

The Distribution of Voting Rights to Shareholders

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February 2, 2021

This is the first comprehensive study of the distribution of voting rights to shareholders. Only those owning stock on the record date may vote. Firms, however, reveal that date after the fact 91% of the time. With controversial votes, firms are more likely to do the opposite, and this is associated with a lower passage rate for shareholder-initiated proposals. The NYSE sells non-public record-date information to select investors. When stocks go ex vote, prices decline, suggesting that investors buy marginal votes. When stocks go ex vote with controversial votes, prices decline markedly and trading volume surges immediately thereafter.

(*JEL* G14, G30, G35)

Keywords: Shareholder voting, ex day, record date, corporate governance.

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This is the first comprehensive study of the distribution of voting rights to shareholders. The neglect of how investors are notified of the voting record date and what happens when stocks go from cum vote to ex vote is surprising on several accounts. First, the right to vote is one of only three distributions made to shareholders. The other two distributions, cash dividends and rights offers, have been studied for years, with well in excess of 100 papers studying ex day changes with cash dividends alone.¹ Moreover, the most common of the three distributions for most firms is the right to vote. Finally, voting is central to how shareholders control agency costs and influence key corporate decisions.² It would be surprising if an integral part of this process, the distribution of voting rights to shareholders, is as unimportant as its neglect in the academic literature might suggest.

In this study of over 100,000 distributions of voting rights to shareholders, we find a wide array of evidence that firms and stock exchanges change when they notify investors of the voting record date based on the proposals involved. Trading volume is higher than normal both before and immediately after the record date. Stock prices decline significantly when they go from cum vote to ex vote. These changes in notification, trading volume, and stock prices are correlated both with how controversial votes are and how they ultimately turn out. In summary, our highest-level finding is that distribution of voting rights to shareholders matters.

We now summarize in more detail our major empirical findings and explain their importance.

First, we find that disclosure of the voting record date is correlated with the type of proposal and whether it ultimately passes. Only those who own stock on the record date are eligible to vote. Thus, in order to become a shareholder of record and

¹ Elton et al (2003). Elton and Gruber (1970) were the first to study stock price changes with cash dividends. Dolley (1934), in an important precursor to the modern event study methodology, was the first to study what happens when stocks go ex rights.

² Yermack (2010) reviews the role shareholder voting plays with corporate governance in general. Studies of the impact of shareholder voting on specific corporate decisions include: Li, Liu, and Wu (2018) (mergers and acquisitions); Holderness (2018) (stock issuances); Fos, Li, and Tsoutsoura (2018) (CEO turnover); Cai and Walkling (2011) (executive compensation).

have the right to vote at a forthcoming meeting, an investor needs to purchase stock before the voting record date while it is still cum vote. With 91% of the votes, however, firms announce the record date after that date has passed. Consequently, in contrast to distributions of cash dividends and rights offers, a significant fraction of shareholders, including some sophisticated investors, are unaware that a distribution of votes has taken place. With controversial votes, the record date is more likely to be announced before it occurs. This change in timing is associated with a significant decline in the passage rate for shareholder-initiated proposals.

These findings identify a new avenue to influence the outcome of shareholder voting. Li and Yermack (2016) document that managers move annual shareholder meetings to be a greater distance from corporate headquarters to discourage scrutiny by shareholders when the managers have private, adverse information about future firm performance. Bach and Metzger (2019) show how firms use access to precise information about preliminary voting results to shape voting results in their favor. Bebchuk and Kamar (2010) document that management often bundle proposals for staggered boards, which shareholders are likely to oppose, with proposals for mergers, which shareholders are likely to support. Dimitrov and Jain (2001) and Baginski et al (2014) report that firms are more likely to release positive news as opposed to negative news when shareholders are voting. We find that when the voting record date is announced is correlated with changes in stock prices, trading volume, the closeness of votes, and the passage rate of proposals. The existing literature, to the extent it considers the issue, assumes that release of the voting record date does not vary and does not matter.

Two recent working papers, Levit, Malenko, and Maug (2020a, 2020b), study models of shareholder governance. In these models, shareholders trade while a stock is still cum vote and that this can affect voting outcomes. Our evidence confirms that such trading often occurs, especially before controversial votes. At the same time, our evidence also shows that not all shareholders are equally informed about the record date. This factor has not (to the best of our knowledge) been considered in the theoretical literature. Trading between informed and uninformed

investors around the voting record date is likely to have significant effects of voting dynamics.

Second, the New York Stock Exchange (“NYSE”) requires that firms report forthcoming voting record dates as part of its “self-regulation” initiative. The Exchange then sells this information to investors, typically before the record date and before the public learns the date. These private sales of non-public information, which include other potentially valuable information, are studied here for the first time.

If knowledge of a voting record date is material information, these sales would seem to conflict with a fundamental principle of federal securities laws, namely that all investors should have equal access to material information. An accepted definition of material information is information that causes some people to change their behavior. We thus investigate whether stock trading volume and prices change around the voting record date. If they do, it would signify that investors change their behavior in response to the setting of a voting record date and that knowledge of a voting record date can be material information.

Our third key contribution is to document broad evidence of vote trading in the spot market around the record day. Trading volume is higher than normal before stocks go ex vote. It then declines around the record date itself, apparently because of uncertainties on when trades clear and sellers thus lose the right to vote. Once stocks have clearly gone ex vote, sometimes there is an immediate surge in trading even though the outcome of the vote has yet to be determined. This trading activity is most pronounced when the forthcoming vote is likely to be contentious. These findings raise the possibility that some voting shareholders may be motivated more by securing private benefits than by increasing firm value, a scenario which has yet to be addressed in the literature.

These findings stand in contrast to the one paper that documents trading volume when stocks go ex vote, Christoffersen et al (2007). They do not disaggregate their sample into those observations where the marginal vote is likely to matter. As

a result, they “find no sign of vote trading in the spot market.”³ In contrast, once we disaggregate distributions by whether they are likely to be contentious, we find considerable evidence of vote trading in the spot market. This is one of many instances where we find it is important to disaggregate distributions of voting rights to shareholders.

Finally, in a seminal paper that was one of the first to question the then-conventional wisdom that shareholder voting was so ineffective that it should be abolished, Manne (1962) called for a comprehensive study to quantify what happens to stock prices when they go ex vote. Surprisingly (especially given the many papers documenting what happens to stock prices when they go ex dividend), ours is the first paper to conduct such a study. On average stock prices decline by nine basis points when they go ex vote but considerably more with votes that are expected to be close and impact firm value. For example, the ex day decline averages 66 basis points when proposals by dissident shareholders are involved. We identify instances when stock prices decline by more than 5% when they go ex vote. We interpret these declines as reflecting activist investors accumulating marginal votes for the next shareholders’ meeting.

The paper is organized as follows. We start by studying two recent distributions of voting rights that involved contentious issues for shareholders to decide. These two cases reveal several novel issues that can arise when voting rights are distributed to shareholders, and they motivate many of our subsequent empirical analyses. We also summarize the limited literature that addresses the distribution of votes to shareholders. We then turn to our empirical investigations which involve more than 100,000 distributions of voting rights between 1996 and 2018 (inclusive). We first investigate how and when investors are notified by firms and stock exchanges of the voting record date. Next, we document what happens to trading volume and stock prices when stocks go from cum vote to ex vote. Lastly, we discuss the implications of our empirical findings for influencing the outcome of shareholder

³ Christoffersen et al (2007) p. 2927.

voting, the price of a marginal vote, and the underlying dynamics of corporate voting. In all of these areas, we raise policy questions and identify promising avenues for future research.

I. Distributions of Two Contentious Votes and Literature Review

Because to date there have been no systematic studies of the distribution of votes to shareholders, to identify issues for our empirical investigations we start by studying the distributions of two contentious votes, one involving a proxy contest at DuPont in 2015 and the other a going-private proposal at AmTrust in 2018. We then discuss what, if anything, the existing literature has to say about the issues identified by these two cases.

A. DuPont Proxy Contest

In 2015 Nelson Peltz and three colleagues from Trian Fund Management ran for the 12-person board at the DuPont Corporation, the fourth largest chemical company in the world at the time. DuPont's management strenuously opposed their election. During this proxy contest, Trian spent \$8 million with 175 people contacting shareholders, while DuPont spent \$15 million with 200 people contacting shareholders. Even small retail shareholders were personally contacted by the opposing parties in what quickly became an intense battle for shareholder support.

On May 13, 2015 DuPont announced that all four of Trian's nominees had been defeated as had the proposal to repeal recent changes to DuPont's bylaws. Nelson Peltz himself received 46% of the votes cast. If any of DuPont's three largest shareholders had changed their vote, Peltz would have been elected (although not his colleagues). Large institutional shareholders voted differently.⁴ There was speculation in the financial press that small retail investors, who held about a third of DuPont's stock, voted heavily for management.⁵

Key events as well as the trading volume and stock returns around the distribution of the votes for this proxy contest are reported in **Table 1**. There are

⁴ The News Journal, September 2, 2015, "Large investor vote varied in DuPont proxy war."

⁵ Wall Street Journal, May 7, 2015, "DuPont's Swing Voter: The Small Investor."

several initially perplexing aspects on the timing of these events. Most notably, the initial public announcement of the March 17 voting record date came through a proxy filed on March 23. This retroactive announcement would seem to have precluded investors from purchasing additional shares to influence the outcome of the vote, so there should have been no change in trading volume or stock prices around the already-passed voting record date. To the contrary, there were significant changes in both. Moreover, many of these changes occurred not on the day academic research generally identifies as the effective ex vote day (March 13), which is two trading days before the record date to give stock trades time to clear (more on this timing below), but over the following two trading days.

The NYSE, where DuPont was listed at the time, requires that firms notify the Exchange at least ten days before any distribution to shareholders. DuPont so notified the Exchange, but because this is a self-regulatory requirement, the Exchange is not obligated to release this information. The Exchange, however, sells this information through its Corporate Actions Reports (the NYSE Group Proxy Meeting File), a subscription-based service which has been criticized for its high prices.⁶ On March 6, the Exchange notified its subscribers of the March 17 record for DuPont, but it did not notify the public at large. Table 1 shows that daily trading volume in DuPont stock doubled on the date the Exchange notified its subscribers (March 6) and remained abnormally high through the record date. DuPont's stock returns were also abnormally high for several days starting on March 6.

The record date for determining who could vote was set by DuPont to be March 17. That is, only those who held title to DuPont stock at the close of exchange trading on March 17 would be eligible to vote on Trian's proposals. Stock trades, however, do not clear instantaneously. At the time, the SEC had a T+3 rule (it has

⁶ "Is NYSE's Corporate Actions Monopoly Broken by 'Disruptive Data Vendor?'" Forbes, September 18, 2017. Exchange Data International, a London-based vendor, has launched a service that will cost less than half of what the NYSE charges. It is not immediately clear how such competitors to the NYSE will obtain voting record date information, at least before it is announced in a proxy. Firms release this information to the NYSE, and we presume that the information is then proprietary to the NYSE. Resale of this information by third parties could raise legal concerns.

since moved to a T+2 rule), which requires that all stock trades clear within three trading days. Thus, someone buying DuPont stock on March 12 (three trading days before the record date) and holding the stock until after the record date would have effectively been guaranteed the right to vote in the proxy contest. This is why academic research typically designates the effective day a stock goes ex vote to be two trading days before the record date, or in this case March 13. But could someone who sold DuPont stock on March 13 still have voted on Trian's proposals? Practitioners tell us and academic research confirms that how quickly trades clear, that is how quickly title passes, varies with a number of factors involving the seller, the buyer, the firm, and market conditions at the time.⁷ Accordingly, it is hard to predict exactly when a given trade will clear other than it will clear within three trading days. Consequently, someone who sold DuPont stock on March 13 could have lost the right to vote if the sale happened to clear before the close of trading on the record date of March 17. We believe this uncertainty, combined with the fact that stock exchanges do not set explicit an ex day with the distribution of votes, explains why the reaction for both the trading volume and stock returns occurs not on March 13 but over the following two days.

DuPont's raw stock price declined by \$5.82 (untabulated) or approximately 8% (adjusted for market changes) over the day before the record day and the record day. (For most empirical analyses, we use a three-day window starting at Day -2. DuPont's abnormal return for this window was -7.46%.) Because the cash flows would be the same whether someone bought DuPont stock cum vote or ex vote, the ex day stock price decline represents the price investors were willing to pay for an additional or marginal vote for the shareholders' meeting which would determine the fate of Trian's proposals.

Trading volume around the ex day is also notable. The increase in trading volume before DuPont's stock went ex vote seems to reflect investors accumulating stock to influence the outcome of the proxy contest. The increase in trading volume

⁷ Angel (1998), Hasbrouck et al (1993).

immediately after DuPont's stock went ex vote is more challenging to understand. If both sides believed that their approach would maximize firm value, it is unclear why trading volume would increase before the outcome of the vote was determined, which in this case would be weeks later at the annual meeting.

In contrast to the pronounced changes around the ex vote day, there were few changes in either the stock returns or trading volume when DuPont filed a (definitive) proxy statement on March 23, which was the first announcement of the record date to the public at large.⁸ The announcement of the outcome of the vote on May 13 was associated with an abnormal return of almost -7% and a significant increase in trading volume (untabulated).⁹

B. AmTrust Going Private Vote

In 2018 the chief executive officer and majority shareholder of AmTrust Financial Services ("AmTrust"), a provider of insurance services in the specialty property and casualty markets, proposed to take his company private. This proposal needed the approval of a majority of the minority shareholders, many of whom complained that the going-private offer was too low.

On April 9 AmTrust's management filed a preliminary proxy detailing its going-private proposal with an offer price of \$13.50 (**Table 2**). As is the case with preliminary proxies, the record date for determining which shareholders could vote on the going-private proposal was left blank.

On April 26 the activist investor Carl Icahn secretly began to accumulate AmTrust stock. By May 7 he had accumulated 5% of the stock. On May 17 Icahn

⁸ There was no mention of a voting record date in a DuPont press release on January 8; a DuPont letter to shareholders on February 17; a Trian press release on February 5; or in a Trian letter to shareholders on February 11.

⁹ After his defeat, Peltz predicted that DuPont would continue to miss its own performance targets. This turned out to be the case. Ellen Kullman resigned as CEO in November 2015. The following month DuPont agreed to merge with Dow. The merger resulted in the separation of the major businesses, something that Peltz had originally sought.

revealed this activity by filing an initial 13D, at which time he owned 9.4% of AmTrust's stock (or 17% of the stock needed to approve the going private proposal).

AmTrust's board, however, had set the voting record date to be April 5 but did not publicly announce that date until it filed a definitive proxy on May 4. When the company filed its preliminary proxy on April 9 it left the record date blank even though the company had already set the record date of April 5 because Delaware law (where it was incorporated) prohibits boards from setting record dates retroactively.¹⁰ Consequently, all of Icahn's stock purchases occurred after the record date and thus could not be voted on the going-private proposal. Icahn filed a lawsuit against AmTrust's management alleging that he and the other "plaintiffs bought many of its shares after April 6 but before May 4, 2018, thus purchasing shares that they could not have known lacked voting rights."¹¹ AmTrust's management responded that it had "complied with all applicable rules in setting and disclosing the record date."¹²

The shareholders' meeting at AmTrust was postponed, but the voting record date remained April 5. Management increased the offer price to \$14.75. Eventually, the going-private proposal received the support of 67.4% of the minority shareholders plus Icahn, who had no votes to cast in the matter because all of his stock was purchased ex vote. The going-private transaction closed in November 2018.

C. Literature Review

There are no existing papers that focus on the distribution of votes to shareholders and only a handful of papers that touch in passing on some of the issues raised by the two preceding cases. Consider what is perhaps the most obvious question: What happens to stock prices when they go from cum vote to ex vote?

¹⁰ 8 Del. C. 1953, §213.

¹¹ Icahn et al v. Barry D. Zyskind et al, Verified Complaint filed on May 21, 2018 in the Court of Chancery of the State of Delaware ¶28.

¹² Wall Street Journal, June 5, 2018, "AmTrust delays Going-Private Vote—Firm to meet with Icahn as count shows backing from minority holders falls short."

Elton et al (2003) report there are over 100 papers studying what happens to stock prices when they go ex with cash dividends. But there are no papers focusing on what happens to stock prices with the other major distribution to shareholders, votes. We are aware of only three papers that purport to findings on what happens to stock prices when they go ex vote, albeit the focus of all three papers is on proxy contests and not on the distribution of votes per se: Dodd and Warner (1983), Gosh et al (1992), and Huang (2005). Unfortunately, all three papers measure stock price changes immediately after the voting record day. By this day, however, the stocks had already been ex vote for several days, so the papers are not measuring the price change as a stock goes from cum vote to ex vote.¹³

In contrast, the literature that measures what happens to stock prices when they go ex cash dividend understands that the relevant date is not the record date but the ex dividend date. The two are never the same because of the time needed for stock trades to clear (with the difference varying with the settlement rules at the time). To cite one example, during the proxy contest DuPont announced a cash dividend with a record date of May 15 and an effective ex date of May 13. Thus, to measure what happens when DuPont's stock went ex dividend, that is to measure the after-tax value of DuPont's dividend, one would measure the stock price change from May 12 (when it was cum vote) to May 13 (when it started to trade ex vote). The change in stock price from the record date of May 15 to the next trading day of May 18 does not reflect the value of the dividend. Research on cash dividends has

¹³ Although Dodd and Warner (1983) focus their interpretation on the stock price change following the voting record day, among the three papers they are the only one to report returns for the period before the record day. They report the cumulative returns for Days -4 through 0 (inclusive, where Day 0 is the voting record day), although not the returns for the individual days within that window. Their sampling period was July 1, 1962 to January 31, 1978. From 1952 until 1968, financial markets in the United States operated under a T+4 rule. In 1968, markets switched to a T+5 rule. Approximately half of Dodd and Warner's 89 observations occurred under the first settlement regime and approximately half under the second regime. Thus, the stocks they were studying effectively went ex vote (or started going ex vote) not on Day +1, as they assume, but either on Day -4 or Day -3 depending on the year. Moreover, they divide their sample by whether the record date precedes or follows the announcement of the proxy contest. They do not consider whether the record date precedes or follows the announcement of the record date itself, be it through the filing of a proxy or a stock exchange data subscription service (if such a service existed at the time).

been facilitated by the fact that stock exchanges set an effective ex day with cash dividends.¹⁴ Exchanges do not do this with voting rights. As Table 1 shows with DuPont, this can create uncertainty on when stocks go ex vote. Therefore, to capture the full value of the vote, an event window of more than one day is needed. We use a three-day window beginning two days before the record day.

Even though voting is central to how shareholders influence corporate policy and control agency costs, the literature to date has also paid little attention to how investors learn the record date and thus know whether any stock they purchase will have voting rights for the next shareholders' meeting. No paper, to the best of our knowledge, has identified that the NYSE sells non-public information including the voting record date to select investors, typically (as we shall see) before the date occurs and before the public at large learns of the date through the filing of a proxy. DuPont suggests that these Exchange information sales can impact stock prices and trading volume.

Two papers, Young et al (1993) and Bethel et al (2009), address the relation between the proxy filing date, which is how the public at large learns of the voting record date, and the date itself. Both papers assert without empirical support that proxies are always filed after the record date. Our evidence will show this is not the case. We will analyze whether the timing of these proxy filings is associated with changes in stock prices, trading volume, and voting outcomes.

Some commentators claim that the experience at AmTrust, where management failed to report the voting record date in a preliminary proxy even though the board by this time had set the already-passed record date, “happens all the time—record date playing.”¹⁵ We will investigate whether this in fact is the case.

¹⁴ NYSE Rule 204. A further indication of the problems that can arise with the uncertainty over when trades clear is the fact that the NYSE has special listing rules governing cash dividends that are for more than 25% of a firm's stock price. Nasdaq also establishes an explicit ex-dividend date soon after it is notified by a firm of the dividend record date. Such notification may be no later than ten calendar days prior to the record date. Nasdaq Listing Rule 5250(e)(6).

¹⁵ Bloomberg News Service, May 22, 2018, “Carl Icahn Didn't Buy Some Shares on Time,” (quoting Steven Davidoff Solomon, a University of California, Berkeley law professor and former securities attorney).

The only paper to document what happens to trading volume when stocks go ex vote is Christoffersen's et al (2007) study of using borrowed stock to influence shareholder votes. They fail, however, to disaggregate votes and as a consequence find no change in aggregate stock trading when stocks go ex vote. This leads them to conclude that there is not a market for votes in what they call the spot market. When we disaggregate, we find that with some types of votes there is an active market for votes before stocks go ex vote. DuPont is an example.

The working assumption in the literature is that trading volume will increase only when the outcome of a controversial vote is revealed, which will in most cases be at the annual meeting (Li et al 2019). While this did happen with DuPont (untabulated), Table 1 shows that there can also be a surge in trading immediately after a stock has gone ex vote. This raises the interesting question of why some shareholders sell as soon as they have voted but before the outcome of the vote has been determined.

In general, we have been struck by the widespread attention paid in the literature to one distribution to shareholders, namely cash dividends, compared with the near-total lack of attention paid to the other major distribution to shareholders, voting rights. Both can be important. For example, during 2015, DuPont paid cash dividends totaling \$1.72, while the ex vote day decline in stock price, the price of a marginal vote for the shareholder's meeting to decide on Trian's proposals, was \$5.82.

Table 3, which incorporates some of our forthcoming findings, highlights similarities and differences between the distribution of cash dividends versus the distribution of votes. A partial explanation for the neglect in the literature of the distribution of votes might be that although most firms do not pay cash dividends, any cash dividend is by definition a significant event. In contrast, while all firms distribute votes at least once a year, many of these distributions are insignificant. This would be the case when the matters for shareholders to vote upon will not impact firm value; or if they will impact firm value they will not be close votes; or if they will both impact firm value and be close they will be decided by the votes of

buy-and-hold shareholders, not activist investors. But there will be times, as with DuPont and possibly AmTrust, when activist shareholders accumulate additional or marginal votes while a stock is still cum vote to garner additional influence over an important forthcoming vote. Our goal in this paper is to determine how often this happens and what the effects are.

II. Data

Public corporations must file a public proxy statement with the Securities and Exchange Commission before holding a shareholder vote. The final or definitive version of that proxy statement must identify the record date for determining who may vote on the proposals contained in the proxy statement. Only those who hold title to the stock on the close of trading on the record date may vote on the proposals in the proxy statement.

To investigate what happens when voting rights are distributed to shareholders, we started by collecting all proxy statements (preliminary and definitive) filed on the SEC's EDGAR electronic portal between 1996 and 2018 (inclusive). We then used a script search to identify those proxy filings containing all of the filing, record, and shareholder meeting dates. Using this approach, we were able to identify 114,368 proxy record dates. In about 7% of the firm-years, a firm had more than one shareholder meeting; we include proxies from these special meetings in our database.

We merged this sample with the Center for Research in Security Prices's (CRSP) database to obtain trading volume and stock prices and for 101,141 proxy voting record dates involving 12,549 different corporations. Some of our analyses focus on trading activity and stock prices as stocks go from cum vote to ex vote. We measure trading activity as the daily trading volume in a company's stock divided by the number of shares outstanding. We measure stock returns using the Fama-French three-factor model, which is estimated from 360 days through 60 days before the record date.

III. Empirical Findings

In this section we present the empirical findings using our full sample. We first investigate how and when investors are notified of the voting record date. We then examine what happens to trading volume and stock prices when stocks go from cum vote to ex vote.

A. Notification of the Voting Record Date to Investors

One might think that all investors would learn of a voting record date at the same time and before that date occurs. Cash dividends, the other major distribution to shareholders, are announced to the public at large well before the record date. This gives investors the opportunity to trade to either secure or avoid cash dividends (perhaps for tax reasons). Similarly, pre-announcement of the record date for the distribution of votes would give investors the opportunity to buy more shares if they want additional influence over a forthcoming vote, or if they want to sell shares because they lack the expertise needed to make an informed decision. Moreover, equal access for all investors to material information is a cornerstone of federal securities laws. Regulation Fair Disclosure (Reg FD), for example, prevents public corporations from selectively disclosing material information to market professionals and favored shareholders. Similarly, long-standing prohibitions on insider trading can broadly be viewed as an effort to prevent individuals from trading on information that others lack. In fact, neither pre-release of the record date nor release of the record date to all investors at the same time is typical with shareholder voting.

Proxy Dates. Under federal securities law, firms must file a definitive proxy before each shareholder vote, and that proxy must identify the record date for determining which shareholders may vote on the proposals contained in the proxy. This is the first identification of the voting record date to a firm's shareholders and the public at large. We randomly checked for whether firms announce voting record dates in press releases (as they do with cash dividends) or other filings but found no evidence along these lines. To be sure, firms sometimes file preliminary proxy statements, but, as with AmTrust, these do not identify the voting record date.

Panel A of **Table 4** reports that 91% of all of our sample proxies that initially identify the voting record date are filed after that date.¹⁶ Thus, claims that definitive proxies are always filed after the record date are incorrect (Young et al 1993, Bethel et al 2009). The question becomes whether the timing of the filing of proxies is random or strategic and whether the timing of the filing is correlated with outcomes of interest, such as the stock price reaction when stocks go ex vote or whether the proposals ultimately pass.

One possibility is that firms simply randomly decide whether to file the (definitive) proxy statement before or after the record date. If this were the case, approximately half of all proxies would be filed before the record date and half would be filed after the record date. Given the lop-sided data in Panel A of Table 4, we can easily reject this random hypothesis.

Another possibility is that firms put little thought into the initial choice between filing a proxy before or after the record date, perhaps reflecting the decision of a low-level employee, but once that choice is made firms stay with it over time. To address this path-dependency argument, we divide our firms with at least two proxy statements into three categories: firms that always file before the record date; firms that always file after the record date; and firms that have done both. We find that 42% of these firms have both early and late filings. Less than 1% of the firms always notify shareholders of the record date before it occurs (untabulated).

Some readers have suggested that notification of the voting record date through the filing of a proxy might be superfluous if investors can accurately predict future

¹⁶ For most of our sampling period, investors needed more than two days' notice before the record date to be assured that any stock they purchased would clear and could thus be voted in the forthcoming meeting. Notification three trading days before the record date would have been sufficient to achieve this if the notification came sufficiently early in the day. Throughout the paper we classify proxies filed at least four trading days before the record date as being filed before the record date with all other proxies classified as being filed after the record date. We also adjust for the movement to a T+2 clearance for stock trades beginning on September 5, 2017. With these observations, we classify proxy statements made at least three trading days before the record date as being filed before the record date with all other proxies being classified as being filed after the record date. We use similar rules when classifying NYSE notifications of the record date to subscribers of its data services.

record dates from past record dates. For almost 20% of our firm-year observations, there is more than one shareholder vote in a given year. In these cases, which tend to address important issues at special shareholder meetings, there is no past record date to predict a future record date. For the remainder of our observations, which are annual meetings, seldom is a record date exactly one year after the previous record date. On average there is a difference of 24 days (plus or minus 365 days) in the voting record date from one year to the next. Thus, it does not appear that investors can on a regular basis accurately predict future records dates from past record dates.

In Panel B of Table 4 we divide our sample into regular filings and non-regular filings. Non-regular filings include shareholder votes on mergers, special meetings, proxy contests, and shareholder-initiated (as opposed to management-initiated) proposals. Both DuPont and AmTrust were non-regular filings. Almost 6% of all proxy filings involve non-regular votes; 35% of our firms have at least one non-regular filing. Because non-regular shareholder votes can offer valuable insights, we use this division throughout the remainder of the paper.

Given that non-regular votes typically are more contentious than regular votes, we would expect greater variation on the timing of the filing of non-regular proxies compared with regular filings if managers are acting strategically. The evidence supports this line of reasoning. Management is significantly more likely to file a non-regular proxy before the record date than they are to file a regular proxy before the record date. This is seen in the summary statistics (Table 4, Panel B); a simple linear probability model (**Table 5**, column 1); when we control for industry and year fixed effects (Table 5, column 2); and when we control for a variety of other factors (Table 5, column 3). Across all three regressions in Table 5, the likelihood that a proxy is filed late (that is, after the record date) decreases by approximately 17 percentage points when the issue to be voted upon is non-regular.

We next explore whether a late filing is correlated with how a vote eventually turns out. To identify how votes turn out, we use the ISS Voting Analytics database which covers the outcome of shareholder voting for the Russell 3000 firms between

2003 and 2016. ISS reports the sponsor of each ballot proposal; whether shareholders approved or rejected the proposal; and the percentage of votes cast for, against, and abstained. We have this information for 258,585 individual votes in our sample involving 5,582 different firms. (Most proxies involve multiple items, hence the large number of individual votes.)

We define a proposal to have a close outcome if the difference between votes in favor and the passing threshold is within 10% of shares outstanding (“close vote”). Panel A of **Table 6** presents summary statistics on these close votes. We see that 2.3% of all votes are close, with the incidence being higher for non-regular votes. For example, 11.5% of all proxy contest votes turn out to be close. We also see that proxies filed early are twice as likely to be associated with close votes compared with those filed late (5.7% versus 2.1%).

The relation between the timing of a filing and whether a proposal fails or passes turns out to depend on who sponsors the proposal. As we see in the bottom of Panel A of Table 6, there is only a modest relation with proposals made by management. With proposals made by shareholders, presumably by shareholders opposed to management, the difference is pronounced. When the proxy is filed after the record date, 27.4% of the dissidents’ proposals fail. But when the proxy is filed before the record date, fully 45.5% of the dissidents’ proposals fail.

These summary statistics are confirmed by regression analyses. Column 1 of Panel B of Table 6 reports that the probability of a close vote is 5.83 percentage points higher with a non-regular meeting than with a regular meeting. Columns 2-4 confirm that managers are significantly more likely to file a proxy before the record date with a vote that turns out to be close.

Panel C of Table 6 is limited to shareholder proposals (dissident proposals) as opposed to proposals made by management. Columns 2 and 3 show that these proposals are more likely to fail when the proxy statement announcing the voting record date is filed before that date actually occurs.

Exchange Subscription Services. The NYSE, but not Nasdaq, requires that listed firms notify the exchange at least 10 days before a voting record date. The

Exchange then sells this information to subscribers (as part of its Corporate Actions Reports) but does not release the information to the public at large. We have the date the NYSE informs its subscribers of the record dates for 11,576 of our shareholder meetings between 2010 and 2018 (inclusive).

Three dates are thus relevant for notification purposes: the voting record date itself, the proxy filing date (which is the first announcement of the record day to the public at large), and the date the NYSE informs its subscribers of the record date.¹⁷ The six possible permutations of these three dates are reported in Panel C of Table 4. The first thing to note is that all possible permutations are represented. This suggests that firms have the freedom to announce the record date either before or after it occurs, and stock exchanges have the freedom to sell this information to subscribers even when the record date is not yet known by the public at large. The second thing to note is that the modal observation is Group 1: The NYSE notifies its subscribers before the record date, and then after the record date the firm notifies the public by filing a proxy. This is what happened at DuPont, and this is what happens 81.4% of the time.

In **Table 7** we conduct two investigations into the NYSE's notification of the record dates to its subscribers. Groups 3, 4, and 5 in Panel C of Table 4 are noteworthy in that the NYSE informs subscribers of the record date after it has occurred. The NYSE is clear that it will not waive the 10-day notification requirement for any reason.¹⁸ It would thus appear that in these cases, which

¹⁷ For all firms no matter where listed, there is a fourth notification date that is potentially relevant. SEC Proxy Rule 14a-13 requires that all public firms notify brokers at least 20 business days prior to any record date including for shareholder voting. For special meetings (but not for regular annual meetings) if 20 days' notice is not practical, notice may be shorter (time is not specified in the regulations), but it still must be before the record date. Many firms use Broadridge for this service. We approached Broadridge to obtain this information and were informed that that they do not retain records. We have no indication that brokers release this information to the public at large. We do not know if brokers reveal this information to select investors.

¹⁸ "The Exchange has no authority to waive its record date notification requirement, so strict compliance with the notification rules is essential in order to avoid situations where record dates or dates for shareholder meetings, dividends or other corporate actions must be reset." https://www.nyse.com/publicdocs/nyse/regulation/nyse/NYSE_2018_Annual_Guidance_Letter.pdf. One example of how seriously the Exchange takes this notification requirement is that the Cato Corporation informed the

represent 13% of all observations, Exchange officials knew of the record date in advance but for some reason delayed releasing the information until after the record date had passed. Such delays could either be intentional or merely clerical errors. If the late notifications by the NYSE are clerical errors, they should be uncorrelated with the type of filing. Regressions in columns 1-3 of Table 7 report that the likelihood that Exchange officials delay a notification to their subscribers until after the record date increases by approximately 10 to 14 percentage points when the issue to be voted upon is non-regular. This evidence is inconsistent with random delays of reporting by Exchange officials.

Notification by the NYSE of the record date also has the potential to create an “unlevel playing field” in that some investors, namely those who subscribe to the Exchange’s service, have potentially valuable information, namely a forthcoming voting record date, that the investing public does not have because a proxy has not yet been filed. This would be Groups 1 and 2 from Panel C of Table 4, or about 86% of all observations. DuPont is an example. In contrast to Regressions 1-3 of Table 7, Regressions 4-6 also reflect when management files a proxy statement and thus notifies the public of the voting record date. This evidence suggests that the potential informational advantage from subscribing to the NYSE service is significantly lower with non-regular filings.

B. Trading Volume Changes

We now turn to evidence on stock trading volume to ascertain whether investors react to the distributions of voting rights. **Figure 1** plots the daily trading volume in the 40 days surrounding the voting record date. Three broad empirical regularities emerge, all of which are confirmed by untabulated regressions. First, Figure 1 again illustrates the importance of disaggregating shareholder votes. For

Exchange on February 22, 2013 that the voting record date for its annual meeting would be March 25 when it meant to report March 26 as the record date. The Exchange called Cato on this discrepancy. Cato had to file a 8-K, which it did on May 13, explaining that it was a clerical error; that this was its first filing with an error; and that the company was in compliance with all other exchange listing rules. Cato did not file a preliminary proxy, and its definitive proxy, which included the (correct) record date of March 26, was filed on April 11.

regular filings, there is little change in turnover in the 40 days surrounding the record date. For non-regular filings, the situation is different in several respects. An example of why it is important to disaggregate the distribution of shareholder votes is Christoffersen et al (2007), which to our knowledge is the only published paper that documents what happens to stock trading volume when stocks go ex vote. As part of a study of investors using borrowing stock to influence shareholder votes, the authors investigate whether there is an active market for votes in the spot market. They report only the equivalent of the middle line of Figure 1 (also Figure 1 in their paper), which is the trading volume for the full sample of observations around the voting record date. As a result of this focus, they conclude that there is not a market for votes in the spot market. Disaggregation clearly shows is an active market for votes in the spot market with some categories of votes.

The second empirical regularity in Figure 1 is that with non-regular votes trading volume is generally higher when a stock is cum vote than when it is ex vote. The daily turnover rate is 0.94% during T-20 to T-5 compared with 0.79% during T+6 to T+20 (where T=0 is the record day). The difference is significant at the 1% level and likely reflects investors accumulating stock to gain additional votes for the forthcoming meeting. We expect investors to be more active with non-regular votes, which can be contentious and close, than with regular votes, which often are neither contentious nor close. Figure 1 is consistent with this reasoning.

The third empirical regularity in Figure 1 is that with non-regular votes once a stock has gone ex vote, trading volume surges. Daily turnover increases from 0.80% one day prior to the record date to almost 0.90% one day after the record date (the increase is highly significant). To investigate whether this surge is driven by non-record-date information in the proxy, as opposed to the passage of the record date itself, in untabulated tests we examine only those observations when the first non-regular proxy filing is at least six days after the record date. We observe no significant changes in the results of Figure 1, suggesting that non-record-date information in proxies is not driving the surge in trading once a stock has gone ex

vote. In contrast to the voting record date, much of this information has often been revealed weeks earlier, often in preliminary proxies.

The trading surge suggests that some investors are unwilling to hold their shares until the meeting when the voting outcome will be determined and any impact of the vote will be fully impounded into the stock price. It should be noted, however, that only a minority of those who purchase stock cum vote sell it as soon as it goes ex vote. If most people who purchased stock cum vote sold it as soon as it went ex vote, then trading volume ex vote would be as high as it was cum vote. This the data does not show. In untabulated regressions we find that the ex-record-date volume surge (days T+1 to T+5) is positively related to the probability of a close vote and negatively related to whether a dissident's proposal passes (both are significant at the 1% level).

Figure 2 is limited to Nasdaq firms when the proxy is filed after the record date. As explained earlier, with these observations there is no formal pre-notification of the record date either to the public, via a proxy, or to select investors, via a subscription service. Nevertheless, with non-regular votes there is a higher level of trading activity before the record date as well as a surge thereafter. These regularities suggest that some investors learn of the voting record date through as-yet-unidentified means and trade accordingly.

C. Stock Price Changes

We now investigate how stock prices react when voting rights are distributed to shareholders. When this occurs, that is when stocks go from cum vote to ex vote, and the only thing that changes is that the purchaser of the stock no longer receives the right to vote it at the forthcoming shareholders' meeting. Cash flows, however, remain unchanged. Consequently, the difference between a stock's price cum vote and its price ex vote is the value of an additional or marginal vote at the next shareholders' meeting. This ex day approach is the same one used by Dolley (1934) to value rights offerings and by Elton and Gruber (1970) (and many others) to calculate the after-tax value of cash dividends.

Table 8 reports the ex day stock price change for our full sample of over 100,000 observations. Column 1 in Panel B shows that over the three-day window from Days -2 to 0 (inclusive), where Day 0 is the record day (“ex vote window”), the average (median) change for the entire sample is a decline of nine (twelve) basis points, both of which are significant at the 1% level. We use a three-day window because the uncertainty over when stock trades clear due to the lack of an explicit ex day, suggested both by what happened at DuPont (Table 1) and by these data, indicates that a multiple-day window is needed to capture the full effect of what happens to prices when stocks go ex vote.

Non-Regular Votes. As with trading volume, there are pronounced differences in the stock price reaction between distribution of regular versus non-regular votes. For non-regular votes, the stock-price decline, or price of a marginal vote, is roughly four times larger than with regular filings, on average 36 (median 35) basis points versus 8 (median 10) basis points (Table 8, Panel B). All of these differences are statistically significant. In **Table 9** we break out the non-regular proxy filings into their four (exhaustive but not mutually exclusive) categories of proxy contests, special meetings, mergers, and shareholder-initiated proposals. All four categories have significant stock-price declines that are substantially larger than the changes for either ex days in general or those involving regular filings. The stock-price decline is the largest for shareholder-initiated proposals, 66 basis points. Recall that it is with these votes that the early filing of a proxy is associated with a marked decline in the probability of passage. In contrast, votes on merger proposals are often non-contentious. Consistent with this reasoning, the decline is the least for this category.

Close Votes. **Table 10** reports the relation between a close vote (within 10% of shares outstanding) and the price of the marginal vote (the abnormal stock-price change over the three-day ex vote window). A larger drop in the stock price, which means a higher price for a marginal vote, is associated with a greater likelihood that the vote turns out to be close. Specifically, a 5% drop in the stock price over the three-day ex vote window is associated with a 14-basis-point increase in the

incidence of a close vote. Compared with the unconditional probability of a close vote, which is 2.3%, this suggests that a 5% drop in the stock price is associated with an approximate 6% (14 basis points divided by 2.3%) increase in the probability of a close vote.

Notification. In **Table 11** we examine whether the ex day stock price change varies with whether the proxy announcing the voting record date is filed before or after the record date. We see that the average stock price reaction is more pronounced when the proxy announcing the record date was filed sufficiently before that date to enable investors to knowingly buy stock that is cum vote especially with non-regular votes. The difference, however, is at best marginally significant.

The observations of Nasdaq firms in the bottom of Table 11 where the proxy is filed after the record date are interesting because (as explained earlier) there is no formal notification to any investor. Nevertheless, as with trading volume, we still observe a statistically significant stock price decline after a stock goes ex vote with both regular votes (10 basis points) and non-regular votes (33 basis points).

IV. Implications of Empirical Findings

Although the existing literature has paid considerable attention to shareholder voting, it has almost totally ignored an integral part of this process—the distribution of the votes to shareholders. Our empirical findings show that far from being a meaningless mechanical process, the distribution of votes to shareholders matters. In this section, we discuss some of the reasons why it matters.

A. Notification to Investors of the Voting Record Date

Existing research has largely ignored whether investors know of the voting record date before it occurs. Those few papers that touch upon this issue erroneously claim that notification is universally after the fact, but that it does not matter because investors, presumably all investors, somehow learn of the record date before it occurs.

Several of our findings reject this line of reasoning. If notification of the record date through the filing of a proxy does not matter, firms should not change whether

they file a proxy before or after the record date based on the nature of the proposals to be voted upon (Tables 3 and 4). If the timing of a proxy filing does not matter, it is also unclear why this timing would be correlated both with how close a vote turns out (Table 6) and whether a proposal ultimately passes (Table 6). If the timing of a proxy filing does not matter, it is unclear why sophisticated investors purchase record date information from the New York Stock Exchange. Because retail investors are unlikely to learn of voting record dates through non-proxy means, this is one area where sophisticated investors would seem to have a systematic informational advantage over retail investors. Finally, both activist investors and legal scholars allege that firms at times manipulate records dates (Amtrust and footnote 14).

Although we can say with confidence that whether a proxy is filed before or after the record date matters, we do not yet have a full understanding of why some proxies are filed before the record date while other proxies are filed after the record date. Part of the challenge of completing this picture arises because firms have the freedom to file a proxy and thus announce a voting record date either before or after it occurs (Tables 1-5), and NYSE officials have the freedom to sell record date information to select investors even when the public does not know the date (Tables 1, 3, 6). This timing could also be influenced by activist investors. Perhaps as part of negotiations with management, they push for a certain timing on the release of the record date. The timing of this decision may also be impacted by the composition of the shareholder base, in particular the division between institutional investors (who are more likely to confront management) and retail investors (who are more likely to support management). This, it is possible that firms choose to release certain record dates beforehand and other record dates after the fact. Sorting out these several endogenous decisions is one topic worthy of future study.

The want of any current definitive explanations for these timing decisions, however, should not prevent investors and policymakers from addressing several potentially important issues related to notification to investors of the voting record date. We will now discuss some of these issues.

Should firms have the discretion to determine when the voting record date is announced including announcing it after it has occurred? Currently, firms have broad discretion on when they reveal the voting record date to the public by filing a definitive proxy. Under current law, firms may impede activist investors by announcing the record date after it has occurred. This is what happened at AmTrust. Conversely, managers may also help investors allied with them accumulate shares and thus exert additional influence by revealing the voting record date before it occurs, certainly publicly by filing a proxy and possibly privately. Brav et al (2019) find that retail investors are more supportive of management than are institutional investors. Because retail investors presumably learn of voting record dates through proxies, this might help explain why managers are more likely to file proxies before the record date with controversial votes than with regular votes (Tables 4 and 5).

Should all investors learn the record date at the same time? A cornerstone of federal securities laws is that all investors should have equal access to material information. This, however, typically is not the case with voting record dates. Some investors learn of the record date before the public learns, either through the NYSE's subscription service or through another as-yet-unidentified means. Furthermore, these investors usually learn of the record date before it occurs while the public learns of the record date after it has passed. Thus, in many instances investors who know a forthcoming record date are trading with individuals who lack this information. DuPont is an example. Here the difference between institutional and retail investors deserves attention.

Securities lawyers have suggested that this situation might have arisen because traditionally people have not considered the voting record date to be material, probably because there was no empirical evidence on what happens when votes are distributed to shareholders. An accepted definition of material information is information that causes people to change their behavior. By this definition, our paper offers a wide variety evidence that the distribution of votes to shareholders can be a material event.

Should stock exchanges be allowed to sell non-public material information?

Although several papers document efforts by management to influence the voting process, to our knowledge ours is the first paper to raise the possibility that stock exchange officials are also influencing the voting process by selling non-public information identifying the voting record date to select market participants. This issue goes beyond voting because the NYSE collects a broad array of data from listed firms as part of its “self-regulation” initiative and then sells the data to subscribers. The Corporate Actions package alone, which is where we obtain our NYSE data, “comprises several reports providing over 60 different corporate actions types for all equities listed on the NYSE Group ... including but not limited to cash dividends, stock dividends, distributions, splits, new listings (IPOs), suspensions and delistings.”¹⁹ Investigating the impact on stock prices and trading volume of selling these other data seems an important topic for future study.

How do some investors learn of the record date before it occurs when a proxy has not been filed and there is no notification by the stock exchange? Some investors learn of voting record dates before they occur even when there is no formal pre-notification of the record date either through a proxy or by the stock exchange (Figure 2, Table 11). One possibility would be that corporate insiders are trading or informing those who trade; another possibility is that brokers (who must be informed of a record date at least 20 business days prior to the record date under SEC Proxy Rule 14a-13) inform select customers of the record date. Even if some investors learn the voting record date beforehand, it appears that not all investors learn the voting record beforehand. Recall that Carl Icahn only learned of the record date with AmTrust’s going-private vote when management filed a proxy well after the record date. Moreover, if all investors learn of a voting record date even when a proxy has not yet been filed, it is unclear why management and stock-exchange officials would act in the strategic ways that we find (Tables 3-6).

¹⁹ <https://www.nyse.com/markets/nyse-arca/reports>

From a policy perspective, we see two broad ways to address these notification issues. First, by-laws and articles of incorporation could change to require that management publicly announce the voting record date a certain number of days before it actually occurs. Second, laws could change. Part of the reason for the unusual state of affairs with notification of voting record dates is that shareholder voting falls between state and federal laws. State laws require annual shareholder meetings and that shareholders make certain decisions, such as the election of directors and changes to articles of incorporation. Federal laws require neither shareholder voting nor shareholder meetings, but when shareholders vote public firms must comply with federal securities law by filing a proxy statement that identifies the voting record date.

For both of these potential policy approaches, it is instructive to consider current European Union laws.²⁰ As in the United States, proxies in Europe must specify the record date for determining who may vote in a forthcoming shareholders' meeting (sometimes called "announcements of convocation" although here we will refer to them as proxies for clarity in comparison). In contrast to the United States, European record dates must come at least eight days after the filing of the proxy. Consequently, in Europe everyone learns of the voting record date presumably at the same time and certainly (at least eight days) before the record date itself. Furthermore, in Europe the record date may be no more than 30 days before the shareholders' meeting. In the United States, this is left to state law. In both Delaware and California, the record date may be no more than 60 nor less than 10 days before the shareholders' meeting. (This is one example of how regulation of the voting record date in the United States is governed by both federal and state laws.) For our sample, the average time between the record and meeting dates is 49.8 days (untabulated). European law does not further regulate the period between the record and meeting dates, although the laws of some member countries do. Under

²⁰ Directive 2007/36/EC of the European Parliament and of the Council of 11 July 2007, "On the exercise of certain rights of shareholders in listed countries."

Finnish law, for instance, the record date is always the tenth day before the shareholders' meeting.

Lastly, our findings on different notification dates involving material information for different types of investors present research opportunities beyond shareholder voting. Many papers extend Kyle (1985) by modeling trading between sophisticated and unsophisticated (sometimes called retail) investors. It has been challenging to identify situations where this occurs on a systematic basis. The trading of stocks when some investors, presumably sophisticated investors who subscribe to the NYSE's service, know of the voting record date, while other investors, presumably retail investors, who do not know the date seems a fruitful venue for testing these theoretical papers.

B. The Dynamics of Corporate Voting

Our findings on the distribution of voting rights to shareholders offer several insights into the dynamics of corporate voting.

Disagreeing shareholders and disaggregation of votes. One such insight confirms that shareholders are not homogeneous, and they sometimes disagree over corporate policies (Levit et al 2019). When this is the case, our findings show that some disagreeing shareholders are willing to pay more for stocks that are cum vote because they will have additional influence over the outcome of the vote.²¹ Stock prices decline when a stock goes ex vote because the demand is lower as it lacks a vote for the forthcoming meeting where the policy will be decided. If there are no disagreements among shareholders, there would be no decline in stock prices when stocks go ex vote; the marginal vote should sell for zero because it would have no impact. We find this is true for many votes but not for all votes.

This leads to another finding: it is important to disaggregate the distributions of votes to shareholders because only some votes will be close and impact firm value. Disaggregation is also key with other corporate events, such as earnings

²¹ For example, Kandel and Pearson (1995) and Hong and Stein (2007).

announcements. One way to do this is to identify those votes where the ex day stock price decline is significant.

The conceptual nature of shareholder voting. We find that some shareholder votes are best viewed within an entrepreneurial conceptual framework. Changes in trading volume around the record date combined with the ex day drop in stock prices show that at times disagreeing shareholders actively seek to influence the voting outcome by purchasing additional shares. That is to say, some investors buy marginal votes to gain influence. The price of a marginal votes varies in predictable ways with the proposals before shareholders and how firms and stock exchanges notify investors of the record date (Tables 7-10). In some instances, investors are willing to pay 5% more for a stock cum vote than the same stock ex vote. DuPont was such an example during the 2015 proxy contest (Table 1).

This entrepreneurial view of shareholder voting contrasts with the judicial view of shareholder voting which sees buy-and-hold shareholders acting as relatively passive judges by choosing among competing managerial teams. Jensen and Ruback (1983, p. 6) explain, “The managerial competition model ... views competing management teams as the primary activist entities, with stockholders including institutions, playing a relatively passive, but fundamentally important, judicial role.”

It is likely that some shareholder votes fit the entrepreneurial model while others fit the judicial model (again, highlighting the need to disaggregate shareholder votes).²² Sorting this out is worthy of future study. Also worthy of future study is to explore whether there is an interaction between the two models. In recent years increasing amounts of stock are being voted by the largest institutional investors, in particular BlackRock, Vanguard, and State Street. It is unlikely that these very large investors are accumulating marginal votes to augment their influence. It is more likely that entrepreneurial investors are the

²² Brav et al (2008) study the management changes made by activist hedge funds. These investors typically fit within the category of what would be considered entrepreneurial investors.

ones buying marginal votes. Do these entrepreneurial investors, such as Carl Icahn, act as substitutes or complements with the very large institutional shareholders? Has the role of entrepreneurial investors changed over time? One empirical strategy for addressing such questions would be to measure how the ex day changes in stock prices and trading volume move over time with the issue to be voted upon and the configuration of ownership at the firm. This is one way that ex day changes in prices and volume can be used to address other issues associated with corporate voting.

Price of a marginal vote. Manne (1962), in a seminal paper which was one of the first to question the then-conventional wisdom that shareholder voting did not matter, called for a broad study to quantify what happens to stock prices when they go ex vote.²³ Surprisingly, our paper is the first such study (Tables 7, 8). There are, however, two lines of research that are related to what we do in that they also measure changes around the voting record dates. Kind and Poltera (2013) and Kalay, Karakas, and Pant (2014) use option pricing to create a synthetic security that has the same cash flows as the underlying stock but lacks the right to vote.²⁵ They compare the price of that security with the price of the underlying stock around the record day. Christoffersen et al (2007) and Aggarwal et al (2015) examine stock lending around voting record dates. Someone borrowing stock and holding it on the record date is entitled to vote the stock. In follow-on research, we are comparing what one learns both theoretically and empirically from our approach versus these two other approaches.

Voting and selling immediately. Finally, our finding of a surge in trading immediately after some stocks go ex vote suggests a different dynamic from what has been modeled in the literature to date. Li et al (2019) propose that shareholders

²³ Manne offers one intriguing example of what happened to Allegheny Corporation's stock price when it went ex vote during a 1961 proxy fight.

²⁵ An investor simultaneously buys a call option and sells a put option with the same strike price and time to expiration. The investor then invests an amount equal to the present value of the strike price in a risk-free asset.

disagreeing over the best policy to increase firm value will not trade until the outcome of the vote is revealed, which for a close vote will usually be at the shareholders' meeting. They present evidence that with close votes stock trading volume often surges around the time of the meeting. Their interpretation is that institutional shareholders on the losing side sell only once the outcome of the vote is known.

We find that with some controversial votes there is also a surge in trading immediately after a stock goes ex vote (Table 1, Figures 1 and 2). One interpretation is that the selling shareholders want to influence the outcome for private gain as opposed to increasing the stock price. Hence, they are willing to delay selling their stock at a lower expected price once it has gone ex vote but fear that the outcome, which presumably they voted for, would lower the firm's stock price. To limit their losses, they sell as soon as the stock has gone ex vote. This might describe managers who are voting to preserve their jobs or institutional investors who are voting to curry favor with management. Fully understanding the surge in trading immediately after some stocks go ex vote likely will offer new insights into the underlying dynamics of shareholder voting.

V. Conclusion

This is the first study of what happens with one of the most common control events for any firm—the distribution of voting rights to shareholders which results in stocks going ex vote. While the many empirical regularities we find show that the historic neglect of what happens when stocks go from cum vote ex vote is not warranted, at the same time they raise numerous questions for both policymakers and researchers. Addressing these questions will be important because the ultimate control of any corporation rests with its shareholders and their power comes primarily through voting. Many shareholder votes are perfunctory, but some are not. It is with the distribution of these votes where the ex day changes are the most informative.

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Table 1

DuPont's Stock Returns, Trading Volume, and Key Events around the Distribution of Voting Rights to Shareholders in the 2015 Proxy Contest

The record date of March 17 determined which shareholders could vote in the 2015 proxy contest involving Triant's proposed directors and bylaw changes. Excess stock returns are calculated using the Fama-French three-factor model, which is estimated from 360 days through 60 days before the record date. Trading volume is the number of DuPont shares traded. Data from CRSP and the NYSE. Shaded entries denote potentially important events.

	Excess Returns	Trading Volume	
February 27	0.04%	3,596,192	
March 2	0.37%	3,263,524	
March 3	-0.23%	4,021,870	
March 4	0.54%	3,120,391	
March 5	0.25%	3,661,119	
March 6	0.96%	7,559,485	NYSE reports record date of March 17 to its subscribers
March 9	0.24%	9,007,420	
March 10	1.94%	7,770,743	
March 11	0.73%	7,544,163	
March 12	0.21%	7,837,543	"Academic" Cum Date
March 13	0.71%	8,904,227	"Academic" Ex Date
March 16	-5.46%	15,913,916	
March 17	-2.80%	16,473,563	Record Date
March 18	0.70%	8,498,122	
March 19	-1.28%	5,979,517	
March 20	-1.08%	8,482,657	
March 23	0.30%	4,295,930	Proxy publicly identifies March 17 record date for first time
March 24	-0.46%	3,992,941	
March 25	-1.03%	5,073,101	
March 26	-0.13%	4,605,833	
March 27	-0.23%	4,149,506	
March 30	0.17%	4,074,233	

Table 2

AmTrust's Stock Returns, Trading Volume, and Key Events around the
Distribution of Voting Rights to Shareholders in the 2018 Going-Private Proposal

The record date of April 5 determined which shareholders could vote on the 2018 proposal to take AmTrust private. The proposal was made by the CEO who owned a majority of the stock. Passage of the proposal was conditional on the approval of a majority of the minority shareholders. Excess stock returns are calculated using the Fama-French three-factor model, which is estimated from 360 days through 60 days before the record date. Trading volume is the number of AmTrust shares traded. Data from CRSP and the 13D filed by Carl Icahn on May 17. Shaded entries denote potentially important events.

	Excess Returns	Trading Volume	
March 29	-0.10%	496,540	
March 30	-0.76%	752,733	
April 2	0.06%	904,207	"Academic Cum Date"
April 3	0.15%	469,293	"Academic Ex Date"
April 4	0.65%	412,337	
April 5	-1.72%	344,492	Record Date
April 6	0.87%	714,543	
April 9	0.87%	381,383	Preliminary proxy does not identify already-set record date
April 10	-0.61%	667,277	
April 11	2.54%	709,840	
April 12	-2.05%	1,358,872	
April 13	-0.12%	826,464	
April 16	-0.09%	487,997	
April 17	-0.31%	1,067,576	
April 18	0.37%	525,512	
April 19	-0.43%	692,475	
April 20	0.20%	392,657	
April 23	-0.22%	1,037,815	
April 24	-1.46%	1,222,508	
April 25	1.34%	526,019	
April 26	1.61%	858,757	Icahn starts buying AmTrust stock
April 27	0.48%	1,015,306	
April 30	0.90%	462,026	
May 1	1.53%	2,885,946	
May 2	-0.12%	5,174,797	
May 3	0.70%	2,408,089	
May 4	-0.72%	2,431,234	Proxy publicly identifies April 5 record date for first time
May 7	1.06%	4,036,827	Icahn crosses 5% ownership threshold
May 8	-0.29%	3,167,099	

May 9	-0.74%	997,451	
May 10	0.14%	1,193,960	
May 11	0.36%	1,037,224	
May 14	-0.46%	972,061	
May 15	-0.26%	1,145,978	
May 16	-0.09%	866,131	
May 17	-0.31%	3,010,582	Icahn files initial 13D revealing 9.4% stake
May 18	2.88%	8,241,798	
May 19	-0.27%	4,001,529	

Table 3

Distribution of Votes versus Distribution of Cash Dividends

Cash dividends and voting rights are the two major distributions corporations make to their shareholders. This table highlights key differences and similarities between the two distributions and notes the difference in academic attention. Some of the points listed for the distribution of votes come from empirical findings later in this paper.

Distribution of Cash Dividends	Distribution of Votes
Over 100 papers focus on what happens when stocks go ex-dividend	This is the first paper to focus on what happens when stocks go ex-vote
All record dates are publicly available far in advance	91% of record dates become publicly available after the fact; timing varies with the type and outcome of vote
Stock exchanges set explicit ex-date	Stock exchanges do not set explicit record date which leads to uncertainty over when stocks go ex-vote
All investors learn of the record date at same time	Some investors purchase record date information from NYSE, usually before the date itself and before the public learns the date
Many papers quantify the ex-day stock price change	This is the first paper to quantify the ex-day stock price change
Many papers quantify what happens to trading volume when stocks go ex-dividend	This is the first paper to quantify what happens to trading volume when stocks go ex-vote
Cash dividends are integral to firm valuation	Votes are integral to how shareholders control managers and thus limit agency costs
Covered largely by state law	Falls between federal and state laws
Only 1/3 of firms distribute (pay) cash dividends	All firms distribute votes at least once a year

Table 4

Relation between the Proxy, Record, and Exchange Notification Dates

Panel A reports whether the first proxy announcing the record date for determining which shareholders may vote in a forthcoming meeting was filed before or after the actual record date. Proxy filed before record date means that the proxy initially announcing the voting record date was filed at least four trading days before the record date. In these cases, investors who wanted to purchase stock that could vote at the forthcoming meeting were able to knowingly do so. These proxies are the first public announcement of a record date. Panel B breaks this data down by the type of shareholder meeting. There are 114,368 observations in Panels A and B between 1996 and 2018 (inclusive). Panel C is restricted to firms listed on NYSE and reports the order of the proxy, record, and stock exchange notification dates. The stock exchange notification date is when the NYSE notifies subscribers of its data services of the record date. The six groups contain all possible permutations with the three dates. There are 11,576 observations in Panel C between 2010 and 2018 (inclusive).

Panel A: All Observations

Proxy Filed Before Record Date	9%
Proxy Filed After Record Date	91%

Panel B: Proxies Filed After Record Date

Regular Meeting	92%
Merger	92%
Special Meeting	71%
Shareholder-Initiated Proposal	60%
Contested	55%

Panel C: Order of Proxy, Record, and Exchange Notification Dates

	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
	Exchange Record Proxy	Exchange Proxy Record	Record Proxy Exchange	Record Exchange Proxy	Proxy Record Exchange	Proxy Exchange Record
Full Sample	81.4%	5.0%	10.5%	1.3%	1.1%	<1%
Regular	82.6%	4.8%	10.1%	1.1%	<1%	<1%
Non-Regular	48.8%	11.5%	21.9%	7.3%	5.7%	4.7%

Table 5

Are Proxies Filed After the Record Date?

Linear probability regressions of the timing of notifications of voting record dates through the filing of a definitive proxy. Proxy filed after record date takes a value of one if the initial proxy identifying the voting record date was not filed at least four trading days before that date, which would enable investors to knowingly purchase stock that could vote at the forthcoming shareholders' meeting. Non-regular filings are proxy contests, special meetings, mergers, and shareholder-initiated proposals. All other filings are Regular Filings. Sales is the natural logarithm of annual sales. Amihud Illiquidity is Amihud (2002) illiquidity measure. NYSE, AMEX, and NASDAQ are indicators of the exchange on which the stock is listed. Tobin's Q is the ratio of market value to book value of assets. 1996-2018 (inclusive). *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively. (Standard errors are clustered at firm level and are in parentheses.)

	Proxy Filed After Record Date		
	(1)	(2)	(3)
Non-Regular Filing	-0.1793*** (0.0069)	-0.1741*** (0.0069)	-0.1709*** (0.0070)
Sales (log)			0.0077*** (0.0010)
Amihud Illiquidity			-0.0156*** (0.0026)
NYSE			-0.0019 (0.0421)
AMEX			-0.0109 (0.0424)
NASDAQ			-0.0025 (0.0419)
Tobin's Q			-0.0026*** (0.0005)
Constant	0.9244*** (0.0014)	0.8705*** (0.0284)	0.8485*** (0.0524)
Year FE	No	Yes	Yes
Industry FE (3-digit SIC)	No	Yes	Yes
N	86,127	85,704	81,862
R ²	0.020	0.035	0.042

Table 6

Relation between the Proxy Date, Record Date, and Voting Outcomes

Panel A reports summary statistics on voting outcomes and the filing of the proxy announcing the record date for the vote. Close votes are when the difference between votes cast in favor of a proposal and the passing threshold is within 10% of total shares outstanding. Data on voting outcomes is from the ISS Voting Analytics database. Panel B reports linear probability regressions where the dependent variable takes a value of one if the shareholder vote turns out to be close and zero otherwise. Panel C reports linear probability regressions where the dependent variable takes a value of one if a shareholder-initiated proposal is defeated and zero otherwise. The independent variables in the regressions are indicators of non-regular filings and proxies filed before the record date. Non-regular filings are proxy contests, special meetings, mergers, and shareholder-initiated proposals. Proxies filed before the record date were filed at least four trading days before that date, thereby enabling investors who wanted to purchase additional stock that could vote at the forthcoming shareholders' meeting to be able to knowingly do so. 2003-2016 (inclusive). *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively. (Standard errors are clustered at the firm level and are reported in parentheses.)

Panel A

<u>Meeting Type</u>	<u>Close Vote</u>
Full Sample	2.3%
Annual	2.2%
Annual/Special	4.5%
Special	9.6%
Proxy Contest	11.5%

<u>Filing Status</u>	<u>Close Vote</u>
Proxy Filed before Record Date	5.7%
Proxy Filed after Record Date	2.1%

	<u>Proposal Fails to Pass*</u>	
	<u>Management</u>	<u>Shareholder</u>
Proxy Filed before Record Date	3.3%	45.5%
Proxy Filed after Record Date	2.8%	27.4%

*(Non-Regular Meetings Only)

Panel B

Dependent Variable: Close Vote				
	(1)	(2)	(3)	(4)
Non-regular meetings	0.0583*** (0.0066)		0.0468*** (0.0064)	
Filed Before Record Date		0.0387** (0.0038)	0.0339*** (0.0037)	0.0327*** (0.0007)
Constant	0.0223*** (0.0007)	0.0211** (0.0007)	0.0206*** (0.0007)	0.0203*** (0.0007)
Meeting Fixed Effects	No	No	No	Yes
R^2	0.002	0.004	0.005	0.007
N	258,345	258,345	258,345	258,345

Panel C

Dependent Variable: Shareholder-Initiated Proposal Defeated			
	(1)	(2)	(3)
Non-regular meetings	-0.4022*** (0.0450)	-0.4453*** (0.0453)	
Filed Before Record Date		0.0663** (0.0289)	0.0556** (0.0259)
Constant	0.8037*** (0.0109)	0.8002*** (0.0113)	0.8005*** (0.0113)
Meeting Fixed Effects	No	No	Yes
R^2	0.071	0.073	0.081
N	6,482	6,482	6,482

Table 7

NYSE Notification of Voting Record Date

Linear probability regressions of the NYSE notification of the voting record date to subscribers of its data services. In columns 1 through 3, the dependent variable takes a value of one if the NYSE notification comes too late for subscribers to knowingly purchase stock cum vote. This investigates whether the NYSE notification of the voting record date is random or strategic. In columns 4 through 6, the dependent variable takes a value of one if the NYSE notification to subscribers of its data services comes before the proxy filing date, which is how the public at large learns of the record date. This investigates whether the NYSE's notification creates an "unlevel playing field." Non-regular filings are proxy contests, special meetings, mergers, and shareholder-initiated proposals. All other filings are Regular Filings. Sales is the natural logarithm of annual sales. Amihud Illiquidity is Amihud (2002) illiquidity measure. Tobin's Q is the ratio of market value to book value of assets. 1996-2018 (inclusive). *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively. (Standard errors are clustered at firm level and are in parentheses.)

	NYSE Notification After Record Date			NYSE Notification before Proxy Date		
	(1)	(2)	(3)	(4)	(5)	(6)
Non-Regular Filing	0.1083*** (0.0242)	0.1489*** (0.0238)	0.1450*** (0.0236)	-0.4037*** (0.0298)	-0.4469*** (0.0300)	-0.4438*** (0.0299)
Sales (log)			-0.0054** (0.0023)			-0.0011 (0.0021)
Amihud Illiquidity			0.0321** (0.0142)			0.0093*** (0.0027)
Tobin's Q			0.0013 (0.0019)			-0.0700*** (0.0182)
Constant	0.1131*** (0.0034)	0.4460*** (0.0290)	0.4789*** (0.0345)	0.8608*** (0.0039)	0.4935*** (0.0326)	0.4339*** (0.0443)
Year FE	No	Yes	Yes	No	Yes	Yes
Industry FE (3-digit SIC)	No	Yes	Yes	No	Yes	Yes
N	8,989	8,989	8,945	8,989	8,989	8,945
R ²	0.003	0.126	0.129	0.038	0.146	0.154

Figure 1

Stock Trading Volume around the Voting Record Date

Stock trading volume is the daily volume divided by the number of shares outstanding (in percentage terms). Non-regular filings are proxy contests, special meetings, mergers, and shareholder-initiated proposals. All other filings are Regular Filings. Shaded area denotes a possible post-record-date surge in trading volume. The sample covers 101,141 record dates from 1996 to 2018 (inclusive). Data from CRSP.

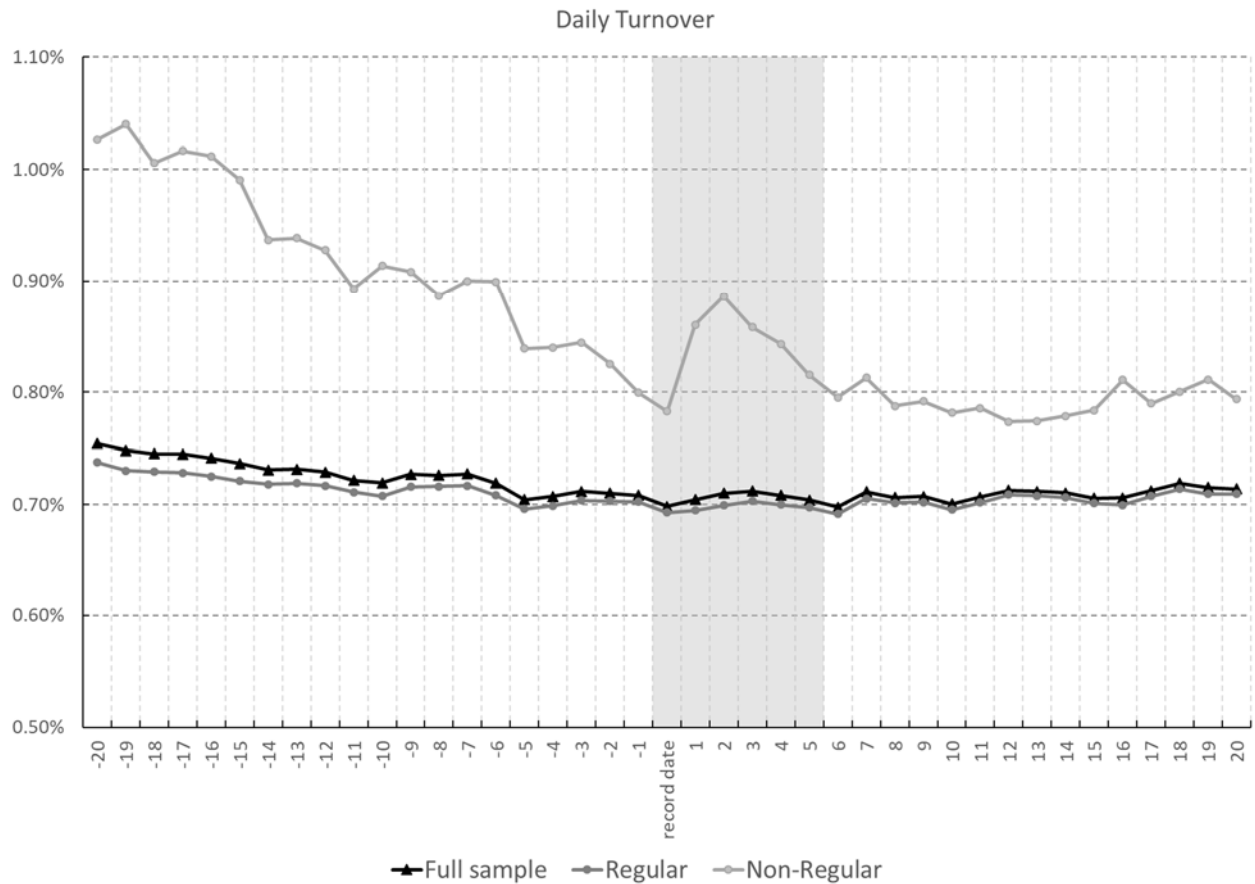


Figure 2

Stock Trading Volume around the Voting Record Date for Nasdaq Firms when the Proxy was Filed after the Record Date

Proxy filed after record date means that the proxy initially announcing the record date was filed less than four trading days before the record date, thereby preventing investors who wanted to purchase stock that could vote at the forthcoming shareholders' meeting from being able to knowingly do so. Stock trading volume is the daily volume divided by the number of shares outstanding (in percentage terms). Non-regular filings are proxy contests, special meetings, mergers, and shareholder-initiated proposals. Nasdaq does not require firms notify it in advance of voting record dates, so with these observations there is no formal announcement of the record date before it occurs. Shaded area denotes a possible post-record-date surge in trading volume. The sample covers 54,682 record dates from 1996 to 2018 (inclusive). Data from CRSP.

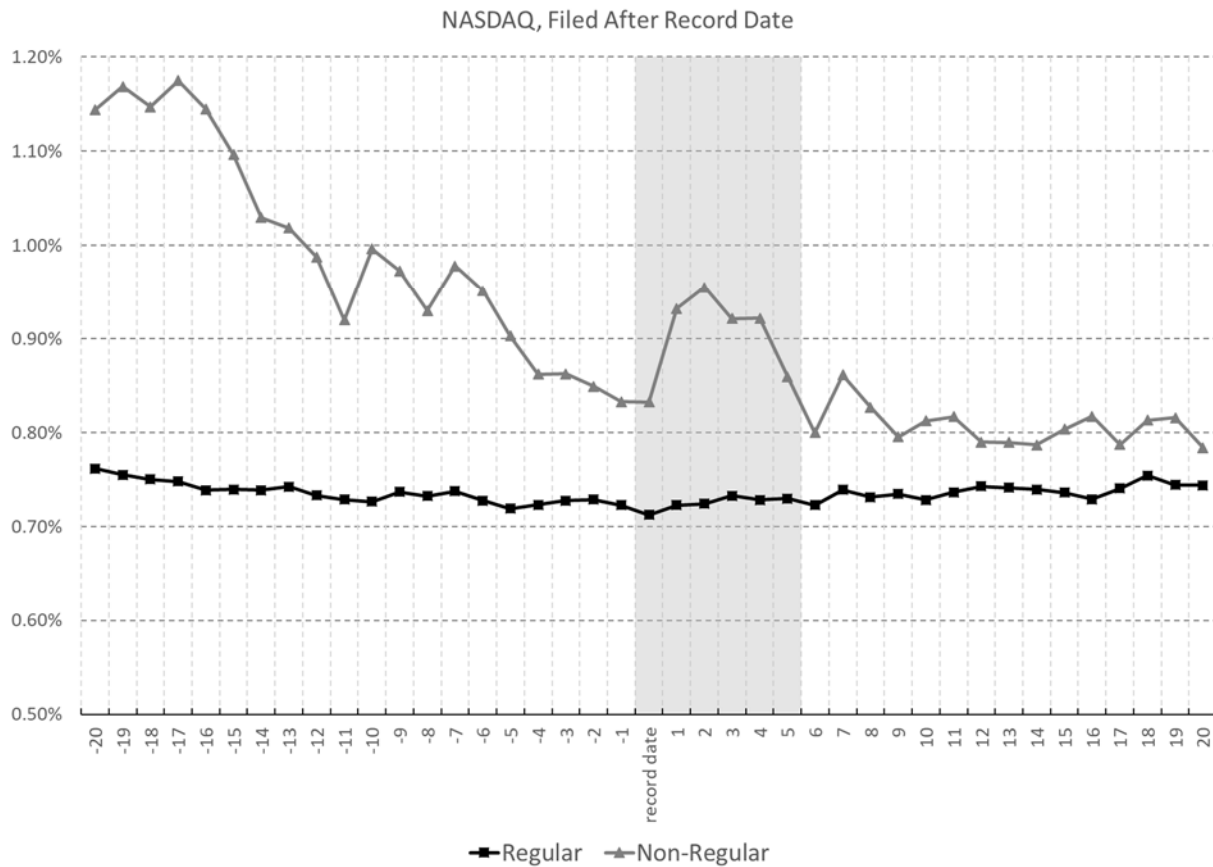


Table 8

Returns as Stocks go Ex Vote

Panel A reports the abnormal stock returns from Days -5 to $+2$ where Day 0 is the record date for a distribution to shareholders of the right to vote in a forthcoming meeting. The return is calculated using Fama-French three-factor model, which is estimated from 360 days through 60 days before the record date. Shaded area denotes the “ex vote window” of Days -2 to 0 (inclusive). Panel B reports the cumulative returns for the ex vote window. The difference calculation in Panel B is between regular and non-regular filings. Non-regular filings are proxy contests, special meetings, mergers, and shareholder-initiated proposals. All other filings are Regular Filings. 1996-2018 (inclusive). *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively. (Standard errors are in parenthesis.)

Panel A: Daily Stock Returns

	All Filings (1)	Regular Filings (2)	Non-Regular Filings (3)
Day = -5	-0.0002 (0.0001)	-0.0002 (0.0001)	-0.0004 (0.0006)
Day = -4	-0.0003*** (0.0001)	-0.0003*** (0.0001)	-0.0011* (0.0006)
Day = -3	-0.0001 (0.0001)	-0.0001 (0.0001)	-0.0005 (0.0006)
Day = -2	-0.0002 (0.0001)	-0.0001 (0.0001)	-0.0010** (0.0006)
Day = -1	-0.0003*** (0.0001)	-0.0003*** (0.0001)	-0.0014** (0.0006)
Day = 0 (Record Date)	-0.0002 (0.0001)	-0.0001 (0.0001)	-0.0010* (0.0006)
Day = $+1$	0.0002 (0.0001)	0.0001 (0.0001)	0.0014** (0.0007)
Day = $+2$	-0.0003** (0.0001)	-0.0004*** (0.0001)	0.0006 (0.0006)

Panel B: Cumulative Stock Returns from Days -2 to 0 (ex vote window)

	All Filings	Regular Filings	Non-Regular Filings
	(1)	(2)	(3)
Mean	-0.0009*** (0.0002)	-0.0008*** (0.0002)	-0.0036*** (0.0010)
Difference			-0.0028*** (0.0011)
Median	-0.0012*** (0.0001)	-0.0010*** (0.0001)	-0.0035*** (0.0003)
Difference			-0.0025*** (0.0004)
Percent Negative	51%	50%	57%
Number of Record Dates	101,141	95,460	5,681 (5.6% of filings)
Number of Firms	12,549	12,211	4,341 (34.6% of firms)

Table 9

Returns as Stocks go Ex Vote with Non-Regular Filings

Non-regular filings are proxy contests, special meetings, mergers, and shareholder-initiated proposals. Some non-regular filings involve more than one of these categories, so the reported categories are not mutually exclusive. The stock return is the average cumulative abnormal stock returns from Days -2 to 0 (inclusive) where Day 0 is the record day for determining which shareholders may vote (ex vote window). The returns are calculated using the Fama-French three-factor model, which is estimated from 360 days through 60 days before the record date. All stock returns in this table are significant at the 1% level. 1996-2018 (inclusive).

	Stock Returns (basis points)	% Negative	Observations
Mergers	-29	59%	3,142
Proxy Contests	-30	55%	962
Special Meetings	-56	54%	1,325
Shareholder-Initiated Proposals	-66	56%	425

Table 10
Closeness of Vote

Linear probability regressions where the dependent variable takes a value of one if the shareholder vote turns out to be close and zero otherwise. Close votes are when the difference between votes cast in favor of a proposition and the passing threshold is within 10% of total shares outstanding. The independent variable Ex Vote Stock Price Change is the cumulative abnormal stock returns from Days -2 to 0 (inclusive) where Day 0 is the record day for determining which shareholders may vote (ex vote window). The returns are calculated using the Fama-French three-factor model, which is estimated from 360 days through 60 days before the record date. Data on the closeness of the vote is from the ISS Voting Analytics database. Most proxy statements involve multiple items for shareholder voting. 2003-2016 (inclusive). *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively. (Standard errors are clustered at the firm level and are reported in parentheses.)

Dependent variable: Close Vote		
	(1)	(2)
Ex Vote Stock Price Change	-0.0288** (0.0115)	-0.0277** (0.0112)
Constant	0.0234*** (0.0007)	0.0221*** (0.0007)
Meeting Type Fixed Effects	No	Yes
R^2	0.00%	0.50%
N	258,585	258,585

Table 11

Stock Returns and Notification of Voting Record Date through the Filing of a Proxy

Average abnormal stock return from Days -2 to 0 where Day 0 is the record date for a distribution to shareholders of the right to vote in a forthcoming meeting (ex vote window). Proxy filed before record date means that the proxy initially announcing the record date was filed at least four trading days before the record date, thereby enabling investors who wanted to purchase additional stock that could vote at the forthcoming shareholders' meeting to be able to knowingly do so. All other filings are considered to be after the record date. The stock returns are calculated using Fama-French three-factor model, which is estimated from 360 days through 60 days before the record date. Non-regular filings are proxy contests, special meetings, mergers, and shareholder-initiated proposals. All other filings are Regular Filings. 1996-2018 (inclusive). *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively. (Standard errors are in parentheses.) Number of observations is directly below the standard errors. Column (3) reports the difference between the first two columns as well as the standard errors of a one-sided *t*-test, which shows whether the value in column (1) is smaller than the value in column (2).

	Proxy Filed Before Record Date (1)	Proxy Filed After Record Date (2)	One-sided test on difference in means (3)
<u>Full Sample</u>			
Regular	-0.0013 (0.0009) 6,999	-0.0007*** (0.0002) 88,461	-0.0006 (0.0009)
Non-Regular	-0.0066*** (0.0023) 1,005	-0.0029*** (0.0009) 4,676	-0.0037* (0.0025)
<u>Nasdaq</u>			
Regular	-0.0019* (0.0012) 4,423	-0.0010*** (0.0003) 51,751	-0.0009 (0.0012)
Non-Regular	-0.0090*** (0.0033) 606	-0.0033** (0.0013)	-0.0057* (0.0036)