

Electronic Proxy Statement Dissemination and Shareholder

Monitoring

Rachel Geoffroy¹

Abstract

This paper examines how the means of disseminating proxy statements affects shareholder monitoring. I exploit the staggered implementation of a regulatory change that allows firms to switch from postal mail to electronic distribution. I estimate that electronic dissemination reduces total voting participation by about 1%–2.2%. Under the plausible assumption that all beneficial shareholder non-participation is from retail investors, my results imply retail investor voting non-participation increases by approximately 8%–17% when electronic distribution is used. The reduction in retail investor participation shifts voting outcomes in favor of management’s recommendations. Consistent with management understanding the importance of dissemination channels, I further show management strategically uses its discretion over the choice of the proxy statement dissemination channel to affect voting.

Draft Date: January 17, 2018

¹ Rachel Geoffroy is associated with the University of Chicago Booth School of Business and can be contacted at rgeoffro@chicagobooth.edu. I would like to thank John Barrios, Phil Berger, Jonathan Bonham, Matthias Breuer, Jung Ho Choi, Hans Christensen, John Gallemore, Anya Kleymenova, Heemin Lee, Mark Maffett, Abbie Smith, the University of Chicago Accounting, Finance, and Money, Markets, and Governance workshops, and many others including the Canadian Securities Administrators and various industry professionals for their helpful suggestions and comments. I would like to recognize financial support from the Booth School of Business Accounting Research Center. All errors are my own.

It is an intriguing question as to whether our own electronic delivery rules for proxy materials may have unintentionally depressed retail investor participation. . . . I believe that a retrospective review of our electronic proxy rules is long overdue.

– Michael Piwowar, SEC commissioner, Feb. 19, 2015

1. Introduction

Retail investors are an economically important investor group, and increasing their participation in corporate governance decisions has recently been a key regulatory concern. Participating in shareholder voting is one way that investors monitor management. Participation is generally low, which can exacerbate agency conflicts. This paper examines the effects of electronic dissemination of proxy statements on monitoring of company management by retail investors. I also provide evidence that management makes strategic decisions regarding dissemination of proxy statements, consistent with dissemination having corporate governance effects.

Although the number of retail investors holding stocks directly, rather than through a pension, hedge fund, or mutual fund is decreasing, these retail investors still constitute a large portion of total investment. Somewhere between 50 million and 56 million Americans hold individual stocks (Bricker et al., 2014). Institutional ownership has grown tremendously, but estimates still have retail investors holding somewhere between 23% and 38% of the equity market directly (Kaiser, Snider, & Lewis, 2013). For comparison, mutual funds own about 20%, and pensions about 16% (Kaiser et al., 2013). Only about 30% of retail investors participate in shareholder elections for stock they own (Broadridge, 2015).

Regulators have stated many reasons for why they care about retail investor participation. They value retail investor participation because participation is a major right of shareholders, which they have a duty to protect. A previous SEC chairman stated in congressional testimony that the SEC has a duty to make proxy voting “as nearly as possible, as a replacement for an actual in-person meeting of shareholders” because of its status as a fundamental right of shareholders (SEC Chairman Ganson Purcell, 1943). The SEC also sees the proxy process as a “vital means by which shareholders and company leadership communicate with one another” and wants to create rules that would increase informed participation as a way to empower shareholders (Commissioner Luis A. Aguilar, February 19, 2015). Solomon (2017) argues that retail investor participation is fundamental to the legitimacy of the capital markets and beneficial to aggregate welfare (Solomon, 2017). The agency has thus increased educational outreach to try to increase informed participation

as a way to level the playing field between retail and institutional investors and increasing trust in the capital markets.

Within the SEC, the use of electronic dissemination as the default method for disseminating accounting- and finance-related information is a contentious issue. In most developed countries, the government regulates dissemination of documents related to shareholder meetings, but regulators do not have clear measurements of the costs and benefits of electronic dissemination. This lack of information has led to an ongoing debate around the regulations this paper studies—the SEC’s e-proxy regulation and Canada’s notice-and-access regulation—but also, more generally, around dissemination of financial information to retail investors, including mutual fund prospectuses. Similar debates are occurring in other developed countries such as in the European Union and Japan. These debates are in part fueled by the importance regulators attach to retail investor participation in shareholder meetings.

The main regulatory shock in my paper is the passage of e-proxy regulation. Before e-proxy, companies were required to disseminate proxy documents through postal mail. With e-proxy, the SEC required companies to choose between two proxy-statement distribution systems, the full-access system (“full access”) and the notice-and-access system (“notice”). Full access requires the company to post proxy materials on their website, while continuing to send physical copies of the proxy documents. Under the notice system, investors receive an email with a link to the proxy materials. The introduction of the change was staggered, based on the size of the company providing the information. Large accelerated filers had an effective date of January 1, 2008, whereas companies with public floats of less than \$700 million had an effective date of January 1, 2009. This staggered implementation provides variation to test the effect on voting patterns.

Before implementation, the response to the regulation was largely positive. A handful of firms adopted early because using e-proxy reduced printing and mailing costs. In 2015, physical copies cost on average \$6.93 more than electronic dissemination per investor per meeting (Broadridge, 2016). Because the regulation increased options for dissemination, many thought it would decrease information costs, and thus embraced the new rule. However, opinion quickly turned after implementation. Former SEC Chairman May Schapiro gave a speech about this change in 2009, asking for feedback given the amount of complaints from investors and companies after adoption.

I present two theories for how e-proxy could decrease participation. The first is that it increases information costs for the retail investors, making participation in shareholder meetings more costly. If these costs are high enough, investors might disengage. Assuming retail investors have a more elastic participation function than institutional investors, changes to proxy information costs should mainly work to enfranchise or disenfranchise them. The second is that retail investors treat the form of dissemination as a signaling device, assuming e-proxy communications are less important because they are cheaper, and that companies send physical copies of documents for important or close elections for which participation might affect the outcome.

I use two approaches to examine the effects of the e-proxy regulation. The first is a triple-difference (DDD) research design with firm-year fixed effects around the \$700 million threshold similar to a regression discontinuity design. The DDD regression uses the fact that participation should only change for non-routine votes in the treatment group in the post period. For routine votes, brokers vote when retail investors do not participate, resulting in no observable change in participation. With non-routine votes, however, the broker must report its retail client's non-participation as a non-vote. Thus, within-firm routine versus non-routine votes are the main variation. I also estimate a difference-in-differences specification, where I look at just non-routine votes to focus on how a firm's investor participation for non-routine votes decreases after the firm changes dissemination methods. In the United States, firms are not required to disclose their method of dissemination. Therefore, I use firm filings to infer which firms use full-disclosure versus notice dissemination methods.

I find that e-proxy led to around a 1%–2.2% decrease in total shareholder participation. On average, 13.5% of shares are not voted on in my sample, due to the lack of retail investor participation. Therefore, the decrease represents an 8%–17% decrease in retail investor participation given estimates of retail investor ownership and participation.

I then examine if any change occurs in voting patterns for routine votes. I essentially use my second difference-in-differences research design, but this time I look at the routine votes rather than the non-routine votes. Bethan and Gillian (1992) and Akyol, Raff, and Verwijmeren (2017) hypothesize that brokers have an agency conflict, leading to them almost always voting for management recommendations even when proxy advisors caution against doing so. Brokers, unlike mutual funds, do not disclose which votes they made relative to the votes the actual retail shareholders made, so enforcing a breach of fiduciary duty is almost impossible. Concerns about these agency costs were one of the reasons that Dodd-Frank restricted the types of votes that could

be classified as routine. I find that as companies switch dissemination methods, and presumably monitor power transfers to brokers, the percentage of the vote that agrees with management's recommendation increases. As a falsification test, I show a similar result does not arise when I look at the non-routine votes. This has implications on potential decisions to reverse section 957 of Dodd-Frank.

Additionally, this paper provides evidence that management strategically invests in dissemination. Although the primary reason for using electronic dissemination is to save money for the firm, when a strategic or close vote takes place, management becomes more sensitive to participation of retail investors and increases spending on dissemination of proxy materials by using the more expensive physical dissemination. This shows that management is aware of how dissemination methods can affect the level of monitoring and makes dissemination choices while weighing the cost of dissemination against the benefits of increased retail investor participation. Participation might be important to management if the company is close to quorum requirements or if it believes retail investors might be more in agreement with management than institutional investors. Finally, I show that management's voluntary use of electronic dissemination has a negative association with special contests and votes that fail.

I also study implementation of Canada's similar notice-and-access regulation in February 2013. Introducing the Canadian setting into my research design helps me deal with potential measurement error because unlike in the U.S. setting, I do not have to make any inferences regarding how the information is disseminated. Furthermore, it increases the generalizability of my results, and investigates whether the Canadian changes designed to encourage participation worked. Unlike companies in the United States, companies in Canada must disclose information about the dissemination of proxy materials and are subject to different corporate governance regulations based on where they are registered. Canadian companies registered at the federal level have a much more burdensome approval process. By contrast, as of February 2013, firms registered in the major provinces adopt voluntarily. The Canadian regulation created requirements for notice dissemination very similar to requirements in the United States, with only two major design differences. The first is that companies must disclose the dissemination method. The other is that the notice must be designed so that investors will not need to go to the site with the proxy materials to vote or to know how to vote.

This paper addresses how the dissemination of information affects corporate governance. Few papers have examined the information-distribution channel. What's more, the proxy statement

setting has useful characteristics for research. The proxy statement has fewer substitutes for information related to shareholder voting than for earnings information. Thus, a clear and regulated notification of when the information is posted and how to find it is a discrete shock to search costs. We should also see no anticipatory effect besides possible early adoption. Anticipation of a new information channel does not change search costs and therefore should not affect participation before the channel is adopted. Finally, we can observe concrete and measurable decisions in the near aftermath.

By exploring retail investor participation, this paper also plumbs the costs and benefits of different dissemination methods, which is a recent area of focus in the accounting literature. Bushee, Core, Guay, and Hamm (2010), for example, show the importance of media coverage, an external voluntary disseminator of accounting information. Blankespoor et al. (2014) examine voluntary dissemination, firm use of Twitter, and increased firm liquidity. And Christensen et al. (2017) look at a regulatory dissemination change, addressing how including known information in an accounting document makes the information more impactful. My research examines both the regulated and voluntary decisions around dissemination of corporate governance documents, creating the first tie between the dissemination method and monitoring and corporate governance.

2. Regulatory Background

This paper examines two regulatory changes: the U.S. e-proxy regulation and the Canadian notice-and-access regulation.

2.1 SEC E-Proxy

The SEC's e-proxy regulation introduced electronic dissemination of proxy materials. E-proxy companies had previously been required to disseminate proxy materials physically in the mail. The SEC allowed firms to choose between two new dissemination methods: the notice method and the full-access method. In both, public companies had to make their proxy statements and annual reports available online (on a website other than EDGAR) to provide investors with more options to receive information. Additionally, companies were required to send a notice with the web address when the statements were posted online, and intermediaries were required to pass the notice to all beneficial shareholders. With the notice method, dissemination of the notice via email was sufficient. With the full-access method, the notice was simply added as part of the proxy document. Notices for how to find the proxy materials online could also be posted separately on

EDGAR as DEFA14A or as part of the proxy document, DEF 14A, depending on the dissemination method chosen.

E-proxy had a staggered introduction, which allows for a cleaner identification of the effects of electronic dissemination. On December 8, 2005, the SEC first proposed e-proxy. The earliest voluntary adoption of this portion of the regulation was allowed on July 1, 2007. Although most large firms had the proxy documents on their company's website before the legal requirement, they were restricted from sending the notice form before July 1, 2007. Large accelerated filers were required to adopt an e-proxy dissemination method by January 1, 2008. All other public companies had an effective date of January 1, 2009.

The SEC allowed some stipulations to protect investors. Investors could contact the company or their broker regarding their individual preference for receiving e-mail or physical copies of proxy statements and annual reports. The default was electronic dissemination for the notice method, and physical dissemination for the full-access method. During this time, if retail investors did not send in proxy forms 10 days before the shareholder meeting, brokers could consider them as non-participating. Requests for a change in the dissemination method from the default could lead investors to miss the 10-day cutoff. However, most investors did not deviate from the default, with most companies reporting only around 1% of investors requesting a return to physical mail if the company chose to use notice dissemination.² Lastly, the regulation required protection of the shareholders' anonymity for both dissemination methods.

E-proxy only changed the dissemination method; all else stayed the same. The SEC gave strong guidance on how the notification was to be formatted, and specified what information was required and permitted. Nothing about the contents or the formatting of the proxy document changed with the rule change. The regulation did not require online proxy voting, although it was permitted. Alternatively, the company could provide a printable proxy form or display a toll-free phone number with the online proxy material.

The SEC made this change to help reduce information-dissemination costs for firms. Because this regulation was designed to help cut costs, firms are unlikely to try to strategically avoid the regulation. For example, firms are unlikely to try to manipulate their classification as large accelerated filers.

² <https://www.sec.gov/comments/s7-28-07/s72807-169.pdf>

However, before implementation, the SEC did receive several comments that the new procedures could lead to a change in investor participation in proxy voting. The comments were split on whether this change would lead to an increase or decrease in investor participation, with more firms commenting that they believed it would increase participation. The SEC noted, in Release No. 34-55146, that more people sent in letters predicting an increase in participation than letters predicting a decrease. This response led to the SEC initially having low expectations of changes in participation.

After implementation, comments from high-level SEC employees suggest the agency started hearing complaints that e-proxy led to lower participation and that the SEC had no idea what was driving this decrease or how to verify these stories. Previous chairman, Mary Jo White, asked anyone with more information about e-proxy to contact the SEC. In a speech in 2008, SEC commissioner Paul Atkins said the distribution change might have led to an approximately 70% decrease in retail participation, which is a big enough drop to impact corporate governance.³ Because of the SEC's fear of falling participation, the agency had created a website and hotline by 2010 to help confused investors understand e-proxy.⁴

Statements like this one rely heavily on information from Broadridge, the company that has majority market share in proxy-voting logistics, and, to my knowledge, they have not been verified. Broadridge sent a letter to the SEC in 2009, after the regulation took effect, and the company's representatives met with the SEC to discuss the regulation. Appendix A, Exhibit 5, presents some of Broadridge's disclosures to the SEC regarding e-proxy. Broadridge has stated it noticed lower participation rates among beneficial shareholders from firms that chose the notice-and-access system, but said it did not have time-series data to determine why participation might have declined (Broadridge, 2009). The ISS data I use includes time-series data, which allows me to assess whether the firms that chose the notice-and-access system had lower participation before the law was enacted, and to try to determine what predicts the choice of distribution system. However, unlike Broadridge, I cannot see retail participation for routine items.

Because electronic dissemination is not specific to proxy dissemination, the SEC's impression of the cost-benefit trade-off resulting from e-proxy has continuing policy ramifications.

³ He gave estimates in which the number of retail accounts voting had "over a 70% drop" and the number of retail shares voting had "a 48% drop." Broadridge estimates that around a third of all retail investors voted before the rule change. If those figures are correct, this reaction caused between a 3.5% and 9% drop in total shareholder voting.

⁴ The website can still be found at <https://www.sec.gov/spotlight/proxymatters/e-proxy.shtml>.

The SEC has continued to push back electronic dissemination of mutual fund prospectuses. Commission members, such as Kara Stein, have said numerous times in interviews with *The Wall Street Journal*, that they are “concerned the benefits of any switch to default digital delivery, in the form of reduced printing and distribution fees, are outweighed by potential harms such as reduced investor access to critical fund reports. ‘At this time, I remain concerned about interfering with investor choice without clearer evidence that it will not do more harm than good’” (Ackerman & O’Conner, 2016).

When Canada changed its dissemination system, the provinces ended up adopting something similar to the e-proxy with two distinctions.

2.2 Canadian Notice-and-Access

On February 11, 2013, Canada launched its notice-and-access regulation from an amendment to Part 9 of NI 51-102 “Continuous Disclosure Obligation” and NI 54-101 “Communication with Beneficial Owners of Securities of a Reporting Issue.” As with the U.S. version, Canadian firms could voluntarily choose to use the notice-and-access system. Whereas the provincial corporate governance statutes had no references to notice-and-access, the Canada Business Corporate Act specifically required it. This difference created a two-tiered system in which firms registered at the provincial level could easily adopt notice-and-access, whereas firms registered at the federal level needed to get approval.

Furthermore, because the Canadian regulators were aware of the political outcry after the U.S. e-proxy regulation, they changed two things. First, Canadian firms were required to post a detailed description of proxy-dissemination practices 20 days before the meeting. This practice differed from the United States, where determination of how an investor should expect to receive proxy documents was difficult to determine from public documents, especially because some firms use a mixture of notice-and-access and full dissemination. Second, Canadian regulators changed the design of the notice in a fundamental way. Their U.S. counterparts had wanted to ensure retail investors had read the proxy documents before voting, and thus required investors to go to the website with the proxy documents to access the voting instructions.⁵ The Canadian regulators felt voting instructions should be included with the notice.

⁵ Although U.S. regulators did allow companies more flexibility with the design of the notices starting in 2010, they did maintain the principle that the design should promote reading the proxy document before voting.

Although no study has been made of the Canadian regulation,⁶ Broadridge has again provided statistics. These statistics show that, unlike in the United States, retail investor participation in Canada potentially increased somewhat with notice-and-access adoption.⁷ This finding suggests the United States could reform proxy dissemination in simple ways to increase participation without giving up notice-and-access or electronic dissemination.

3 Predictions

This paper is one of the first to investigate what drives participation in shareholder meetings. Therefore, I want to start from what we know about participation in political elections. As with the political setting, an investor's decision to vote can be represented as a maximization function whereby increased value of the firm from monitoring and psychological factors increases utility from voting. Most economic models for political voting are based on Riker and Ordeshook's "A Theory of the Calculus of voting" that gives the following model for voting:

$$V = PB + D \geq C$$

V is the latent utility from voting. P is the probability that the voter's vote will decide the vote. B is the expected monetary benefit of the voter's preferred outcome, making PB the combined expected benefit of voting (Riker & Ordeshook, 1968).

In the traditional models, D represents a civic duty to vote, but in my model, D is the psychological benefit from exercising one's right to vote. As owners of the firm who have trusted the company to an agent, investors do not have a duty to vote, as citizens do for political voting. Investors do have the right to vote and may reap psychological benefits from exercising that right, such as feeling greater connection to the company. Fama and French (2007) provide evidence that investors receive non-monetary benefits from ownership; therefore, to extrapolate some investors receive non-monetary benefits from voting is not unusual.

Lastly, C is the cost of voting. Information costs, such as the opportunity costs of finding and understanding the proxy documents, decrease participation. I assume C is a fixed cost all investors must pay and is heterogeneous to investors, but an increase in ownership will not increase C. Essentially, C is the one-time commitment of time needed to read a proxy and become informed.

⁶ As of my conversation with an Ontario Securities official on March 17, 2017, no internal review of the regulation has occurred.

⁷ They show a 7% increase in notice-and-access participation in comparison to the traditional dissemination.

Some investors will have a higher premium on their time, but ownership should have no causal relation with C, only B. C might be dependent on sophistication.

The regulation should affect the model in two ways, which I will explain in the following sections. The major predictions from the two are similar, but the policy implications differ.

3.1 Information Costs

The first way of viewing this regulation is as a shock to C. If electronic dissemination increases (decreases) information costs, I expect participation to decrease (increase). Electronic dissemination might increase information costs for retail investors for several reasons. Electronic dissemination might affect the ease with which investors can find and access the proxy document, or it might change the ease of processing the information within the proxy document.

Psychologists and educational specialists have studied the effects of electronic versus paper documents on information processing. Muter et al. (1982) find that reading speed is slower and comprehension higher for paper books than for the same material on a computer. Switchenko (1984), by contrast, finds no effect when the text formatting perfectly matches, and the difficulty of the passage is lowered. Subsequent literature finds such factors as lighting, the reader's posture, and spacing between lines often reduces or eliminates differences between the media (Osborne & Holton, 1988). Firms disseminating complicated text cannot control the lighting or the reader's posture. Randomized trials show students reading printed texts score significantly better on reading comprehension tests than those reading text off computer screens (Mangen et al., 2013).

We can reasonably assume a shock to C would have a greater effect on retail investors than on institutional investors. Retail investors are frequently less sophisticated, which might change the degree to which C changes when dissemination changes. Furthermore, many institutional investors use standardized information platforms, with additional information from proxy advisors, which would help insulate them from dissemination changes. Therefore, I would expect any participation change to be driven by retail investors, which leads to my first hypothesis.

H1: If e-proxy represents an increase (decrease) in fixed costs, participation, particularly from retail investors, will decrease (increase).

Under the information-costs model, a change in participation related to e-proxy implies a transfer of wealth among investors. Whereas the firm was previously paying some amount X to disseminate this information to unsophisticated investors, it now saves X and distributes that savings through earnings based on ownership. Unsophisticated investors, who are more likely to be small minority investors, end up either paying the shock to C or becoming disenfranchised. Thus, the new regulation would essentially move the burden of costs from large investors to small investors.

3.2 Signaling

An alternative explanation is that e-proxy creates the opportunity to signal the expected benefits of a vote. A signaling model implies B is not the same for all votes. Assume two types of votes exist: important and unimportant. The voting benefits associated with these two types are $B \in \{B_H, B_L\}$ with $B_H > B_L$. Previously, B was unobservable to investors until they incurred C , but was privately known by the management, who, before e-proxy, could not credibly communicate B before the investors incurred C . Investors make the decision to participate based on a pooled mean benefit. B_H and B_L occur with probability q and $1-q$, respectively. $PB_H + D > C$, but $PB_L + D < C$. If $P(qB_H + (1 - q)B_L) > C$, being able to distinguish between B_H and B_L will lead to an average decrease in participation.

Fewer retail investors might participate when information is disseminated electronically, because they take this form of dissemination as a signal that a vote is not important. Printing and postage makes physical dissemination costlier, potentially allowing dissemination to serve as a costly signal. Estimates from Broadridge suggest electronic dissemination of proxy materials saves the United States over \$500 million per year, and other estimates show notice-and-access saves about \$350 million per year (Broadridge, 2015).⁸ Statements from various companies suggest they save around 10%–15% of their investor relations' budget by switching to the notice method (Jones, 2008). Firms can justify the cost of important votes for which modest increases in participation could have large implications for the firm or management. For unimportant votes, this spending could be interpreted as investor-relations departments wasting money.

⁸ <http://www.broadridge.com/news-events/press-releases/Broadridge-Reports-Annual-Proxy-Season-Statistics.html>. <http://media.broadridge.com/documents/Broadridge-Distribution-and-Voting-Trends-2015.pdf>. A main difference between the two is that Broadridge does not classify institutional investors' use of electronic dissemination as notice-and-access, because it sells separate electronic platforms for dissemination to these investors.

Although I am calling this signaling, the model would have to differ slightly from the traditional Spence (1973) signaling model, which looked at education. The Spence (1973) model has one universal benefit function, wage, and two cost functions for education, depending on the type of employee. Single crossing of the cost functions means it is optimal for the two different types of employees with their two different cost functions to choose different education levels given a single benefit for a given level of education. My model contains only one cost function for all types, but the two types have different benefit functions. Voters condition participation on the dissemination method if managers with two different types of proposals, which have two different benefits from inducing participation, choose different means of dissemination. This is equivalent to investors setting their participation function based on the means of dissemination, because the net cost of the means of dissemination for an unimportant proposal is different than for an important proposal.

If a decrease in participation stems from the signaling explanation, retail investors are making more efficient uses of their time. Before, they could not differentiate between important and unimportant votes until after they had become informed on the vote. At that point, it was rational to vote. Now, able to differentiate, retail investors can better allocate their time. This interpretation differs from the one stemming from the information-costs model. Because my paper will not be able to disentangle which of these two models is driving my findings, the policy interpretation of my findings is somewhat open-ended.

Disentangling the two theories might be possible. If the signaling causes the participation decrease, Canadian reforms should not make the situation better but, instead, even worse, because the Canadian reforms make it even easier to determine how much of an investment the company has made in dissemination. In the United States, investors can ask for physical copies, and improvements to the design of the notices in the United States have been made since 2010, so the decrease in participation might weaken over time if it is caused by information-cost increases.

3.3 Participation and Voting

Non-routine does not necessarily imply importance, though a strong correlation exists. Non-routine votes are votes the New York Stock Exchange has declared brokers cannot vote when retail investors have failed to submit voting instructions. In Exhibit 4, I discuss what is considered

routine and non-routine. This classification difference creates different expectations of what will happen to the vote when participation decreases.

For non-routine matters, the broker must give a separate non-vote for the beneficial shareholders, which are retail investors or insiders. Because most retail investors own shares “in street name,” most of them are beneficial shareholders. Therefore, for non-routine issues, if retail investors are not participating, we would expect the number of these nonvotes to increase.

Bethel and Gillian (2002) provide evidence that whereas some brokers used the recommendation of proxy advisors to determine how to vote the uninstructed shares, many simply vote for the management recommendation (Bethel & Gillan, 2002). They find, for example, that routine stock-option- plan proposals receive more votes in agreement with management than non-routine stock-option plan proposals, even when controlling for ISS’s recommendation. These findings comport with much of the anecdotal evidence from activists and journalists.

The argument for why brokerages do this is rooted in agency conflicts. Especially if the brokerage is not an owner in its own right, it has no incentive to become informed. Doing so would be costly, and the broker would not receive economic benefits from the monitoring. Unlike mutual funds, brokers have no voting reporting requirement, making it difficult to hold brokers accountable for breaches in fiduciary duty related to proxy voting. By contrast, by voting with management, brokers might be able to increase connections with management, which could bring in more commissions for the brokerage. This leads to my second hypothesis.

H2: If adoption of e-proxy leads to a decrease (increase) in participation, an increase (decrease) in votes in alignment with management recommendations for routine votes will occur.

3.4 Strategic Dissemination

Assuming management is aware of the relationship between electronic dissemination and participation, managers will want to use dissemination to strategically influence the vote. In line with the prior hypotheses, management has no incentive to spend money to increase votes for routine votes that tend to be less important and for which brokers will likely vote in favor of their recommendations. For non-routine votes when brokers cannot vote in favor of their recommendations, management has the incentive to increase retail investor participation if retail investors are more aligned with their interests than institutional investors. Alternatively, these votes tend to be more important and contentious, and so management might want to increase

participation simply to have a more representative consensus from the shareholders. I use three variables to measure the likelihood of having important and contentious non-routine votes. The first is the type of meeting. Special meetings and proxy contests are called specifically because important or contentious non-routine items have arisen that voters need to consider. The second is a vote ex-post failing. Lastly, I look at whether the vote received less than 70% support and management recommended investors vote “For.” This leads to my third hypothesis.

H3: Management will invest more in dissemination for non-routine votes that management sees as important or contentious.

4. Data

4.1 Measuring Participation

In order to measure the effect on participation, I need to construct a measure of shareholder participation. I use voting data from ISS (formerly RiskMetrics), which has compiled the voting records from U.S. companies 10-K, 10-Q, and 8-K filings for the Russell 3000 firms. I define participation as Votes For + Votes Against + Votes Abstain + Votes Withheld (a classification of votes within ISS from before 2006, which lumps Votes Against and Votes Abstain together), divided by the total number of shares outstanding. ISS reports participation at the meeting item level because participation will vary between items in a meeting. Meeting items with total votes cast exceeding the total number of shares outstanding are excluded from the regression. Meeting items with no reported participation are also excluded.

Historically, true participation could be observed for only a fraction of the total companies. Before 2010, brokers could vote on behalf of retail investors on routine issues if retail investors did not vote. Brokers did not need to disclose which of the votes retail investors cast and which votes brokers cast for them. Therefore, seeing actual participation by retail investors is difficult with routine votes, which were more prevalent before 2010. Full retail participation can be seen for non-routine votes; however, those are more likely to be complex issues, and more active attempts are often made to increase participation in meetings with many non-routine votes.

In 2010, Dodd-Frank changed the definition of non-routine votes. Section 957 of Dodd-Frank required that NYSE Rule 452 be changed to include more items as non-routine. Since the change in 2010, almost every firm has at least one non-routine voting item. The full definition of

routine and non-routine votes before and after Dodd-Frank can be found in Exhibit 4. In section 5, I describe how I partition the sample either before or after Dodd-Frank.

To interpret e-proxy's effects on participation, I estimate total non-participation as a percentage of outstanding shares⁹. The regression for total non-participation can be found in Table 2 Panel A. I use the difference in participation between routine and non-routine votes to represent the amount of beneficial non-participation as a percentage of outstanding shares. The regression shows a 13.5% average, which I use for interpreting the results of my participation tests. I have also calculated yearly regressions on the difference between routine and non-routine votes with meetingid fixed effects. Estimates resulting from the use of this method are very similar to estimates of participation from taking the average broker non-votes divided by outstanding shares for non-routine votes during a calendar year.

One issue with any other previous estimate is that they could never estimate non-participation for the entire US market, all previous estimates were skewed by a small sample. In Panel B, I estimate the yearly averages post Dodd-Frank where I can now give the average of non-participation for the entire Russell 3000. I use Thompson Reuter's Data to subtract institutional and insider ownership to provide the estimate of individual investor participation (retail and insiders). In Panel C, I show this estimate partitioned by size of total asset quantiles. For the total sample, individual participation is 46%. Participation is highest for the largest firms (59.7%), and lowest with the middle quantile (32.5%). This is higher than the number that SEC officials usually cite in speeches, policy documents, and testaments to congress, which is based off reports for Broadridge. Broadridge does not typically provide much information about the construction of its estimate; however, they do mention removing all institutional ownership and they not mention removing insider participation. Theoretically, Broadridge and I should be measuring the same construct, although they might be reporting in percentage of investors, while I am reporting it in percentage of shares. To my knowledge, I am the first academic to try to construct this variable.

⁹ Akol et al. (2016) reported an estimate just for 2009 fiscal year of roughly 12%, which is consistent with my calculation of 12.1% for the same time frame. Bethel and Gillan (2002) estimated between 11-13.6% for 1997 off a sample of 320 votes from larger firms larger than the general population. Cvigenoic et al. (2017) claims that there is 73% turnout for "discretionary voting", which includes pensions and hedge funds because they claim that SEC Final Rule IA-2106 is not "practically enforced" for those institutions. However, such institutions typically have at least a 95% participating rate, where non-participation is often caused by unusual circumstances such as a sale of the shares between the record date and the meeting, because they still have a fiduciary obligation and can be legally liable for non-participation. Therefore, I have no issue removing their ownership to obtain a more relevant measure of participation.

4.2 Measuring Treatment

Next, I construct two measures of electronic dissemination. The first, which I call regulation, is based off the e-proxy regulation. Companies with a public float of more than \$700 million, classified as “large accelerated filers,” were required to allow investors the option to receive their proxy material and annual statements in the mail or electronically. I hand-collected the public float from 10-K filings for 2007 and 2008 to determine whether a firm would be required to adopt the SEC e-proxy and verified the results with Audit Analytics.

I identify adoption of e-proxy by the inclusion of “Availability of Proxy Materials” in either the definite proxy document (DEF 14A) or an additional definite proxy document (DEFA14A)¹⁰. The full-access method requires the company to include in the physically distributed copy a page informing investors of the new website location of the proxy materials. The emails used in the notice-and-access dissemination allowed by e-proxy are one of the many types of disclosures that fall under the DEFA14A category. Other types of disclosures include social media posts about the shareholder meeting, PowerPoint slide presentations from the shareholder meeting, and letters to large investors related to shareholder meeting items. The appearance of the notification in a DEFA14A shows that the company created a separate email notification and is at least partially using the notice-dissemination method.

Not all companies that adopt e-proxy file a DEFA14A, which could lead to noise in my measure of treatment. Broadridge claims that at least 40% of all shareholder meetings use notice-and-access, and the percentage among larger firms is even greater. However, in Table 6, I find only around 31% use notice-and-access. The discrepancy ultimately comes from the legal counsels of non-DEFA14A filing firms. The courts have given materiality rules to §240.14a-6(b) following the ruling in *TSC Industries, Inc v. Northway, Inc*, 426 U.S. 438 (1976); in order to prosecute, the rule requires a substantial likelihood that a reasonable stockholder would consider information important in deciding how to vote on a matter. Application of materiality varies widely between companies, leading to highly divergent disclosure policies regarding any kind of additional proxy material. If I assume the missing DEFA14As are due to the respective legal counsel not considering the notice material, I would be concerned that the posting of a DEFA14A might simply reflect the

¹⁰ According to the Federal Regulation allowing e-proxy, §240.14a-16(h)(2)(i), “the registrant must file a form of the Notice of Internet Availability of Proxy Material with the Commission pursuant to §240.14a-6(b).” §240.14a-6(b) requires all other soliciting material besides the definite proxy statement to be filed with the commission, which is why the DEFA14A for additional proxy materials was created.

legal counsel revising materiality rather than the firm changing its practice. The total number of DEFA14As does seem to increase around contentious elections, but I find that companies that previously filed notices as DEFA14As stop around contentious elections.

The issues with identifying a firm's dissemination method in the United States are alleviated in Canada. In Canada, companies must disclose before all shareholder meetings how they will be disseminating proxy materials, as an additional line in a highly enforced document. Canadian firms also need to explain their criteria for determining use of notice-and-access if they selectively use notice-and-access for only certain parts of their investor base. I refer to criteria to determine which portion of the investor base will use notice-and-access as stratification criteria. In Canada, most reported stratification criteria fall under three types. The first type is whether the investor is a registered or beneficial shareholder. The second type is the physical location of the shareholder. The last type is the number of shares held by the shareholder. Because few incentives to misreport the company's dissemination practices to regulators exist, these data should have minimal measurement noise.

In my Canadian test, I will use the Global ISS data that starts in 2013, plus additional voting data provided to me by the Canadian Securities Administrators compiling public voting data starting in 2010. According to my agreement with the Canadian Securities Administrators, I can provide only aggregate-level statistics on my data. Because the Canadian securities market is much smaller than the U.S. securities market, and because they adopted later, I will have a smaller sample with the Canadian setting.

4.3 Sample and Controls

My sample extends from 2005–2015. I exclude companies that Compustat reports as non-U.S. firms, because most foreign filers are not subject to Rule 14(a) for my main tests. Institutional ownership data comes from Thompson Reuter's 13F database, using the total institutional ownership as a percentage of the outstanding shares variable. More information about the construction of controls can be found in Appendix B. Table 1 provides the descriptive statistics for all variables.

5. Research Design and Results

In my analyses, I first identify the effect that electronic dissemination of proxy materials had on retail investor participation and voting outcomes. Then, I provide evidence that

management is switching dissemination methods during important elections where management might want to increase participation.

5.1 Effect of Electronic Dissemination on Participation

In this section, I assess the effect that adoption of electronic dissemination had on retail investor participation. I use two empirical designs to identify the effect. The first, Design 1, relies on variation between routine and non-routine votes within a single meeting. The second, Design 2, examines just the non-routine issues and relies on the variation in adoption time between firms.

5.1.1 Design 1

First, I use a triple difference (DDD) design in which I examine participation changes for non-routine votes in the treatment group during the post period. Participation will vary within a meeting for every vote as investors may choose not to vote at all on a particular issue. Routine votes would not show much of a participation change if retail investor participation patterns changed, because most retail investors own shares beneficially, and the institutional brokers would perfectly offset any change in participation from beneficial retail investors. Therefore, I use them as a control group, thereby controlling for any shock that might affect beneficial and registered shareholders' participation equally. Non-routine votes by firms not in the treatment group will also serve as a control. My model, suppressing year, firm, and voting item subscripts, is:

Participation

$$= \alpha + \beta_1 \text{Regulation or DEFA} * \text{non} - \text{routine} + \text{Controls} + \text{Meeting}_{FE} \\ + \text{Non} - \text{routine} * \text{Year}_{FE} + \varepsilon. \quad (1)$$

The dependent variable is participation. The variable of interest is either Regulation*non-routine, my measure of treatment based on which firms were subject to the e-proxy regulation interacted with an indicator variable that equals one when the vote is non-routine, or DEFA*non-routine, my measure of treatment based on observation of a DEFA14A filing of a notice interacted with an indicator variable that equals one when the vote is non-routine. Thus, the coefficient estimate β_1 will be positive if the regulation increased participation or negative if it decreased participation. I include meeting fixed effects to control for firm and time varying characteristics. I include meeting-level fixed effects, because multiple meetings are held per year, and meeting fixed

effects subsume firm*year fixed effects. I include year*non-routine fixed effects to control for time trends in the retail participation. I cluster observations at the firm level.

Because little empirical evidence of what drives participation in shareholder meetings is available, I first use my model to determine the controls for the regression. In the model, the major source of omitted-variable bias would have to come from a simultaneous shock to D, which in this setting is psychological benefits retail investors receive for exercising their right to vote. Most variables the political science field has associated with D are unobservable in this setting. I use both my fixed effects structure and several controls to deal with shocks to D. In talking to corporate governance consultants tied to Broadridge and PricewaterhouseCoopers, I found they focused on whether the topic of the vote was likely to inspire investors' loyalty to the firm. Because they typically use the description of the vote, such as whether it was a merger vote or a compensation vote, to determine their expectation of retail investor loyalty, I control for several different types of votes. The contentiousness of the vote might also be a factor that is associated with the importance an investor might place on exercising his right; therefore, I control for the closeness of the voting result.

I also use the literature on voting outcomes and the criteria for treatment to determine controls. Cai, Gerner, and Walkling (2009) find director meeting attendance and ISS recommendations had the biggest economic impact on shareholder votes for directors. Unfortunately, I do not have ISS recommendations; therefore, I include a variable to interact earnings per share with non-routine votes. Because firm size drives the variation, I add two controls to obtain interactive effects based on the logged total assets and logged market value of the company.

5.1.2 Design 2

One potential concern of Design 1 is that the changes in non-routine votes over time, particularly due to Dodd-Frank, might be influencing the results. Design 2 addresses this concern by limiting the sample to include only non-routine votes from before Dodd-Frank changed NYSE Rule 452. Restricting both the years and the type of vote significantly decreases the sample size. I use a standard difference-in-differences model. My model for Design 2, suppressing year, firm, and voting item subscripts, is:

$$Participation = \alpha + \beta_1 Regulation\ or\ DEFA + Controls + Year_{FE} + Firm_{FE} + \varepsilon. (2)$$

The dependent variable is still participation. The variable of interest is Regulation or DEFA, my two measures of e-proxy adoption. I include year fixed effects to control for time trends in participation. The year fixed effects and controlling for Delta Earnings should control for the recession. I include firm fixed effects to control for time-invariant characteristics of the company investor-base and participation. The concern with this regression is that because it relies on changes in the time of adoption, I might not be able to sufficiently control for the differences in other time-variant firm characteristics not related to the e-proxy regulation. However, Design 1 addresses that concern because it uses within meeting variation allowing the firm within the same time period to be its own control.

5.1.3 Estimates on Participation

The estimates of the effect on participation can be found in Table 3. Column 1 shows a statistically significant decrease of around 2.2%. Given the estimates from Table 2, I can interpret this as a 16.3% increase in non-participation. For Design 1, I cluster the standard errors by firm, although in non-tabulated results, I find this result is robust to industry or firm and year clustering. Because the dependent variable is a fraction out of 1, we can interpret the coefficient as a percentage decrease in total shareholder participation. Column 2 estimates the effect using the second research design. The estimate in Column 2 is economically similar to the result in Column 1, although the statistical significance has decreased even given the clustering change to meeting level cluster to adjust for the decrease in degrees of freedom.

Columns 3 and 4 shows the results using the DEFA measure. I find a negative correlation, suggesting around a 2.2% decrease in the total participation effect using Design 2 and 1% using Design 1. Results for both columns are robust to firm and industry clustering. Ideally, the DEFA measure would be stronger than the regulation measure because I have more confidence that the firms are actually using e-proxy. Because I know my measure of DEFA is underreporting e-proxy usage, it is hard to disentangle whether measurement error in DEFA or an omitted variable bias in Design 1 is driving the discrepancy in the estimates. This is why including the Canadian Data is valuable.

5.2 Institutional Ownership Splits

To assess whether firms with higher retail ownership are driving the results, I partition the sample from Table 3 into high and low institutional investor groups. If little or no retail ownership is present, we should see little to no impact on participation from a dissemination shock that primarily affects retail shareholders. I proxy for a subset of firms, where p , the probability that the retail investor might be influential, is zero if institutional owners vote as a block. If the probability of institutional investors disagreeing is small, the average benefit should not be above cost. When p is sufficiently small, a shock to C would have little effect on participation, because voting leads to almost no monetary benefit.

I define high institutional ownership as firms with more than 66% institutional ownership, because that percentage would be enough to ensure that institutional ownership alone could completely decide a vote if institutional owners had complete agreement. Although many companies vote along a simple majority, many companies have supermajority requirements for important votes. Using a 66% threshold would help identify firms that could theoretically decide the vote with only institutional voting even in the case of a two-thirds supermajority requirement.

Table 4 shows the results of this split. Columns 1 and 2 estimate the effect of electronic dissemination on participation using the first empirical design and the regulation measurement with low and high institutional ownership, respectively. Columns 4 and 5 estimate the effect on participation with the DEFA14A measurement and with low and high institutional ownership, respectively. Columns 3 and 6 have the results from the Chi-squared test of statistical difference between the coefficients for the high and low institutional ownership firms. The Chi-squared test of statistical difference reports that firms with lower institutional ownership appear to have a statistically larger effect from a change in dissemination than firms with a supermajority of institutional ownership. I have also used the median institutional ownership to separate the groups. I find similar results with the regulation measure, although the DEFA measure loses statistical significance in the test between the two groups. I cannot do a split of the data using the second research design because of power issues.

5.3 Electronic Dissemination and Voting Results

Next, I estimate how change in participation affects voting outcomes. Because uninstructed votes are treated differently, my predictions vary, depending on whether the vote is classified as routine or non-routine. Therefore, I have partitioned my sample based on the classification of the

vote. Table 5 shows the results for routine votes. Because I want to partition my sample based on whether the vote is routine, and because Dodd-Frank has limited non-routine issues, I use the second empirical design, Design 2. The dependent variable for all columns is the percentage of the vote out of the total voting base that agrees with management's recommendation. Different meetings will have different voting bases depending on the company charter. I use ISS data on both the voting base and management's recommendation. If management recommends voting against a shareholder proposal and the charter specifies the voting base is votes for, against, or abstaining, the dependent variable is the number of votes against the proposal over the total number of votes for, against, and abstaining. The results are robust to using the outstanding votes as the base; however, the tabulated dependent variable closely captures the actual outcome of the vote and is the dependent variable management would care about. This leads to the following revised version of my Design 2 model:

$$\text{Management For} = \alpha + \beta_1 \text{Regulation} + \text{Controls} + \text{Year}_{FE} + \text{Firm}_{FE} + \epsilon. \quad (4)$$

Table 5 reports results for whether adoption is associated with the percentage of the vote agreeing with management's recommendation. With both my measures of e-proxy adoption, I see a statistically significant increase in the percentage of votes in agreement with management. I include a falsification test in the third and fourth columns, where I look at non-routine rather than routine votes. For the non-routine votes, I do not find an increase in the percentage of the vote agreeing with management's recommendation. With non-routine votes, the vote is not given to the brokers. This result can be interpreted as the brokers being more likely than the retail investors to vote in agreement with management but the retail investors not having statistically different voting patterns than institutional owners.

5.4 Strategic Dissemination

Lastly, I test for correlation between the decision to use the notice method and management's strategic reasons for wanting to increase participation. This test captures whether management appears to be investing more in dissemination during important or strategic elections. I restrict my sample to years after 2010, by which time all firms have had time to comply with e-proxy. My strategic dissemination model, suppressing year, firm, and voting item subscripts, is as follows:

$$Postal\ Mail = \beta_1 proxy\ contest + \beta_2 special + \beta_3 vote\ fail + \beta_4 Close\ Management\ votes + Size + Fixed\ effects + \varepsilon. (5)$$

The dependent variable captures the voluntary use of postal mail to disseminate the proxy materials. The dependent variable is an indicator variable for whether the company filed its electronic notice as a DEF14A on the SEC website, where a 1 represents that the company has not filed a notice. I have four measures of whether management sees the vote as important. The first is whether this vote is a proxy contest. The second is whether a special election has been called to vote on important issues that cannot wait until the next annual shareholder meeting. The third measure is whether the vote ex-post failed. The fourth measure is for close votes in which management is recommending investors vote in favor of the vote passing. I include year fixed effects to control for any time varying factors that might affect either method of dissemination or my ability to detect dissemination through EDGAR filings. Because dissemination methods tend to remain the same from year to year, I estimate this test with firm and then industry fixed effects. The firm fixed effects with control for time-invariant firm variation includes much of the variation driven by management disclosure time and investor-base characteristics. The main nonstrategic benefits of electronic dissemination relate to economies of scale, so firms with larger investor-bases and more cost-efficient departments are going to be more likely to adopt. Therefore, I include measures that reflect the size of the firm and the investor base.

In Table 6, I find that there is a positive statistically significant correlation between postal dissemination and my measures of important votes. The first column shows the results with firm fixed effects. Three measures capturing important or strategic votes all have positive (negative) correlations with the measure of postal dissemination (electronic dissemination): proxy contest, special meeting, and close management votes. The second column also shows all four measures are at least weakly significant. I plan to estimate the same regression using the cleaner Canadian data.

Importantly, although this provides evidence that management is strategic with regard to dissemination, it does not imply anything about an agency conflict between investors and management. Particularly when considering the signaling theory of how electronic dissemination can affect participation, investors could be made better off if management disseminates using postal mail during only important elections.

5.6 Descriptive Information About Dissemination Switches and Stratification

To help interpret the results of Table 6, I document how many companies change dissemination methods. In Table 7, I show that dissemination methods change in about 4.4% of shareholder elections and that 166 companies switch methods within a single year. Most of the company switches within a single year are one-time switches to physical dissemination for a special meeting. This is consistent with my finding that only about 11% of special elections and proxy contests report using electronic dissemination in comparison to 31% for the total population for the same time period.

After implementation in the United States, there were reports from law firms of companies having different default forms of dissemination for different types of investors. The National Investor Relations Institute surveyed IR departments in August of 2008, and they reported that 42% took a stratified or hybrid approach. The stratification criteria were reported as being “fairly evenly distributed across those who differentiated based on number of shares held, by beneficial versus registered holders, and “other” which included geographical delineations, 401K participants (who received full packages) and variants on the above” (NIRI, 2008). There were even some reports of the default form of dissemination being tied to whether an investor had voted in the last election.

In the U.S. setting, I cannot observe when this behavior is going on, nor can I gauge the full extent of it. I assume any company disclosing that they used the notice method of dissemination used it for all investors who did not specifically call the company to request a physical copy. When the Canadians adopted their version of e-proxy in 2013, they required that companies disclose any stratification of the dissemination method. Although disclosure might moderate behavior, this can give some estimate of how prevalent the practice might be in the United States. This is helpful because I could be considering firms treated that only are receiving a partial treatment.

Table 7, Panel B, shows the different criteria Canadian firms use to determine which of their investors receives which form of dissemination, given that the firm uses different dissemination methods for different investors. Only a small percentage of the Canadian sample uses stratification, and the majority that do use the beneficial versus registered investor distinction to determine method of dissemination. Because I rely strongly on the use of broker non-votes to identify retail investors, that type of stratification is least likely to bias my results. These findings

are different from NIRI's survey. This could imply that NIRI's survey data was not representative of the general population or that disclosure of stratification moderates the behavior. For example, there were a small handful of Canadian companies that disclosed that their stratification criterion was "to be determined" or "to follow" and then filed an amended form right before the election disclosing actual dissemination. Because US filers would not need to amend financial documents over last minute dissemination changes, they might be more likely to actually engage in last minute changes although that behavior would need to be significantly more common than what I am observing in Canada to bias results.

5.7 Robustness and Limitations

One potential limitation to this study is that I may have misclassified some of the DEFA14A changes. Although a change in a company's disclosure policy is still a potential concern, I hand-checked the classification of over 400 elections in which only one DEFA14A was filed but multiple elections took place in that year to guarantee that I was reporting the correct dissemination method with the right election. The inclusion of future Canadian results can help confirm a dissemination change rather than a disclosure change drives the results.

Another potential limitation is related to outliers in the size of the firm or regarding election turnout. Reported regressions have truncated samples based on the size of the company, but all results are robust to removing that truncation. I have also removed elections with no reported participation, even if broker non-votes are reported; however, all results are robust to their inclusion.

I have performed several other untabulated robustness checks that I can provide upon request. Although I use the tightest fixed effects structure for my first empirical design, the results are robust to using firm*year fixed effects rather than meeting fixed effects and for the exclusion of the routine*year fixed effects in Table 3, Panel A. I also clean public float data from 2008 and control for the interaction between logged public float and non-routine votes with a 2006-2009 timeframe, and find similar results.

6. Conclusion

This paper shows that the means of information dissemination affects investor monitoring and corporate governance. It also provides evidence that management strategically invests more

in dissemination for important votes, which shows that companies realize the role dissemination can play in corporate governance. My results confirm a decrease in participation occurred with the adoption of electronic dissemination in the United States. At the same time, the results may provide some reassurance to policymakers because of the selection. The firms that chose to use e-proxy were large with high total participation and with routine and non-controversial items on their ballots. Furthermore, if the signaling model explains this result, retail investors are being made better off.

These findings are of interest to policymakers. American policy-makers have frequently stated interest in research related to this topic specifically and generally around shareholder participation. This study also pertains to more than American policy; very public SEC debates such as this one affect policy positions of other countries too. E-proxy has made it easier to adopt the notice-and-access method than is true in many international systems. Member states of the European Union could use electronic dissemination, but companies were required to obtain written consent before sending information electronically (Zetsche, 2007).¹¹ Surveys of Japanese companies found the burdensome consent requirements explained why less than 3% of companies had adopted the Japanese version of e-proxy (Tanaka, 2015). Although making the system more permissive could lead to clear efficiency gains, the negative reaction from firms in the United States in the early years of adoption raised concern. Nowhere was that concern clearer than with the Canadian Securities Administration.

Part of what makes my paper useful to regulators is the lack of research on retail investor participation. Corporate finance has a large literature on the effects of proxy voting and how it affects the balance of power in agency conflicts with asymmetric information. Theories on the effects of corporate proposals on the value of the firm implicitly make assumptions regarding whether uninformed control creates or destroys value. Recent papers show proxy voting can lead to positive monitoring effects. Ertimur et al. (2010) find poorly performing managers were more likely to have their compensation package rejected in “say on pay” votes. Bach and Metzger (2014) similarly show managers who do not implement approved corporate governance proposals are dismissed. And Cunat, Gine, and Guadalupe (2012, 2013) find positive valuation effects from approved shareholder proposals. While there is a large literature on voting outcomes, the literature has rarely mentioned participation.

¹¹ Article 17 (3) of the Transparency Directive

Over time, ownership has become more concentrated, with many retail investors investing through institutional investors. Papers have examined the role of institutional investors in corporate governance and shareholder outcomes. Appel et al. (2016) find an increase in passive shareholders due to classification in the Russell 2000 leads to more involvement by activist investors. The natural assumption is that retail investors are the default and that an increase in institutional investors is the same as a decrease in retail investors. However, these papers do not look directly at retail investor participation in shareholder meetings. Thus, they cannot determine if institution ownership increases corporate governance because institutions are frequently required to monitor or because they are more sophisticated voters. My findings suggest that in studies using voting data before 2010, low retail investor participation was causing discretion to fall toward brokerages, who vote differently than retail investors themselves.

References

- Ackerman, Andrew, O'Connor, Patrick (August 2006) Print Is Dead? Not in Mutual-Fund Reports - <http://www.wsj.com/articles/print-is-dead-not-in-mutual-fund-reports-1472064595>
- Akyol, A. C., Raff, K., & Verwijmeren, P. (2016). The Elimination of Broker Voting in Director Elections *. Retrieved from <http://ssrn.com/abstract=1973558>
- Anderson, A.-M., & Nayar, N. (2013). Board of Directors and Shareholder Value: New Evidence. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.295.3248>
- Aguilar, L. A. (2015, February 19). *Ensuring the Proxy Process Works for Shareholders*. Speech presented at Roundtable on Proxy Voting, Washington, DC. Retrieved from <https://www.sec.gov/news/statement/021915-psclaa.html>.
- Paul S. Atkins, Shareholder Rights, the 2008 Proxy Season, and the Impact of Shareholder Activism, Speech before the U.S. Chamber of Commerce, Washington, D.C., July 22, 2008
- Bach, Laurent and Metzger, Daniel, Why Do Shareholder Votes Matter? (August 2015). Swedish House of Finance Research Paper No. 13-01. Available at SSRN: <http://ssrn.com/abstract=2247084>
- Becker, Bo and Bergstresser, Daniel and Subramanian, Guhan, Does Shareholder Proxy Access Improve Firm Value? Evidence from the Business Roundtable Challenge (January 19, 2012). Harvard Business School Finance Working Paper No. 11-052; Available at SSRN: <http://ssrn.com/abstract=1695666> or <http://dx.doi.org/10.2139/ssrn.1695666>
- Bethel, J. E., & Gillan, S. L. (2002). The Impact of the Institutional and Regulatory Environment on Shareholder Voting. *Financial Management*, 31(4), 29–54. <https://doi.org/10.2307/3666173>
- Blankespoor, Elizabeth and Miller, Gregory S. and White, Hal D., The Role of Dissemination in Market Liquidity: Evidence from Firms' Use of Twitter (April 24, 2013). *Accounting Review*, 2014, Vol. 89, No. 1, pp.79-11
- Bricker, J., Dettling, L. J., Henriques, A., Hsu, J. W., Moore, K. B., Sabelhaus, J., ... Krimmel, J. (2014). Changes in U.S. Family Finances from 2010 to 2013: Evidence from the Survey of Consumer Finances, 100(4). Retrieved from <https://www.federalreserve.gov/pubs/bulletin/2014/pdf/scf14.pdf>
- Broadridge (2015). "Distribution and Voting Trends in 2015" <http://media.broadridge.com/documents/Broadridge-Distribution-and-Voting-Trends-2015.pdf>
- Broadridge (2016). " Analysis of Distribution and Voting Trends Fiscal Year Ending June 30, 2016". https://www.broadridge.com/_assets/pdf/broadridge-analysis-of-traditional-and-notice-access-issuers-na-adoption-distribution-and-voting.pdf
- Bushee, B. J., Core, J. E., Guay, W., & Hamm, S. J. W. (2010). The Role of the Business Press

- as an Information Intermediary. *Journal of Accounting Research*, 48(1), 1–19.
<https://doi.org/10.1111/j.1475-679X.2009.00357.x>
- Bushman, Robert M. and Smith, Abbie J., Financial Accounting Information and Corporate Governance (April 2001). JAE Rochester Conference April 2000. Available at SSRN: <http://ssrn.com/abstract=253302>
- Cai, J., Garner, J. L., & Walkling, R. A. (2009). Electing Directors. *Journal of Finance*, 64(5), 2389–2421.
- Christensen, Hans Bonde and Floyd, Eric and Liu, Lisa Yao and Maffett, Mark G., (2017). The Real Effects of Mandated Information on Social Responsibility in Financial Reports: Evidence from Mine-Safety Records. *Journal of Accounting and Economics*
- Code of Federal Regulation 240.14a-16(h)(2)(i)
- Coval, J. D. and Moskowitz, T. J. (1999), Home Bias at Home: Local Equity Preference in Domestic Portfolios. *The Journal of Finance*, 54: 2045–2073. doi:10.1111/0022-1082.00181
- Cuñat, V., M. Gine and M. Guadalupe (2012). "The Vote Is Cast: The Effect of Corporate Governance on Shareholder Value." *The Journal of Finance* 67(5): 1943-1977.
- Cuñat, V., M. Gine and M. Guadalupe (2013). "Corporate Governance and Value: Evidence from “Close Calls” On Shareholder Governance Proposals." *Journal of Applied Corporate Finance* 25(1): 44-54.
- Davis, G. F., & Kim, E. H. (2007). Business ties and proxy voting by mutual funds. *Journal of Financial Economics*, 85(2), 552-570. Chicago
- Eugene F. Fama, Kenneth R. French, Disagreement, tastes, and asset prices, In *Journal of Financial Economics*, Volume 83, Issue 3, 2007, Pages 667-689, ISSN 0304-405X, <https://doi.org/10.1016/j.jfineco.2006.01.003>.
- Jeffrey N. Gordon, “Proxy Contests in an Era of Increasing Shareholder Power: Forget Issuer Proxy Access and Focus on E-Proxy,” 61 *Vanderbilt Law Review* 475 (2008), 489
- Hearings on H.R. 1493, H.R. 1821, and H.R. 2019 before the House Committee on Interstate and Foreign Commerce, 78th Cong., 1st Sess. 172 (1943)
- Kaiser, S., Snider, B., & Lewis, P. (2013). *An equity investor ’ s guide to the Flow of Funds Accounts*.
- Karpoff J.M., Malatesta P.H., Walkling R.A. (1996) Corporate governance and shareholder initiatives: Empirical evidence *Journal of Financial Economics*, 42 (3), pp. 365-395.
- Kempf, Elisabeth and Manconi, Alberto and Spalt, Oliver G., Distracted Shareholders and Corporate Actions (July 8, 2016). *Review of Financial Studies*, Forthcoming
- John, Klose and Klein, April, Shareholder Proposals and Corporate Governance (March 1995). NYU Working Paper No. FIN-98-046. Available at SSRN: <http://ssrn.com/abstract=1297750>

- Jones, Dominic (2008), "Firms blame Broadridge, SEC for e-proxy snafus",
<http://irwebreport.com/20080220/firms-blame-broadridge-sec-for-e-proxy-snafus/>
- Leuz, Christian and Wysocki, Peter D., Economic Consequences of Financial Reporting and Disclosure Regulation: A Review and Suggestions for Future Research (March 2008). Available at SSRN: <http://ssrn.com/abstract=1105398>
- Lombardo, D., and M Pagano, 2002, Law and Equity Markets: A Simple Model, Working paper No. 25, University of Salerno
- Mangen, A., Walgermo, B. R., & Brønnick, K. (2013). Reading linear texts on paper versus computer screen: Effects on reading comprehension. *International Journal of Educational Research*, 58, 61–68. <http://doi.org/10.1016/j.ijer.2012.12.002>
- Martin Lipton, Steven A. Rosenblum (1991) A new system of corporate governance: The quinquennial election of directors *University of Chicago Law Review*, 58, pp. 187–253
- P. Muter, S.A. Latrémouille (1982), W.C. Treurniet, P. Beam Extended reading of continuous text on television screens *Human Factors*, 24, pp. 501–508
- Osborne, D. J., & Holton, D. (1988). Reading from screen versus paper: there is no difference. *International Journal of Man-Machine Studies*, 28(1), 1–9. [http://doi.org/10.1016/S0020-7373\(88\)80049-X](http://doi.org/10.1016/S0020-7373(88)80049-X)
- Piwowar, M. (2015). *PROXY VOTING ROUNDTABLE*. Speech presented at SEC Roundtable, Washington, DC. Retrieved from <https://www.sec.gov/spotlight/proxy-voting-roundtable/proxy-voting-roundtable-transcript.txt>
- Pozen, Robert C. (1994) Institutional investors: The reluctant activists Jan.-Feb *Harvard Business Review*, pp. 140–149
- Riker, W. H., & Ordeshook, P. C. (1968). A Theory of the Calculus of Voting. *American Political Science Review*, 62(1), 25–42. <https://doi.org/10.2307/1953324>
- Ryan, Patrick J. (1988) Rule 14a-8, institutional shareholder proposals, and corporate democracy *Georgia Law Review*, 23, pp. 97–184
- Shapiro, Mary (2009) " Address to the Practising Law Institute's 41st Annual Institute on Securities Regulation" <https://www.sec.gov/news/speech/2009/spch110409mls.htm>
- Michael Spence, (1973). "Job Market Signaling," *The Quarterly Journal of Economics*, Oxford University Press, vol. 87(3), pages 355-374.
- Solomon, D. (2017, May 10). The Voice: The Minority Shareholder’s Perspective. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2868725
- Switchenko, (1984) D.M. Reading from CRT versus paper: the CRT-disadvantage re-examined Proceedings of the 25th Annual Meeting of the Human Factors Society, HFS, Baltimore

Tanaka, W. (2015). Shareholder Meetings and Corporate Governance: With a Focus on Electronic Provision of Reference Materials for Shareholder Meetings. *Public Policy Review*, 11(3), 451-474.

Van der Elst, C. (2011) "Revisiting shareholder activism at AGMs: Voting determinants of large and small shareholders," ECGI-Finance Working Paper

Wohlstetter C (1993) Pension fund socialism: Can bureaucrats run the blue chips? Jan.–Feb *Harvard Business Review*, 71, p. 78

Appendix A

Exhibit 1:

Companies had to choose between two new dissemination methods: full access and notice. Large accelerated filers were required to make the switch on January 1, 2008, and all public companies were required to adopt by January 1, 2009. Companies could freely switch back and forth between full access and notice.

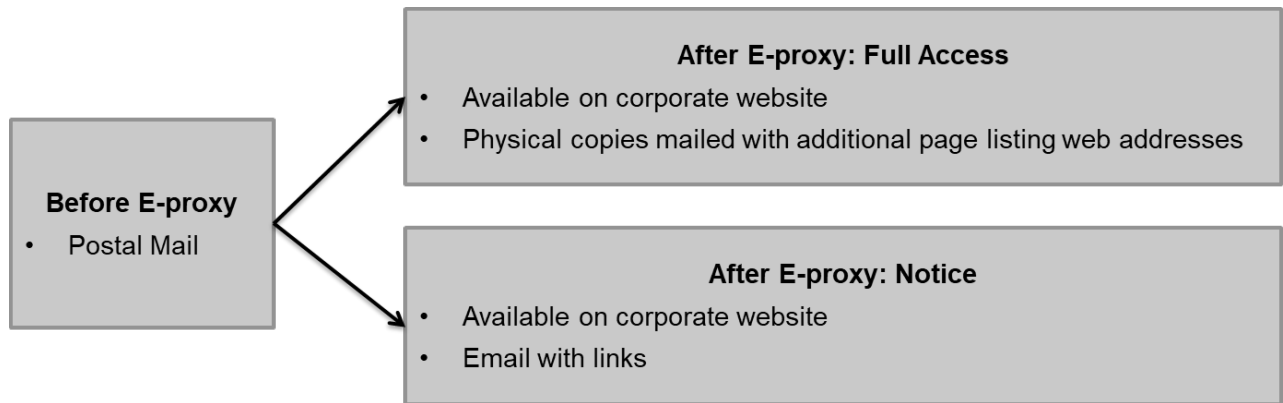


Exhibit 2: Notice

Below is an example of a notice-and-access form from Computershare. Alcoa filed this notice as a DEFA14A on March 17, 2017. Two major companies are in charge of proxy dissemination: Computershare and Broadridge.



Important Notice Regarding the Availability of Proxy Materials for the Alcoa Corporation Annual Meeting of Stockholders to be Held on May 10, 2017

You are receiving this notice that the proxy materials for the Alcoa Corporation 2017 Annual Meeting of Stockholders are available on the Internet. Follow the instructions below to view the materials and vote online or request a paper or email copy. Information about the items to be voted on and the location of the annual meeting are provided on the reverse side of this notice.

This communication presents only an overview of the more complete proxy materials that are available to you on the Internet or by mail. We encourage you to access and review all of the important information contained in the proxy materials before voting.

The 2017 Proxy Statement and 2016 Annual Report (including Form 10-K) are available at:

www.ViewMaterial.com/AA



Easy Online Access – A Convenient Way to View Proxy Materials and Vote

When you go online to view materials, you can also vote your shares.

Step 1: Go to **www.ViewMaterial.com/AA** and view the proxy materials.

Step 2: Click the icon to vote your shares.

Step 3: Enter the 11 digit control number (located by the arrow in the box below).

Step 4: Follow the simple instructions to record your vote.

You are able to vote online until 6:00 a.m. (EDT) on May 10, 2017.

When you go online, you can also help the environment by consenting to receive electronic delivery of future materials.



Obtaining a Copy of the Proxy Materials – If you want to receive a paper or email copy of the proxy materials, you must request one. There is no charge to you for requesting a copy. Please make your request for a copy as instructed on the reverse side on or before April 26, 2017 to facilitate timely delivery.



Exhibit 3: Ownership Structure

This figure shows how proxy information flows through the ownership structure. Information flows from the firm through any relevant intermediaries to the investors. The boxes with the blue border (gray if printed black and white) show the groups that will attend the shareholder meetings. This information matters because the broker has the right to make discretionary voting over beneficially owned shares for routine issues when voting instructions have not been received after legal dissemination of proxy materials. I use the difference between participation in votes where brokers have discretionary voting rights and participation in votes where they do not to estimate the level of retail investor nonparticipation.

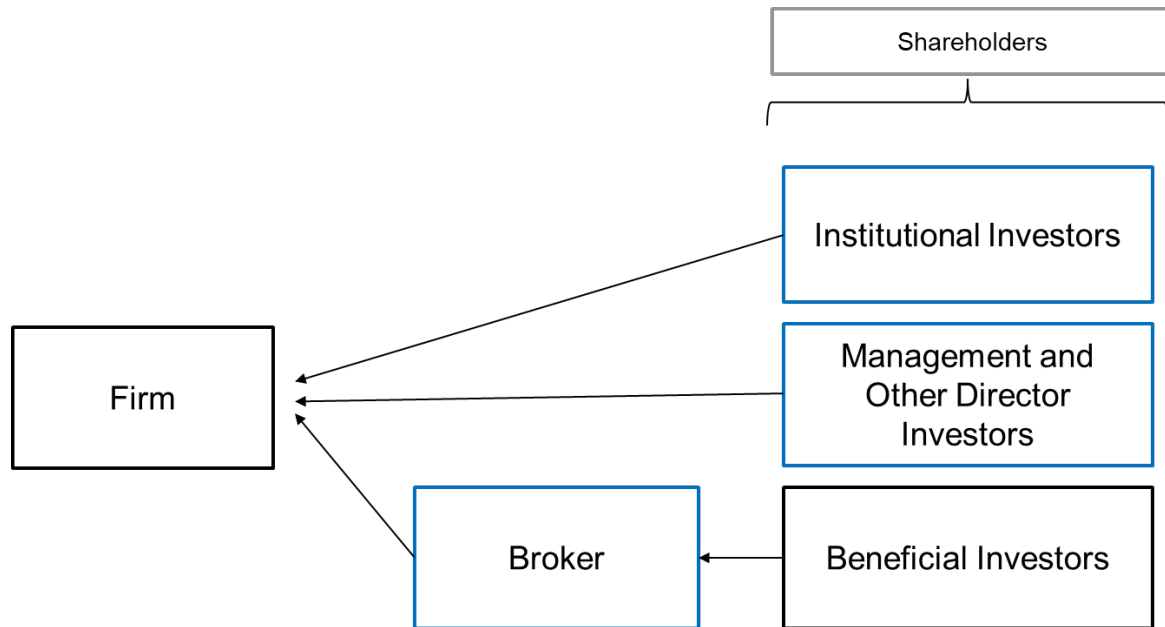


Exhibit 4: Routine versus Non-routine

Participation can only be accurately measured on non-routine proposals. For routine proposals, brokers can make discretionary votes on shares that are uninstructed 10 days before the shareholder meeting. Thus, the changing definition of non-routine proposals throughout the sample explains the composition of votes in my sample. Changes in the definition are caused by implementation of Dodd-Frank.

Time Period	Routine Proposals	Non-routine Proposals
Pre-Jan 1, 2010	<ul style="list-style-type: none"> • Auditor ratification • Non-contested election of directors • Matters relating to executive compensation • De-staggering the board of directors • Implement majority voting in director elections • Supermajority requirements • Provide for the use of written consent • Provide rights to call a special meeting • Opt out of certain types of takeover provisions 	<ul style="list-style-type: none"> • Is not submitted to shareholders by means of a proxy statement comparable to that specified in Schedule 14-A of the SEC • Proxy contests • Mergers and consolidations • Shareholder appraisal rights • Authorizations of property mortgages • Authorizations or increased authorizations of company indebtedness • Authorizations or increased authorizations of classes of preferred stock • Alterations of the terms or conditions of existing stock or indebtedness • Modifications of preemptive rights • Changes to stockholder meeting quorum requirements • Alterations of voting provisions of stock • Authorizations or issuances of stock or stock options to directors, officers, or employees in amounts that exceed 5% of outstanding common shares • Authorizations or increased authorizations of profit sharing or special remuneration plans that exceed 10% of average annual income before taxes • Material changes in a company's lines of businesses • Acquisitions of property, assets or a company, where the fair market value exceeds 20% of the firm's market value • Sales of property or earning power approximating 20% or more of those existing before the transaction • Authorizations of transactions not in the ordinary course of business in which officers, directors, or substantial security holders have a direct or indirect interest

		<ul style="list-style-type: none"> • Reductions in earned surpluses of 51% or more, or red
Jan 1, 2010- July 21, 2010	<ul style="list-style-type: none"> • Auditor ratification • Matters relating to executive compensation • De-staggering the board of directors • Implement majority voting in director elections • Supermajority requirements • Provide for the use of written consent • Provide rights to call a special meeting • Opt out of certain types of takeover provisions 	<ul style="list-style-type: none"> • All Elections of directors • See above
July 21, 2010- Jan 2012	<ul style="list-style-type: none"> • Auditor ratification • De-staggering the board of directors • Implement majority voting in director elections • Supermajority requirements • Provide for the use of written consent • Provide rights to call a special meeting • Opt out of certain types of takeover provisions 	<ul style="list-style-type: none"> • Election of directors • Matters relating to executive compensation • See above
Jan 2012- Present	<ul style="list-style-type: none"> • Auditor ratification 	<ul style="list-style-type: none"> • Election of directors • Matters relating to executive compensation • De-staggering the board of directors • Implement majority voting in director elections • Eliminating supermajority requirements • Provide for the use of written consent • Provide rights to call a special meeting • Opt out of certain types of takeover provisions • See above

Exhibit 5:

This table shows Broadridge’s disclosures to the SEC regarding investor participation. They appear to show investor participation decreases particularly for smaller investors. Outside of my paper, this table is the only other empirical look at the effect of this regulation, and it reports only total numbers, without any empirical design or controls for other factors.

**But the Savings Have Come at the Expense of “Main Street” Participation
“Matched” Account Participation: Before and After Notice & Access**

Participation has decreased among the same account holders, especially among smaller investors.

Size of Account (share range)	Number of Accounts in Range	# that Voted Before N&A	# that Voted After N&A	Percent Change +/-
< 1000	5,982,606	868,027	343,941	(61)*
1,000 - 4,999	648,656	143,527	55,402	(61)
5,000 - 9,999	61,266	14,685	7,244	(51)
10,000 - 49,999	40,862	10,301	5,605	(46)
> 50,000	7,657	2,324	1,626	(30)
Total	6,741,047	1,038,864	413,818	(60)

“Matched” accounts denotes the same account. Comparison of voting at the same companies -- with N&A (current meeting) to without N&A (prior meeting, pre-N&A rules). Based on all 164 corporate shareholder meetings from July 1, 2007 - April 30, 2008.

* Includes mailings of a 2nd Notice (with a ballot) and full packages as a result of ‘consents’ and issuer stratification.

4



Number of Notice Recipients	Number of Notice Recipients that Visited the Specified URL and Selected “Read Materials”	%	Number of Notice Recipients that Visited the Specified URL and Selected “Vote”	%
812,772	2,593	0.47	21,115	3.25

Notes

- Includes all 40 registrants that used Notice & Access (meetings from 6/1/08 to 9/26/08).
- A total of 812,772 account holders received a Notice by mail.
- Going to the URL and clicking on the “Vote” option opens a voting ballot and provides a link to view detailed information.
- The “Read Materials” option presents the materials and includes the option to vote.

Investors who receive proxy information (mail or email) are more likely to use the Internet to vote than are investors who receive a Notice only.

Voting Methods Receipt of Info	Total Items Sent (#)	Voting by Paper Ballot (#)	Voting by Paper Ballot (%)	Voting by Internet Ballot (#)	Voting by Internet Ballot (%)
Full Set Sent by Mail	110,118	34,787	31.8	26,626	23.0
Notice Sent by Mail	812,772	1,677	0.4	21,115	3.3
Email Including Links	328,651	65	0.1	37,351	12.5

Notes

- All 40 Notice & Access corporate issuers with meetings 6/1/08 to 9/26/08.
- Distributions ranged from 1,226 to 966,578 accounts/issuer.
- Total of 1,875,021 account holders. ProxyEdge (624,080 accounts) is a proprietary platform for institutional investors and financial advisors, and it is excluded.
- Response rates represent an average of averages, i.e., on average for a given issuer. Differences due to rounding.
- "Full Set by Mail" includes prior consents and issuer stratification of mailings.
- "Email" delivery provides essentially the same experience for an account holder, with or without Notice & Access, and is based on prior consent.
- Prior "Consents" on file for 2.5 million account holders. Processing of prior consents and issuer stratification (e.g., full package to larger accounts) resulted in 11% of items mailed by full package (7/1/07 to 6/30/08).

Appendix B

Variable	Definition
Participation	The percentage of votes (for, against, abstaining, and withholding) out of outstanding shares
Management For	The percent of the vote in agreement with management recommendations out of voting base as reported in ISS
Non-routine	Votes where there were non-votes because brokers do not have discretionary voting rights when beneficial shareholders do not participate
DEFA	Indicator variable equal to 1 if I observe a DEFA14A notice, which means the firm is using the notice and access method of dissemination
Postal Mail	Indicator variable equal to 1 if I do not observe a DEFA14A notice, which means the firm is using the full-access method of dissemination
DEFA*non-routine	The interaction between DEFA and non-routine
Regulation	Large accelerated filers interacted with 2008 and all firms starting with 2009
Regulation*non-routine	The interaction between regulation and non-routine
Supermajority Institutional Ownership	Firms with more than 66% ownership by institutional owners as defined by Thompson Reuters's 13F Institutional Ownership data
Lower Institutional Ownership	Firms with less than 66% ownership by institutional owners as defined by Thompson Reuters's 13F Institutional Ownership data
Ln(Total assets)	Natural logarithm of total assets from COMPUSTAT
Ln(Acquisition)	Natural logarithm of acquisition data from COMPUSTAT
Ln(Outstanding)	Natural logarithm of outstanding shares from ISS
Delta eps	The change in dilutive earnings per share scaled by total assets between time t and t-1, winsorized at the 1% and 99% levels
Ln(Market value)	Natural logarithm of the market value at fiscal year-end as reported in COMPUSTAT
Annual meeting	Indicator variable equal to 1 if the vote was part of an annual meeting, and 0 otherwise
Special meeting	Indicator variable equal to 1 if the vote was part of a special meeting, and 0 otherwise
Proxy contest	Indicator variable equal to 1 if the vote was part of a proxy contest, and 0 otherwise
Director Election	Indicator variable equal to 1 if the vote was for the election of a director, and 0 otherwise
Auditor Ratification	Indicator variable equal to 1 if the vote was for the ratification of the external auditor, and 0 otherwise
Elect Director after 2010	Indicator variable for if the vote for the election of a director after 2010, and 0 otherwise
Amend compensation	Indicator variable equal to 1 if the vote was to amend an omnibus stock or option plan, and 0 otherwise

Approve compensation	Indicator variable for if the vote was to approve compensation plan otherwise equal to 0
Close management vote	Indicator variable for if the vote has less than 70% support and management recommended support
Ln(Total Assets)*non-routine	Ln(Total Assets) interacted with non-routine
Ln(Market value)*non-routine	Ln(Market value) interacted with non-routine
Delta EPS*non-routine	Delta EPS interacted with non-routine
Annual*non-routine	Annual interacted with non-routine
Merger	Indicator variable equal to 1 if the vote was related to a merger or acquisition
Vote Fail	Indicator variable equal to 1 if the vote failed to pass, and 0 otherwise
Industry	4-digit SIC code

Table 1: Summary Statistics

Panel A: Full sample

Variable	N	Mean	Min	Max	Variance
Participation	158832	0.79	<.01	1.56	0.03
DEFA*non-routine	158832	0.10	0.00	1.00	0.09
Regulation*non-routine	158832	0.52	0.00	1.00	0.25
Ln(Total Assets)*non-routine	158832	3.74	-1.74	14.70	15.02
Ln(Market Value)*non-routine	158832	3.73	-1.61	13.35	14.82
Delta EPS*non-routine	158832	0.04	-9.27	7.69	1.99
Auditor Ratification	158832	0.12	0.00	1.00	0.11
Annual*non-routine	158832	0.53	0.00	1.00	0.25
Director Election Post 2010	158832	0.46	0.00	1.00	0.25
Amend Compensation	158832	0.03	0.00	1.00	0.03
How close vote result	158832	0.93	0.00	1.00	0.02
Vote failed	158832	0.02	0.00	1.00	0.02
Approve Compensation	158832	0.01	0.00	1.00	0.01
Merger	158832	<.01	0.00	1.00	<.01
Director Election	158832	0.71	0.00	1.00	0.21

Panel B: Routine for 2005-2009

Variable	N	Mean	Min	Max	Variance
Management For	44126	0.94	0.00	1.00	0.011
Participation	44126	0.88	<0.01	1.00	0.011
Regulation	44126	0.37	0.00	1.00	0.234
DEFA	44126	0.04	0.00	1.00	0.036
Ln(Outstanding)	44126	18.11	7.85	23.23	1.814
Ln(Total assets)	44126	7.23	1.88	14.45	3.222
Delta EPS	44126	-0.13	-9.27	7.69	4.589
Special meeting	44126	0.01	0	1	0.01
Ln(Acquisition)	44126	0.02	-5.52	8.18	0.108

Panel C: Non-routine for 2005-2009

Variable	N	Mean	Min	Max	Variance
Management For	3255	0.78	0.03	1.00	0.04
Participation	3255	0.77	0.11	1.00	0.01
Regulation	3255	0.42	0.00	1.00	0.24
DEFA	3255	0.04	0.00	1.00	0.04
Ln(Outstanding)	3255	18.94	14.97	23.09	2.89
Ln(Total assets)	3255	8.31	2.34	14.45	4.74
Delta EPS	3255	-0.11	-9.27	7.69	6.21
Special meeting	3255	0.01	0.00	1.00	0.01
Ln(Acquisition)	3255	0.01	-5.52	8.18	0.19

Panel D: 2010-2015

Variable	N	Mean	Min	Max	Variance
Postal Mail	147225	0.69	0.00	1.00	0.21
Special election	147225	0.01	0.00	1.00	0.01
Proxy contest	147225	0.01	0.00	1.00	0.01
Vote fail	147225	0.02	0.00	1.00	0.02
Close management vote	147225	0.03	0.00	1.00	0.03
Ln(Total Assets)	147225	7.08	-1.78	14.76	5.54
Delta Eps	147225	-0.01	-9.27	7.69	2.38
Ln(Outstanding)	147225	17.85	11.51	24.30	2.34
Ln(Market value)	147225	6.77	-5.17	13.35	5.27

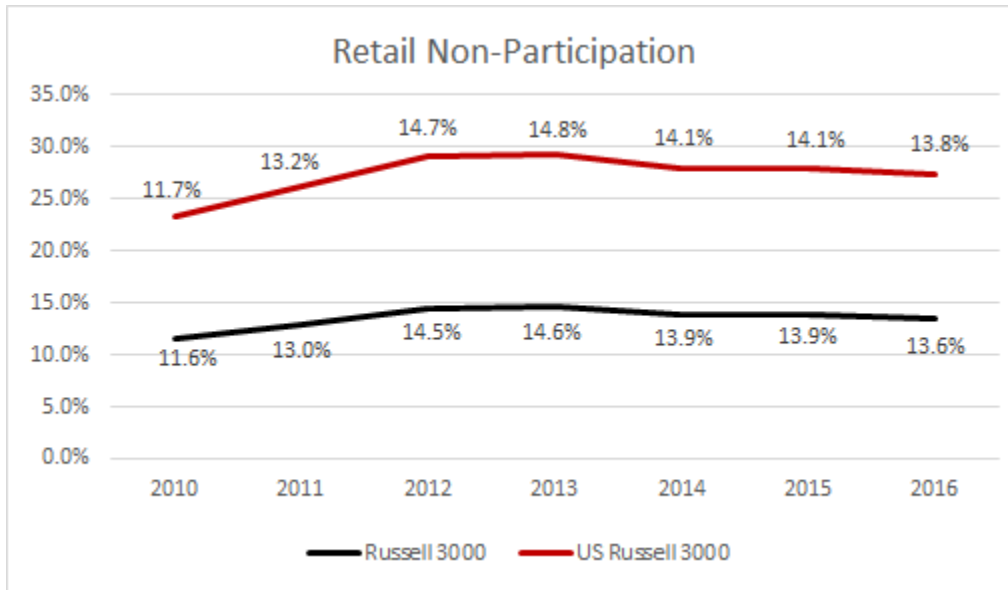
Table 2: Total Non-participation

Panel A: Full Sample

(1)	
<i>Participation as Dependent Variable</i>	
<i>Non-routine</i>	-0.135*** (-83.07)
Meeting Fixed Effects	Yes
Observations	251,372
R-squared	0.882

Notes: This regression estimates total beneficial shareholder non-participation in shareholder meeting by measuring the average difference between routine and non-routine votes within the same shareholder meeting. The amount of non-participation is equal to the decrease in participation during a non-routine vote. Non-routine is an indicator variable for whether broker non-votes were recorded for the vote. The coefficient from this regression is used to interpret the results from Table 3. The regression includes the entire sample from 2005-2015. Interferences based on t-statistics, reported in parentheses. Statistical significance level below 1%, 5%, and 10% are denoted by ***, **, and * respectively.

Panel B: Non-Participation for Russell 3000



Notes: This shows the average broker non-votes divided by outstanding shares for non-routine votes during a calendar year, which provides consistent estimates with the yearly regressions from Panel A. The amount of non-participation is equal to the decrease in participation during a non-routine vote. The sample shows the entire ISS Russell 3000 sample for the years 2010-2016. I also show the estimate for just the portion of the Russell 3000 incorporated in the United States.

Panel C: Retail Participation Partitioned by Total Assets of the Company

Quantiles of Total Assets	Mean (Total Participation)	Mean (Individual Participation)	Mean (Institutional Ownership)	Mean (Total Assets in Millions)	Observations
1	60.7%	49.8%	39.0%	\$139.33	20,852
2	74.9%	33.8%	58.7%	\$783.28	20,960
3	77.8%	32.5%	67.9%	\$2,417.51	20,954
4	77.5%	55.0%	69.3%	\$7,028.41	20,906
5	74.5%	59.7%	66.0%	\$104,451.87	20,946

Notes: This table presents the total participation rate and total individual participation (retail and inside investors) partitioned into five quantiles for the 2011-2015 sample matched with Thompson Reuter's institutional ownership data. The mean total assets in millions and the number of observations (number of ballot items) are also provided. Because observations where Thompson Reuter's had reported more than one hundred percent ownership were excluded, there is a slight imbalance to the number of observations within the quantiles.

Table 3: Effect on Participation

<i>Participation as Dependent Variable</i>	Measure of Treatment 1		Measure of Treatment 2	
	Design 1	Design 2	Design 1	Design 2
Treatment:				
<i>Regulation*non-routine</i>	-0.022** (-2.24)			
<i>Regulation</i>		-0.021* (-1.85)		
<i>DEFA*non-routine</i>			-0.010*** (-3.03)	
<i>DEFA</i>				-0.021** (-2.03)
Control Variables:				
<i>Ln(Market Value)*non-routine</i>	0.014*** (7.78)		0.014*** (7.90)	
<i>Ln(Total Assets)*non-routine</i>	0.011*** (5.98)		0.011*** (5.95)	
<i>Delta EPS*non-routine</i>	-0.001** (-1.98)		-0.001** (-1.99)	
<i>Annual*nonroutine</i>	0.001 (0.03)		0.001 (0.05)	
<i>How close vote result</i>	-0.004 (-0.49)		-0.004 (-0.47)	
<i>Vote failed</i>	-0.062*** (-8.30)		-0.062*** (-8.34)	
<i>Merger</i>	0.002 (0.21)		0.002 (0.20)	
<i>Auditor Ratification Vote</i>	0.086*** (30.68)		0.086*** (30.67)	
<i>Director Election</i>	0.075*** (28.22)	0.097*** (8.70)	0.075*** (28.21)	0.096*** (8.61)
<i>Director Election Post 2010</i>	-0.097*** (-33.97)		-0.097*** (-33.96)	
<i>Amend Compensation</i>	-0.015*** (-9.87)		-0.015*** (-9.76)	
<i>Approve Compensation</i>	-0.017*** (-8.26)		-0.017*** (-8.24)	
<i>Ln(Total Assets)</i>		0.015 (1.50)		0.015 (1.42)
<i>Delta EPS</i>		0.001 (0.91)		0.001 (0.91)
<i>Ln(Outstanding shares)</i>		-0.049*** (-2.61)		-0.049*** (-2.59)
<i>Special meeting</i>		-0.035 (-0.60)		-0.035 (-0.60)
Fixed Effects:				
<i>Meeting</i>	Yes	No	Yes	No
<i>Year*non-routine</i>	Yes	No	Yes	No
<i>Firm</i>	Yes	Yes	Yes	Yes
<i>Year</i>	Yes	Yes	Yes	Yes
Observations	158,832	3,813	158,832	3,813
R-squared	0.901	0.801	0.901	0.801

Notes: This table shows the effect of the SEC's e-proxy regulation on participation in shareholder elections, using

the regulation cutoff. The dependent variable is participation, which is measured as the number of votes voted for +voted again +voted withheld +voted abstain. I have two research designs and two measures of treatment. *DEFA* refers to whether a notice was published on EDGAR as a DEFA14A form. *Regulation* refers to whether the firm was subject to the e-proxy regulation. The partitioned difference-in-differences restricts the sample to only non-routine votes and only between years 2005 and 2009, before the definition of non-routine changed. *Delta EPS* is winsorized at 1% and 99%. Standard errors are clustered by firm for Design 1 and meeting for Design 2. Interferences based on t-statistics, reported in parentheses. Statistical significance levels below 1%, 5%, and 10% are denoted by ***, **, and *, respectively.

Table 4: Institutional Ownership

Participation as Dependent Variable	(1) Lower Institutional Ownership	(2) Supermajority Institutional Ownership	(3) Difference χ^2 p-value	(4) Lower Institutional Ownership	(5) Supermajority Institutional Ownership	(6) Difference χ^2 p-value
Treatment:						
<i>Regulation*non-routine</i>	-0.043** (-2.33)	-0.012 (-1.05)	5.75** (0.017)			
<i>DEFA*non-routine</i>				-0.020*** (-2.80)	-0.012*** (-3.53)	4.32** (0.038)
Control Variables:						
<i>AT*non-routine</i>	0.020*** (7.07)	0.004** (2.22)		0.020*** (7.05)	0.004** (2.22)	
<i>Market value*non-routine</i>	0.004 (1.54)	0.014*** (7.34)		0.005* (1.68)	0.015*** (7.51)	
<i>EPS*non-routine</i>	-0.001 (-1.08)	-0.001 (-1.22)		-0.001 (-1.15)	-0.001 (-1.21)	
<i>Annual*non-routine</i>	-0.031 (-1.14)	-0.022 (-0.76)		-0.031 (-1.14)	-0.021 (-0.74)	
<i>Director Elect post 2010</i>	-0.069*** (-19.93)	-0.042*** (-19.14)		-0.070*** (-19.99)	-0.042*** (-19.14)	
<i>Amend compensation</i>	-0.045*** (-13.67)	-0.029*** (-14.40)		-0.045*** (-13.42)	-0.029*** (-14.36)	
<i>How close vote result</i>	0.026* (1.80)	0.025** (2.36)		0.027* (1.84)	0.025** (2.37)	
<i>Vote failed</i>	-0.067*** (-5.00)	-0.054*** (-5.87)		-0.067*** (-5.04)	-0.054*** (-5.90)	
<i>Approve compensation</i>	-0.058*** (-13.27)	-0.027*** (-9.83)		-0.058*** (-13.23)	-0.027*** (-9.82)	
<i>Merger</i>	0.010 (1.00)	-0.004 (-0.32)		0.009 (0.97)	-0.004 (-0.32)	
<i>Director Election</i>	0.019*** (8.41)	0.010*** (6.79)		0.019*** (8.45)	0.010*** (6.81)	
Fixed Effects:						
<i>Meeting</i>	Yes	Yes		Yes	Yes	
<i>Year*Non-routine</i>	Yes	Yes		Yes	Yes	
Observations	56,790	100,762		56,790	100,762	
R-squared	0.914	0.870		0.914	0.870	

Notes: This regression shows the splits of the Table 3 results based on institutional ownership. *Supermajority institutional ownership* is defined as institutional ownership of more than 66% of outstanding shares, and *lower institutional ownership* is institutional ownership of less than 66% of outstanding shares. The dependent variable for all columns is participation. I have two measures of treatment. *DEFA* refers to whether a notice was published on EDGAR as a DEFA14A form. *Regulation* refers to whether the firm was subject to the e-proxy regulation. Standard errors are clustered by firm. Interferences based on t-statistics, reported in parentheses. The statistical difference between tests was calculated using a chi-squared test, with both the chi-squared and p-value reported. Statistical significance levels below 1%, 5%, and 10% are denoted by ***, **, and *, respectively.

Table 5: Voting Outcome

	(1)	(2)	(3)	(4)
<i>% in Agreement with Management Recommendation as Dependent Variable</i>	Routine	Routine	Non-routine	Non-routine
Treatment:				
<i>DEFA</i>	0.016* (1.68)		0.007 (0.30)	
<i>Regulation</i>		0.011** (2.33)		-0.015 (-0.92)
Control Variables:				
<i>Ln(Outstanding)</i>	-0.015*** (-3.19)	-0.015*** (-3.21)	-0.025 (-1.27)	-0.026 (-1.35)
<i>Ln(Total assets)</i>	0.007 (1.61)	0.007 (1.48)	0.014 (0.65)	0.014 (0.66)
<i>Delta EPS</i>	-0.000 (-0.70)	-0.000 (-0.68)	-0.000 (-0.03)	-0.000 (-0.07)
<i>Special meeting</i>	-0.129*** (-8.77)	-0.128*** (-8.75)	-0.056 (-1.47)	-0.057 (-1.46)
<i>Ln(Acquisition)</i>	0.002 (0.70)	0.002 (0.79)	0.003 (0.29)	0.003 (0.28)
Fixed Effects:				
<i>Firm</i>	Yes	Yes	Yes	Yes
<i>Year</i>	Yes	Yes	Yes	Yes
Observations	44,126	44,126	3,255	3,255
R-squared	0.260	0.260	0.456	0.456

Notes: This tests for the effect of the SEC's e-proxy regulation on the percentage of the vote in agreement with management recommendations. The first column shows my measure for adoption based on SEC filings of DEFA14A forms. The second column shows my measure of regulation. Columns three and four are a falsification test that shows the result does not hold with non-routine votes, no exchange of decision-making power occurs. Inferences based on t-statistics, reported in parentheses. Statistical significance levels below 1%, 5%, and 10% are denoted by ***, **, and *, respectively.

Table 6: Strategic Dissemination

	(1)	(2)
<i>Postal Mail</i> as Dependent Variable		
<i>Proxy contest</i>	0.115** (2.15)	0.199*** (5.24)
<i>Special meeting</i>	0.098*** (5.80)	0.134*** (8.25)
<i>Vote failed</i>	0.007 (1.30)	0.025* (1.72)
<i>Close management vote (<70% For and management for)</i>	0.011* (1.72)	0.021* (1.81)
<i>Ln(Total assets)</i>	0.004 (0.37)	-0.023*** (-3.43)
<i>Delta EPS</i>	0.001 (0.33)	0.000 (0.08)
<i>Ln(Market value)</i>	0.002 (0.20)	-0.021*** (-3.25)
<i>Ln(Outstanding)</i>	-0.003 (-0.29)	-0.039*** (-6.55)
Fixed Effects:		
<i>Firm</i>	Yes	No
<i>Year</i>	Yes	Yes
<i>Industry</i>	No	Yes
Observations	147,225	147,225
R-squared	0.694	0.169

Notes: This regression shows the relationship between full access dissemination of proxy statement and variables associated with management's perception of the importance of the vote. The dependent variable is an indicator variable for whether the company filed its electronic notice as a DEFA14A on the SEC website, where a 1 represents the company has not filed a notice. The first column shows the results with firm fixed effects, and the second column shows the results with industry fixed effects. All standard errors are clustered by firm. Inferences based on t-statistics, reported in parentheses. Statistical significance levels below 1%, 5%, and 10% are denoted by ***, **, and *, respectively.

Table 7: Switching and Stratification

Panel A:

Total number of shareholder meetings in 2011-2015 sample that use different dissemination from previous period	813 (4.4% of shareholder meetings in sample)
Number of U.S. companies that use multiple dissemination methods within a year:	166

Notes: This table shows the number of companies that change dissemination in a single year or between years in the United States. For the second row, a change in dissemination only counts a switch after the company has adopted e-proxy. Therefore, a switch would include returning to hard-copy dissemination and any re-adoption of e-proxy.

Panel B:

Type of Stratification	Companies
Number of Shares:	12
Location of Investor:	6
Type of Investor:	43
Undecided:	5

Notes: This table provides data about the number of firms that use different methods of dissemination for different investors for a single election in Canada, which is called stratification. I decompose this data according to the most common types of stratification criteria as reported in the company's Notice of Meeting and Record Date. *Undecided* refers to companies that would disclose "To be determined" or "To follow" and then file an amended notice in the week before the election. 65 out of 4325 companies stratify or 1.5%.

Panel C:

Type of Meeting	% Using Notice and Access	Total Number of Observations
Annual	31.2%	119,426
Special	10.1%	1,736
Proxy Contest	11.2%	1,148
Written Consent	0%	59

Notes: This table presents the percentage of the observations using notice and access and total number of observations within my sample for the years 2011 through 2015 based on the type of meeting. The type of meeting is based off ISS classification, where Annual/Special elections are included as *Special*.