	0.351**	0.105*	0.090***	0.103***	0.056**
	(0.034)	(0.142)	(0.055)	(0.022)	(0.035)	(0.023)
Relative_value	0.084***	0.166	0.172***	0.055**	0.094***	0.024
	(0.030)	(0.119)	(0.060)	(0.025)	(0.026)	(0.034)
Ln_days	0.699***	1.023***	0.260***	0.035	0.003	0.058**
	(0.031)	(0.196)	(0.050)	(0.026)	(0.031)	(0.028)
Cash_payment	-0.105***	-0.382***	-0.183***	-0.146***	-0.150***	-0.080***
	(0.028)	(0.088)	(0.048)	(0.027)	(0.039)	(0.029)
Horizontal	0.026	0.081	0.023	0.057**	0.055*	0.006
	(0.030)	(0.189)	(0.061)	(0.027)	(0.028)	(0.019)
Size	0.017	-0.042	0.026	-0.030**	0.006	-0.047***
	(0.020)	(0.077)	(0.020)	(0.014)	(0.012)	(0.011)
Return	0.033	0.316	-0.094	0.033	0.052	0.101*
	(0.067)	(0.319)	(0.117)	(0.059)	(0.069)	(0.058)
Volatility	1.608	6.346	2.247	1.946	0.679	-0.824
	(1.661)	(11.733)	(2.095)	(1.211)	(1.081)	(1.403)
Instown	0.074	0.808**	0.181**	0.130***	0.012	0.143**
	(0.061)	(0.385)	(0.086)	(0.034)	(0.055)	(0.064)
Ln_analysts	0.080**	0.357*	0.002	-0.033	0.022	0.099***
	(0.038)	(0.196)	(0.043)	(0.026)	(0.028)	(0.031)
MTB	-0.004	-0.123	-0.011	0.017	-0.044***	-0.010
	(0.015)	(0.122)	(0.020)	(0.010)	(0.007)	(0.013)
ROA	-0.314	-2.674	0.294	-0.405	0.665	1.212**
	(0.549)	(4.518)	(1.372)	(0.283)	(0.777)	(0.503)
Loss	0.058	0.086	-0.054	-0.081	0.089*	-0.204***
	(0.055)	(0.419)	(0.074)	(0.049)	(0.046)	(0.051)
Leverage	0.119	-0.091	0.191	-0.116*	-0.036	-0.002
	(0.085)	(0.495)	(0.131)	(0.061)	(0.099)	(0.087)
Ind_directors	0.060	0.840**	-0.101	0.086	-0.072	0.050
	(0.086)	(0.356)	(0.152)	(0.132)	(0.077)	(0.078)
Duality	0.024	0.297	-0.120**	-0.014	-0.022	0.058*
	(0.025)	(0.202)	(0.058)	(0.032)	(0.050)	(0.031)
Observations	1,516	1,516	1,516	1,516	1,516	1,516
Adjusted R-squared	0.629	0.443	0.232	0.228	0.194	0.101
Quarter-Year FE	yes	yes	yes	yes	yes	yes
Industry FE	yes	yes	yes	yes	yes	yes

This table presents regression results for the models examining the relationship between shareholder voting and 8-K disclosure controlling for additional governance characteristics. *Ind_directors* is percentage of independent directors, and *Duality* is an indicator equal to 1 if the CEO is also the chairman of the board and 0 otherwise. Data used to construct these two variables are from BoardEx which begins in 1999, hence the sample is significantly reduced. Robust standard errors clustered by industry are in parentheses. ***, **, and * denote statistical significance at 1%, 5% and 10% level, respectively.

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Table A7: Shareholder voting and disclosure tone

VARIABLES	(1) Pct_pos8k	(2) Tone_8k
Vote	-0.012	-0.013
	(0.015)	(0.025)
Relative_value	-0.019	-0.047*
	(0.012)	(0.027)
Ln_days	-0.001	-0.121***
	(0.011)	(0.032)
Cash_payment	0.001	0.010
	(0.024)	(0.038)
Horizontal	-0.013	-0.015
	(0.011)	(0.026)
Size	0.002	0.018
	(0.011)	(0.013)
Return	-0.036	-0.118**
	(0.046)	(0.051)
Volatility	-1.734***	-3.645***
	(0.568)	(0.906)
Instown	-0.024	0.029
	(0.033)	(0.066)
Ln_analysts	0.024	0.006
	(0.017)	(0.024)
MTB	0.011	0.006
	(0.010)	(0.013)
ROA	0.299**	0.490*
	(0.139)	(0.284)
Loss	0.020	0.068**
	(0.021)	(0.034)
Leverage	-0.004	-0.056
	(0.037)	(0.059)
Observations	2,614	2,614
Adjusted R-squared	0.120	0.098
Quarter-Year FE	yes	yes
Industry FE	yes	yes

This table presents regression results for the models examining the relationship between shareholder voting and 8-K disclosure tone. *Pct_pos8k* is percentage of 8-K filings with positive tone measured as in Loughran and McDonald (2011), and *Tone_8k* is weighted average tone of all 8-K filings during the transaction period. Robust standard errors clustered by industry are in parentheses. ***, **, and * denote statistical significance at 1%, 5% and 10% level, respectively.

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Table A8: Shareholder voting and disclosure informativeness: 8-K filing level

VARIABLES	(1) Abs_car	(2) Abs_car	(3) Abs_car
Vote	0.116*	0.112	0.107
	(0.067)	(0.068)	(0.068)
Vote × Ln_items		0.118***	
		(0.038)	
Vote × Ln_exhibits			0.185***
			(0.037)
Observations	16,572	16,572	16,572
Adjusted R-squared	0.193	0.194	0.195
Controls	yes	yes	yes
Quarter-Year FE	yes	yes	yes
Industry FE	yes	yes	yes
Item FE	yes	yes	yes

This table presents regression results for the models examining the relationship between shareholder voting and 8-K disclosure informativeness. *Abs_car* is the absolute value of the cumulative abnormal return over 3 days (-1,1) around the 8-K filing. *Ln_items* is logarithm of 1 plus the number of items in the 8-K filing. *Ln_exhibits* is logarithm of 1 plus the number of exhibits in the 8-K filing. Robust standard errors clustered by industry are in parentheses. ***, **, and * denote statistical significance at 1%, 5% and 10% level, respectively.

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Table A9: Market reaction and deal outcomes

VARIABLES	(1) Votes_for	(2) Votes_for	(3) Votes_for	(4) Completed	(5) Completed	(6) Completed
BHAR30	5.158**			0.081*		
	(1.911)			(0.041)		
BHAR60		2.332*			0.089***	
		(1.188)			(0.030)	
BHAR90			2.847***			0.077***
			(0.723)			(0.029)
Observations	832	832	832	2,818	2,818	2,818
Adjusted R-squared	0.062	0.054	0.059	0.024	0.027	0.028
Controls	yes	yes	yes	yes	yes	yes
Quarter-Year FE	yes	yes	yes	yes	yes	yes
Industry FE	yes	yes	yes	yes	yes	yes

This table presents regression results for the models examining the relationship between the market reaction and deal outcomes. The dependent variable in columns (1)-(3) is *Votes_for*, the percentage of votes in favor of the deal over the total vote cast (in %), in columns (4)-(6) *Completed*, an indicator equal to 1 if the deal is completed and 0 if withdrawn. *BHAR30/60/90* is the buy-and-hold abnormal return from one day before to 30/60/90 days after the announcement date calculated using the market-adjusted model. Robust standard errors clustered by industry are in parentheses. ***, **, and * denote statistical significance at 1%, 5% and 10% level, respectively.

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Table A10: Continuity of control variables

	Relative_value	Ln_days	Horizontal	Size	Return	Volatility	Instown	Ln_analysts	MTB	ROA	Loss	Leverage
Bandwidth	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
Estimate	0.015	-0.023	-0.283	0.022	0.020	0.002	-0.066	0.115	0.663	0.003	0.088	-0.062
p-value	0.674	0.586	0.323	0.769	0.763	0.867	0.707	0.628	0.384	0.266	0.870	0.865
N	295	295	295	295	295	295	295	295	295	295	295	295
Bandwidth	0.052	0.058	0.046	0.053	0.057	0.075	0.061	0.060	0.084	0.061	0.040	0.067
Estimate	0.015	-0.151	-0.185	0.117	0.037	0.001	-0.123	0.093	0.265	0.018	-0.121	-0.033
p-value	0.651	0.319	0.607	0.792	0.875	0.937	0.372	0.784	0.936	0.250	0.451	0.577
N	128	149	112	131	143	211	160	158	233	158	94	186

This table shows continuity of control variables. RD estimates are obtained using a fixed bandwidth of 10% or data-driven bandwidths proposed by Calonico et al. (2014). In both cases, p-values are constructed using bias-correction with robust standard errors as derived in Calonico et al. (2014). ***, **, and * denote statistical significance at 1%, 5% and 10% level, respectively.

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A.2 Data Collection Process

A.2.1 8-K parsing

We develop a set of Python scripts to automatically parse, process and retrieve 8-K filings from EDGAR database. Our algorithm consists of the following two steps: (a) download Edgar indexes and crawl 8-K header information and (b) construct textual variables based on 8-K main reports.

Download Edgar indexes and crawl 8-K header information

First, we download all quarterly indexes from EDGAR for the period 1993Q1-2020Q4 using the *python-edgar* package.[1] The EDGAR indexes are publicly available documents issued by EDGAR to facilitate automated crawling. The EDGAR indexes contain the following information for each filing: company name, form type, central index key (CIK), date filed, file name and filing folder path.[2] After downloading all quarterly EDGAR indexes, we keep EDGAR filings that satisfy all the following conditions: (a) form type being 8-K (b) filed by a company that is either an acquirer or a target in an M&A deal recorded in the SDC database and (c) filing date being within a time period that begins from 7 days before the announcement date and ends on the close date, or within the same time period in one year before the deal. For example, if SDC records an M&A deal between the acquirer A and the target T, which is announced on 2015-3-26 and completed/withdrawn on 2015-8-20. Then we download all 8-K filings of A and T that are filed between 2015-3-19 and 2015-8-20, and between 2014-3-19 and 2014-8-20. We then obtain the url of the *filing folder* webpage[3] for each of the filtered filings.

Second, we extract (a) the identification information and (b) the url of the 8-K main report from the *filing folder* webpage for each of the 8-K filings. The identification information for each 8-K filing includes accession number, cik, company name, reporting period, filing date, 8-K items, sic, fiscal year end, state of incorporation, zip code, irs, film number, public document count, accepted timestamp, number of exhibits and number of graphs, which are structured data and can be used directly in statistical analysis. The purpose of crawling the url of the main report is to use the urls to download the main reports. Apart from the urls of the 8-K main reports, we also manually collect the urls of the M&A announcement press releases, merger agreements and transcripts

[1] Python-edgar package documentation available at https://github.com/edouardswiac/python-edgar. All quarterly EDGAR indexes are downloaded as of January 12 of 2021.

[2] See https://www.sec.gov/os/accessing-edgar-data.

[3] One example of filing folder webpage is available at https://www.sec.gov/Archives/edgar/data/320193/000119312521237787/0001193125-21-237787-index.htm.

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of conference calls, which are sometimes attached to the 8-K filings as exhibits.[4]

Construction of textual variables

We construct textual variables based on main 8-K reports and announcement press releases. First, we read the document directly from the EDGAR website using the urls obtained in the last step. Then we clean the HTML tags (if any) by the following procedure. (1) Delete nondisplay section identified by the HTML tag " display:none." (2) Delete all tables that contains more than 4 numbers. (3) Delete all HTML tags using *beautiful soup* package.[5] Second, we examine the following textual attributes using the cleaned texts.

- Post-merger earnings forecasts in press releases

  We follow Amel-Zadeh and Meeks (2019) to check whether firms provide post-merger earnings forecasts in the announcement press releases. Specifically, if in the announcement press release, the acquirer firm mentions (earnings OR EPS OR income OR profit) AND (accretive OR accretion OR additive OR add OR positive OR increase OR contribute OR dilutive OR dilution OR decline OR negative OR decrease OR neutral OR impact), then we set *e_forecasts* to 1, and 0 otherwise.

- Expected synergy information in press releases

  We search if firms mention a synergy-related word in the announcement press releases. To do this, we create a word list that includes the following synergy-related words: *synergy*, *synergies*, *cost saving(s)*.

We also identify the 8-Ks that are related to the M&A deals by searching the counter-party's name in the main 8-K report. If the main 8-K report contains the counter-party's name then this 8-K is labeled as a related 8-K.

A.2.2 Voting requirement and shares to be issued

We manually collect voting requirement data from EDGAR. We search the (variations of) keyword "approval" in all M&A related filings (Press release, Form 8-K, 425, S-4, SC

[4]In case that the press releases, merger agreements and conference calls are not attached to the 8-Ks, we extend our manual search for the three documents to other forms filed by the acquirers such as Form 425, S-4, SC 13D, 10-Q and 10-K around the transaction period.

[5]Beautiful soup package documentation available at https://www.crummy.com/software/BeautifulSoup/bs4/doc/

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13D, 10-Q and 10-K filed by acquirers around the transaction period) and read whether the deal requires the shareholder approval for the acquirer.[6]

For the deals that requires acquirer shareholder voting, we also collect the voting results from 8-K (Item 5.07 Submission of Matters to a Vote of Security Holders), 10-Q or 10-K (Item 4. Submission of Matters to a Vote of Security Holders) filed near the transaction period. The voting results present the number of votes for, against the proposal, as well as the number of votes abstained and non-votes in many cases.[7]

In addition, we manually collect the number of shares the acquirer plan to issue to finance the merger mainly from Form S-4 filed by acquirers during the transaction period.[8]

[6]For instance, one 8-K (https://www.sec.gov/Archives/edgar/data/1141107/000095014407008785/g09627e8vk.htm) states that "the Merger is subject to the *approval* of the shareholders of both ARRIS and C-COR, as well as the receipt of all regulatory approvals, including clearance under the Hart-Scott-Rodino Act." (emphasis added) We deem a voting requirement is triggered for the acquirer if any filings explicitly specify so.

[7]An example of voting results is available at https://www.sec.gov/Archives/edgar/data/800240/000119312513288066/d566948d8k.htm. Some voting results do not show the number of votes abstained or non-votes.

[8]An example of the S-4 containing the number of shares to be issued is available at https://www.sec.gov/Archives/edgar/data/716646/000095013508007887/b73137s4sv4.htm.

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