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Custom Proxy Voting Advice

Finance Working Paper N° 975/2024
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Abstract

This paper studies institutional investors' decision-making using novel data from a major proxy advisor. While prior literature has focused exclusively on benchmark recommendations, we highlight the significant role of custom recommendations in shaping shareholder votes: 80% of funds receive customized advice, and custom recommendations differ substantially from benchmark ones. Combining a theoretical framework with data on customization and voting behavior, we show that customization plays two key roles. First, it helps shareholders express their ideologies through voting. Second, it reallocates investors' attention, reducing the need to pay attention to each individual proposal and enabling focus on the most important ones.

Keywords: proxy advisory firms, ideology, ESG, customization, benchmark recommendations, research, attention to voting, proxy voting, customized recommendations

JEL Classifications: G23, G34, G38, D72, K22

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Keywords: Shareholder voting, proxy advisors, customization, aggregation of preferences, aggregation of information, limited attention, heterogeneous preferences, ideology

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1. Introduction

How institutional investors arrive at their voting decisions is central to understanding corporate stewardship and shareholder oversight. Yet little is known about investors' decision-making process, as researchers typically observe only their ex-post votes. This paper opens the black box of shareholder decision-making using novel data from a major proxy advisor, Glass Lewis. We document a previously unexplored role played by proxy advisors in helping institutions arrive at their voting decisions: customized voting recommendations. Using a simple theoretical framework and data on investors' customization choices and vote timing, our paper highlights new channels through which proxy advisors shape the aggregation of preferences and information in voting. These channels, in turn, help better understand how investors allocate attention across proposals, express their ideologies, and make voting decisions. The importance of customization documented in this paper was underscored in October 2025, when Glass Lewis announced it would discontinue benchmark recommendations entirely and move to customized advice only.[1]

Institutional investors' costs of stewardship can be substantial, as they face ballots at thousands of portfolio companies. One way they can potentially reduce these costs is by hiring proxy advisors such as Institutional Shareholder Services (ISS) or Glass Lewis, which provide research, vote recommendations, and vote execution services. Significant scholarly attention has focused on the influence of proxy advisors and the concern that many shareholders passively follow their recommendations. Policymakers have taken note, and proxy advisory firms have become the subject of a sustained regulatory and political debate.[2]

However, the academic literature and regulatory discussions have focused almost exclusively on benchmark recommendations – standardized recommendations not tailored to any specific investor. In contrast, we document that most institutional investors subscribe to customized advice, thereby actively shaping the recommendations they receive. In particular, they work with the proxy advisor to develop custom voting policies, i.e., a set of rules and standards that reflect the investor's voting ideology. These policies allow the proxy advisor to issue custom recommendations, aligned with the client's preferences and beliefs. For example, a shareholder may be systematically more or less inclined to support environmental and social (ES) issues relative to

[1] See "Glass Lewis to end benchmark voting recommendations on proxy issues," *Financial Times*, October 14, 2025.
[2] In 2020, the SEC imposed new restrictions on proxy advisors, including requirements for company feedback and increased oversight. In 2022, the Biden Administration's SEC rescinded most of those rules. The legal status of these regulations remains unsettled, with several conflicting circuit court rulings. Under the second Trump Administration, both the House Financial Services and Judiciary Committees launched investigations into proxy advisors, and Texas enacted legislation restricting proxy advisors. We discuss these and other regulations in Section 7.

benchmark recommendations, and this aspect would be incorporated into its custom voting policy and reflected in custom recommendations across its portfolio. Online Appendix B provides examples of custom policies and explains how customization is implemented in practice.

Using proprietary data from the second largest proxy advisor Glass Lewis, we document that about 80% of funds use custom voting policies.[3] These funds receive significantly different recommendations: on average across all ballots, custom recommendations differ from benchmark ones in over 20% of ballots, with substantially larger differences on ballots that include environmental, social, or governance proposals. Funds that customize also allocate their attention and decision-making efforts across proposals differently from non-customizers. Together, these findings suggest that investors' use of proxy advisors is best understood as a two-stage process. First, prior to the proxy season, investors develop a custom voting policy that shapes the recommendations they will later receive. Second, once proposals are announced, investors receive these recommendations, decide whether to conduct additional research, and cast their votes. This two-stage process differs from the standard view in the literature, which focuses only on the second stage and assumes that all shareholders receive the same recommendation.

This difference highlights new channels through which proxy advisors affect voting outcomes. We argue that customization has implications for two key roles of shareholder voting: aggregating preferences and aggregating information. On the preference side, recent literature documents substantial heterogeneity in shareholders' voting ideologies (e.g., Bolton et al., 2020; Bubb and Catan, 2022), pointing to the role of voting in aggregating these diverse preferences. Our paper is the first to show that, through customization, proxy advisors help shareholders express their ideologies and thereby facilitate preference aggregation. On the information side, voting is viewed as a mechanism for aggregating information from multiple shareholders with access to different signals. Prior literature focuses on the idea that proxy advisors provide a common signal to all investors and studies how this affects shareholders' incentives to pay attention and conduct independent research (e.g., Choi, Fisch, and Kahan, 2010; Iliev and Lowry, 2015; Malenko and Malenko, 2019). In contrast, our paper argues that the role of common (benchmark) recommendations may be overemphasized, as proxy advisors often provide different advice to

[3] While our sample is based on Glass Lewis clients, customization is equally prevalent among those of ISS, the other major proxy advisor. As Steven Friedman, General Counsel at ISS, explained: "Our job is to synthesize data, analyze proxy statements, and formulate vote recommendations that flow from the client's chosen policies and guidelines… During calendar year 2022, approximately 86% of the total voted shares processed by ISS on behalf of our clients were linked to clients' custom voting policies" (ISS, 2023). See Section 4 for details.

different shareholders. Moreover, we show that customization can both strengthen and weaken shareholders' incentives for independent research, further influencing information aggregation.

To formalize these ideas, we develop a simple model to study the two-stage decision-making process of investors, and then analyze its predictions using proprietary data from Glass Lewis. In the first stage of our model, a fund whose ideology may differ from that of the proxy advisor (e.g., the fund may be more ESG-friendly) decides whether to pay a cost to customize the recommendations it receives.[4] In the second stage, the recommendation received by the fund determines its default vote if the fund chooses to follow the recommendation without further research. However, the fund can also invest in independent research to learn additional information about the proposal beyond what is contained in the recommendation.

The model predicts that funds whose ideologies closely align with that of the proxy advisor will not customize. For such funds, custom recommendations would largely mirror the benchmark, making the costs of customization outweigh the benefits. Consistent with this prediction, we find that funds are much more likely to subscribe to Glass Lewis custom recommendations when they disagree with benchmark policies in a consistent ideological direction, for example, if they tend to support ES proposals more than Glass Lewis. We also find that deviations between benchmark and custom recommendations are largest for meetings involving environmental, social, or governance proposals – issues where prior research has documented persistent ideological differences among shareholders (Bolton et al., 2020; Bubb and Catan, 2022).

Customization thus allows a fund's votes to more closely reflect its ideology, facilitating preference aggregation. The fund achieves this by developing ex-ante rules and policies that the proxy advisor later applies to specific proposals, producing recommendations tailored to the fund's views. Moreover, because these policies are applied across all portfolio firms, customization creates economies of scale and reduces the need to scrutinize proposals at each individual firm. The model therefore predicts that funds with stakes in many firms are more likely to benefit from an ex-ante investment in a custom policy. Consistent with this prediction, we find that institutional investors with more firms in their portfolios are more likely to customize.

[4] Heterogeneous ideologies can reflect both heterogeneous preferences and heterogeneous beliefs about which policies maximize firm value. Preference heterogeneity may arise from non-pecuniary utility derived when a portfolio firm acts responsibly or from shareholders' reluctance to oppose management, e.g., due to business ties (Davis and Kim, 2007). Examples of belief heterogeneity include diverse views on which governance issues should be decided by boards rather than shareholders (Bubb and Catan, 2022) and differences in beliefs among asset managers about the role of ES factors in firm performance (Edmans, Gosling, and Jenter, 2025). In what follows, we use "investor ideology" and "preference aggregation" to refer interchangeably to heterogeneous preferences and beliefs.

So far, the evidence highlights the ideological motive to customize. In addition, as our model – and our discussions with asset managers – suggest, customization serves another purpose: the reallocation of attention. There are two opposing effects. On the one hand, because custom recommendations already reflect the fund's ideology, customization can *substitute* for shareholders' independent attention on proposals covered by custom policies. This raises a concern that customization may undermine the "wisdom of the crowd": if investors rely on custom recommendations without conducting their own research, the diversity of private information can decline, reducing the quality of collective decisions. However, customization can also generate a *complementarity* effect, which encourages more attention and research. This is because, as we explain in Section 2, customization helps funds identify contentious or high-stakes proposals, where research is most valuable. Moreover, by allowing investors to follow custom recommendations on proposals covered by custom policies, customization frees up their limited attention budget to focus more deeply on other important meetings. Both substitution and complementarity may well be present at the same fund, capturing the reallocation of attention that customization enables – away from less important meetings and toward those that matter most.

Combining these effects, the model predicts two objectives for customization. First, by setting rules and policies that reflect its ideology, a fund ensures that its default votes, if it follows recommendations, align with its preferred positions. Second, customization enables more efficient attention allocation: it reduces effort on proposals where preset rules already capture the fund's optimal vote and redirects focus to those where additional research is most cost-effective.

To test these predictions and study how investors allocate attention, we use unique data from Glass Lewis on the timing of funds' votes and their auto-submission policies. These data reveal whether a fund's vote was automatically submitted based on pre-populated recommendations (i.e., auto-submitted, indicating passive voting) or manually submitted. We use manual submission as a proxy for attention to voting. Consistent with this interpretation, fund-ballot regressions show that non-customizing funds deviate more from benchmark recommendations on manually submitted ballots than on those they auto-submit. This pattern holds when comparing the same fund-firm pair across time and the same fund across firms within a year, indicating that it reflects within-fund variation in attention, rather than differences across funds or firms. Our data thus provide a novel, granular proxy for attention allocation across all fund-ballots.

Using this proxy, we first examine how funds allocate limited attention across proposals. Within a given fund-year and fund-firm, a fund is substantially more likely to vote manually – rather than auto-submit – when the meeting includes a major proposal (such as a proxy contest or a special

meeting) or when it is contentious, involving at least one proxy advisor recommending against management. Furthermore, in difference-in-differences (DiD) tests, we show that funds' manual-voting rates increase sharply when a firm experiences a contentious event for the first time. These results suggest that funds focus their attention on proposals where additional research can meaningfully affect firm value, in line with the evidence in Iliev, Kalodimos, and Lowry (2021).

Having established these overall patterns, we next ask whether customizers allocate their attention differently from non-customizers. Several patterns in the data point to a substitution effect. Most notably, on auto-submitted votes, customizers deviate substantially from benchmark recommendations – especially on ES and governance proposals, where deviations can reach 50% – whereas non-customizers tend to follow the benchmark. Thus, while non-customizers must allocate attention and manually vote to deviate from the benchmark and express their ideology, customizers achieve the same outcome through customization, requiring less effort at the voting stage. This pattern provides direct evidence of substitution. In addition, it shows that deviations from proxy advisors' benchmark recommendations, which are often interpreted as a sign of active voting and independent research (e.g., Iliev and Lowry, 2015; Malenko and Malenko, 2019), may not necessarily reflect active voting. Instead, such deviations could reflect the decision to adopt custom recommendations (an active ex-ante choice) and passively follow them ex post.

Additional evidence based on within-family variation also supports the substitution effect. Within a given fund family, customizing funds are less likely to vote manually than non-customizing funds. This pattern is consistent with stewardship teams centralizing research and voting for most funds in the family, while relying on custom recommendations for a small subset of ideologically distinct funds – often those with a strong pro-ES orientation – to avoid conducting separate research for them. Moreover, within customizing families, cross-fund variation in ideological positions is larger than within non-customizing families, including on auto-submitted votes. This suggests that customization allows the family to represent diverse fund ideologies without conducting separate research for each – effectively substituting individualized voting analysis with fund-level customization through distinct custom policies.

While these results point to substitution, we also find evidence consistent with complementarity. The model predicts that, relative to non-customizers, customizers allocate less attention to non-contentious proposals (substitution) but more to contentious ones (complementarity). Hence, a unique prediction is that customizers' attention should be more sensitive to contentious shareholder meetings. We test this prediction across several types of contentious meetings – those with negative proxy advisor recommendations, activist involvement,

or special meetings – and find that customizers' manual-voting rates respond significantly more to contentious meetings than those of non-customizers. Moreover, holding constant a fund's overall propensity to vote manually – that is, fixing its attention budget – customizers allocate a greater share of their manual votes to contentious (relative to non-contentious) meetings than non-customizers with comparable attention levels. This evidence is consistent with customizers reallocating their attention across proposals relative to non-customizers.

Our findings have several implications in light of recent policy and institutional developments. One important development is the rise of pass-through voting – the practice of asset managers such as the Big Three decentralizing voting authority and giving it to their funds' clients (Fisch and Schwartz, 2023; Malenko and Malenko, 2024). Customization is likely to become even more prevalent as this system continues to expand. As we discuss in Section 7, institutional clients that opt into pass-through voting and begin voting directly often rely on tailored custom recommendations from proxy advisors to guide their decisions. Thus, by studying the characteristics and behavior of customizers, we offer preliminary insights into the voting patterns that may emerge under pass-through voting.

A related aspect of pass-through voting involves "ready-made" customization. In addition to providing tailored recommendations for specific clients, proxy advisors offer several ready-made, i.e., pre-determined, custom policies.[5] Ready-made policies represent the primary mechanism through which asset managers extend pass-through voting to retail investors—by allowing them to choose from menus of such pre-defined options. A subset of Glass Lewis clients in our sample also subscribe to these ready-made policies, likely because they are less costly than tailored ones. Consistent with their lower-cost, standardized nature and with the substitution mechanism in our framework, we find that ready-made customizers are highly ideological and deviate substantially from benchmark recommendations while predominantly auto-submitting their votes. We discuss ready-made policy menus and their implications in Sections 6.3.3 and 7.

Our results also speak to ongoing policy debates about the voting process. Policymakers have considered banning auto-submission and pre-populated voting choices to encourage shareholders to engage in independent research (SEC, 2019). Our evidence suggests that such restrictions could have unintended costs. They may discourage the use of customization, increasing reliance on benchmark recommendations and weakening the aggregation of investor preferences. In

[5] Glass Lewis refers to such policies as "Thematic Policies," and ISS refers to them as "Specialty Policies." Examples of ready-made policies in our sample include the "ESG" and "Public Pension" policies. Additional examples and details are provided in Sections 3, 6.3.3, and Online Appendix B.

addition, the complementarity effect we highlight implies that such bans could paradoxically reduce independent research: the need to manually review every proposal may limit investors' ability to focus on the most critical issues. We discuss these and other implications in Section 7.

Related literature. Our paper contributes to the corporate governance literature by offering a new perspective on the shareholder voting process. The extensive empirical literature on proxy advisors has focused exclusively on benchmark recommendations.[6] Thus, our first and most basic contribution is to document the widespread use of customization and show that different shareholders receive very different recommendations. The continued regulatory attention to proxy advisors underscores the need to better understand their more complex role – both in shaping the information environment and in aggregating heterogeneous preferences.

In particular, accounting for customization enhances our understanding of proxy advisors' informational role. Existing work concludes that proxy advisors provide an informative signal (Alexander et al., 2010, Albuquerque et al., 2020; Malenko et al., 2025), but that their recommendations may crowd out independent research, leading to overreliance on a common noisy signal (Iliev and Lowry, 2015; Malenko and Malenko, 2019; Calluzzo and Dudley, 2019). Customization leads to a more nuanced view of these effects. First, it implies the presence of multiple signals tailored to individual shareholders, reducing concerns about reliance on one common signal. Second, our theoretical framework and empirical analysis suggest that while customization can crowd out some research, it can also stimulate additional research on the most important proposals. This complementarity effect is related to, but distinct from, that in the theory of Buechel, Mechtenberg, and Wagner (2024), who focus on benchmark recommendations and homogeneous investors: in our paper, it arises from the link between information acquisition and heterogeneous investor ideologies. These insights also connect our paper to the broader literature on how information received by market participants shapes incentives for information production (e.g., Diamond, 1985; Boot and Thakor, 2001; Goldstein and Yang, 2017).

Accounting for customization also highlights proxy advisors' role in reflecting heterogeneous preferences. While prior work has largely focused on their impact on information aggregation, we show that proxy advisors enable investors to express their preferences and ideologies through custom voting policies. This connects our work to the growing literature on

[6] See Alexander et al. (2010), Choi, Fisch, and Kahan (2010), Dey, Starkweather, and White (2024), Ertimur, Ferri, and Oesch (2013, 2018), Iliev and Lowry (2015), Larcker, McCall, and Ormazabal (2015), Li (2018), Malenko and Shen (2016), and Shu (2024), among many others.

heterogeneous shareholder preferences,[7] including studies of how investors' ES ideologies shape voting behavior (e.g., Dikolli et al., 2022; Li, Naaraayanan, and Sachdeva, 2023; Michaely, Rubio, and Yi, 2025). Our finding that investors with strong views on ES issues use proxy advisors to express them is consistent with Couvert (2025), who shows that fund families' voting policies are a major predictor of voting behavior, and supports the idea that funds rely on proxy advisors to implement their policies. Camara, Matsusaka, and Shu (2025) develop a theoretical model of how proxy advisors design benchmark recommendations when investors have social goals, extending it to customized advice. Their model focuses on the structure of the proxy advisory industry, whereas our focus is on how customization interacts with shareholders' independent research.

Finally, our paper relates to the literature on institutional investor attention (Kacperczyk, Van Nieuwerburgh, and Veldkamp, 2016; Kempf, Manconi, and Spalt, 2017). In the context of shareholder voting, Bebchuk and Hirst (2019) emphasize that institutions operate with limited stewardship teams, while Iliev, Kalodimos, and Lowry (2021) and Calluzzo and Kedia (2022) note that the busy spring proxy season could constrain investors' attention. We contribute to this literature in two ways. First, we show that institutional investors use customization to proactively manage their limited attention, reallocating it away from proposals well covered by custom recommendations toward those where additional research is most valuable. Second, we demonstrate how attention allocation – previously shown by Iliev, Kalodimos, and Lowry (2021) to manifest in research effort (views of proxy filings in EDGAR) – relates to the use of automated voting: investors use voting platforms to auto-submit their votes on proposals requiring little attention and manually vote on those they view as more important. In doing so, we introduce a new fund-ballot-level measure of investor attention to voting, covering all Glass Lewis clients.

2. Theoretical framework and predictions

To understand the role of customization, we develop a simple model that highlights previously unexplored channels through which proxy advisors affect investors' decision-making and yields predictions that guide our empirical analysis. The setup and formal results of the model are presented in Appendix A. In this section, we only summarize its key ingredients and implications.

The ability to customize implies that a shareholder's decision-making process is best described in two stages: (1) the decision on customization, made prior to the proxy season and

[7] See Bolton et al. (2020), Bubb and Catan (2022), and Zytnick (2024) for empirical evidence, and Zachariadis, Cvijanovic, and Groen-Xu (2020), Levit, Malenko, and Maug (2024), and Meirowitz, Pi, and Ringgenberg (2025) for theoretical work. The theory of Ma and Xiong (2021) shows that when investors have non-value-maximizing preferences, the proxy advisor optimally caters to them, and Shu (2024) find evidence in line with this mechanism.

applied across all portfolio firms; followed by (2) the decisions on independent research and voting, made during the proxy season for each individual proposal on firms' ballots. The introduction of the first stage and its interaction with the second stage distinguishes our setting from other theoretical models of shareholder voting. Specifically, the setup is as follows.

A shareholder (fund) votes on a proposal at one of its portfolio firms.[8] Its value from voting "for" is proportional to $(X + \beta Y)$, where X captures "common value," which is the same for all shareholders, and βY is the fund's "private value," reflecting its unique ideological preferences; β reflects the strength of the fund's ideology. Both X and Y are unknown to the fund.

The fund needs to decide whether to customize, whether to conduct additional research, and how to vote. Without customization, it only receives a benchmark recommendation, which is a noisy signal about X. This recommendation may deviate from the fund's optimal vote due to ideological differences. For example, in a director election, X could reflect the director's monitoring characteristics such as busyness, with busy directors generally viewed less favorably. However, if a fund places a large weight (β) on ES considerations, it may also care about whether the board provides ES oversight (Y) and may support a busy director if the board performs well on this dimension, even when the benchmark recommendation does not. Online Appendix B provides further examples of custom policies and institutional details underlying our modeling assumptions.

At the first stage, the fund decides whether to incur a cost to customize – proxy advisors charge higher fees for customization.[9] If the fund customizes, it receives a custom recommendation aligned with its ideology (a noisy signal about $X + \beta Y$) and also observes the benchmark recommendation.[10] At the second stage, after observing the recommendations, the fund decides whether to conduct independent research. Research is costly but allows the fund to learn information about the proposal that is not contained in the recommendations (a more precise signal about X and Y than what the proxy advisor produces). Then, the fund decides how to vote.

[8] In practice, decisions on customization and voting are often made at the fund-family level, by the family's stewardship team. For simplicity, however, we refer to the shareholder as "fund" throughout this section. The distinction between funds and the family's stewardship team becomes relevant only in our within-family analysis.

[9] In practice, customization is likely preceded by another stage of interaction between funds and proxy advisors: proxy advisors set their benchmark policies and funds choose between proxy advisors. Competition between proxy advisors has interesting implications for how benchmark policies are designed, how far they deviate from funds' ideologies, and how much proxy advisors charge for customization. While these issues lie beyond the scope of this paper, we discuss them in Section 7.4, including their implications for interpreting our empirical findings.

[10] As we discuss in Section 3.1 and Online Appendix B, in practice, customizers observe both sets of recommendations.

2.1 Effect of customization on the fund's voting and independent research

We first take the fund's first-stage customization decision as given and compare its equilibrium voting behavior and propensity to do research in two scenarios: with and without customization.

The first effect of customization is on voting: we show that if the fund does not conduct independent research, it follows the recommendation it subscribes to (custom or benchmark). In this case, customization aligns the fund's "default" vote more closely with its ideology.

The second effect of customization is on the fund's propensity to conduct research:

- For many proposals, the fund conducts *less research* when it customizes.
- For certain contentious proposals, the fund conducts *more research* when it customizes than when it does not.

The logic is as follows. Independent research serves two purposes. First, it can provide a more precise signal about the proposal's common value (X) than the proxy advisor's signal alone. Second, it helps the fund learn about proposal characteristics (Y) that matter given its ideological preferences (e.g., the board's oversight of ES issues). Customization weakens the second motive, since the custom recommendation already reflects information about Y. Consequently, the fund reduces its research efforts: customization effectively allows it to express its ideological stance without incurring additional ex-post effort.

However, if the fund's ideology is not too strong, it still cares about the common value (X). Because proxy advisor recommendations are based on a noisy signal about X, the first motive for research remains important. Moreover, customization strengthens this motive for contentious proposals – those where additional information is particularly valuable – and increases the fund's incentive to conduct research. We refer to this mechanism as the *complementarity effect*.

The broad intuition behind complementarity is that customization reallocates the fund's attention toward contentious proposals, making its attention more precisely targeted. As a result, as long as the fund cares sufficiently about voting, it devotes more effort to such proposals than it would in the absence of customization. This attention reallocation can occur through two closely related channels – an "alert" channel and a "limited attention budget" channel:

- **"Alert" channel**. Our conversations with proxy advisors and asset managers revealed customization's role in *alerting* funds to proposals that warrant special attention – those particularly important given the fund's voting priorities. Customizers can configure explicit alerts through the proxy advisor's voting platform, and these alerts can be highly sophisticated (see Online Appendix B for details). In Appendix A, we describe both these platform-based alerts and

a related informational-alert channel: as our model shows, even when no explicit alert is issued, a disagreement between the benchmark and custom recommendations can itself act as an implicit alert, signaling that additional information may be especially valuable.

- **"Limited attention budget" channel**. Customization can also be viewed through the lens of a limited attention budget. By allowing the fund to devote less attention to proposals where custom policies already specify its preferred vote, customization frees up attention that can be redirected toward proposals where additional research is most valuable or where custom voting policies are not pre-specified.

These channels are conceptually similar: the very fact that funds configure alerts implies that they recognize their limited attention and use customization to allocate it across proposals. In our model, complementarity arises specifically through the informational-alert channel, but in practice, all these channels are likely to operate and reinforce one another. Our data do not have the granularity to distinguish between these channels (e.g., we do not observe the specific alerts set by investors), so in our empirical analysis, we test for complementarity in a broad sense.

Together, these arguments reveal the following motives for the fund to customize.

1. **Customization helps align the fund's votes with its ideology.**
   If the fund does not conduct research or pay attention to specific proposals, but simply follows the proxy advisor's benchmark recommendations, the fund's votes may deviate from its ideology. Such deviations can be costly for the fund manager – for example, because it has a reputation to maintain with its investors (e.g., if the fund announced through its prospectus or voting guidelines how it intends to vote, and investors expect it to follow through), or because the fund manager holds personal beliefs about how firms should be run. By becoming a customizer and developing rules and policies that the proxy advisor applies to issue custom recommendations, the fund can ensure its votes align more closely with its ideology. In this sense, customization reduces the fund's costs of not paying attention.

Two other motives relate to a more efficient allocation of the fund's attention:

2. **Customization reduces the costs of paying attention**.
   Absent customization, the fund could avoid misaligned votes by paying close attention — reviewing proposals and conducting research to determine whether its ideology suggests a different vote from the benchmark recommendation. Customization lowers these costs: the fund specifies its ideology to the proxy advisor ex ante, sets the corresponding rules for the proxy advisor to follow, and then relies on custom recommendations ex post.

3. **Customization directs the fund's attention to proposals where research is most valuable**. Through either the alert or attention budget channels, customization allows the fund to focus its attention on proposals where it matters most.

Note that motives one and two are closely related: both reflect the idea that for a fund whose ideology differs from the proxy advisor's, customization reduces the costs of voting – either the costs of not paying attention and failing to vote in line with its ideology (first motive) or the costs of paying attention and reviewing all proposals to ensure alignment (second motive). In essence, they show that a fund seeking to vote in line with its ideology can *substitute attention* with customization. Thus, in what follows, we refer to these two roles of customization as the "**substitution**" effect. In contrast, the third motive implies that customization complements the fund's research efforts, so we refer to this role of customization as the "**complementarity**" effect.

2.2 Determinants of customization

We next examine the fund's decision to customize. The three motives outlined in Section 2.1 help clarify which fund characteristics predict this choice. The model yields the following results.

(i) A fund customizes if its ideology differs substantially from the proxy advisor's.

Intuitively, if the fund's ideology is close to that of the proxy advisor, benchmark recommendations will mostly coincide with recommendations tailored to the fund, making customization redundant.

(ii) A fund customizes if it holds a large enough number of firms in its portfolio.

Customization allows the fund to exploit economies of scale: the fund receives custom recommendations across all firms in its portfolio, allowing it to consistently vote in line with its ideology and reducing the need to review proposals at each individual firm.

(iii) A fund customizes if its stake in an average portfolio firm is sufficiently large.

When the fund's ownership stakes are small, its votes have a small impact on its utility – both because the fund internalizes less the effects of the proposals, and because its vote is less likely to be decisive in the outcomes. As a result, investing in customization is only worthwhile if the fund's average stake is large enough.

In summary, the model shows how customization affects preference and information aggregation in voting. First, it allows shareholders to express their ideologies, facilitating the aggregation of

preferences. Second, it shapes the information shareholders receive from the proxy advisor and guides their research and attention, influencing information aggregation.

In what follows, we empirically analyze investors' customization, voting, and attention allocation decisions to assess whether their behavior is consistent with the model predictions.

3. Data and institutional background

Our main data source is a proprietary dataset from Glass Lewis covering shareholder meetings between 2011 and 2017 for all institutional investors that use its web-based voting platform, Viewpoint. These investors, which we refer to as Glass Lewis clients, subscribe to Glass Lewis's voting service, which facilitates vote execution.[11] Through the platform, shareholders can review ballot proposals for their portfolio companies and submit votes (see Online Appendix B).

Our data are anonymized, so while we can track an investor across firms and over time, we do not observe investors' names or types.[12] Institutional investors typically have multiple subsidiary voting units – funds or separately managed accounts – which may have distinct portfolios and submit different votes. For simplicity, we will refer to these voting units as "funds." Our dataset contains information at the fund level.

Data on customization. For each Glass Lewis client, we observe the type of recommendations it receives as of July 2022.[13] These data are provided both at the fund and at the institution level:

- Fund-level: For each fund, we observe whether it subscribes only to Glass Lewis benchmark recommendations (non-customizer) or also to custom recommendations (customizer). Notably, even customizers continue to have access to benchmark recommendations.
    - *Type of customization*: If a fund customizes, we observe whether it subscribes to tailored recommendations that reflect its own voting policies communicated to Glass Lewis ("*tailored*" customizer), or instead adopts one of Glass Lewis's pre-determined custom policies ("*ready-made*" customizer). Funds in our sample use five ready-made policies: Catholic, ESG, MacBride, Public Pension, and Taft-Hartley.

[11] Three firms provide vote execution services for the vast majority of institutional investors: Broadridge, Glass Lewis, and ISS, with software ProxyEdge, Viewpoint, and ProxyExchange, respectively (e.g., Shu, 2024).

[12] According to our conversations with Glass Lewis and its stewardship reports, the majority of Glass Lewis's clients are traditional asset managers focused on mutual funds and ETFs. Its clients also include hedge funds (about 10%) and pension funds (slightly more than 10%). Glass Lewis does not directly serve retail investors.

[13] This information comes from our second data request. Our first request, in May 2020, also provided customization data as of 2020. We use the 2022 data because it is more comprehensive but note that only one institution changed its customization policy between 2020 and 2022, so the choice of year has no substantive effect. Furthermore, as we discuss in Section 6.3.4, our analyses and conversations with Glass Lewis suggest that funds classified as customizers in 2022 were likely already customizing at the start of our sample period.

- Institution-level: For each institution (i.e., fund family), the fund-level customization data thus indicate whether the institution receives benchmark recommendations for all its funds, or some type of custom recommendations for at least some of its funds.
    - *Level of customization*: In addition, for each customizing institution, we observe Glass Lewis's internal categorization of its level of customization: "low," "medium," or "high." According to Glass Lewis, low-level customization introduces a few tweaks to the benchmark policy. Medium-level customization involves numerous deviations from the benchmark and reflects the client's individual stance on various types of proposals; it also involves more complex policies that set various conditions for a given recommendation. Finally, institutions with high levels of customization have entirely tailored policies, with little overlap with Glass Lewis benchmarks, and may involve complex formulations with multiple conditions (see Online Appendix B).

Auto-submission and vote timing. For each shareholder meeting, Glass Lewis's platform pre-populates the fund's ballot, i.e., pre-fills it with voting choices based on the fund's applicable recommendations (benchmark or custom, depending on the fund's customization decision). This pre-populated ballot becomes the fund's default vote if the fund takes no action, and the platform then automatically submits it on the date specified by the fund. The fund can, however, also vote manually, revising its choices and deviating from the pre-populated ballot if desired.

Specifically, in addition to deciding whether to customize recommendations, each fund also specifies whether its ballots should be automatically submitted in the absence of manual voting, and, if so, when. We observe these auto-submission timing choices in our data. In a companion paper (Hu, Malenko, and Zytnick, 2024), we show that most funds set their auto-submission date to four days before the meeting.[14] Thus, for most funds, if the fund does not manually vote, the platform will auto-submit its pre-populated ballot four days before the meeting.

Importantly, we also observe the actual submission date of each fund's vote. Comparing it with the fund's pre-specified auto-submission date allows us to identify whether the ballot was auto- or manually submitted: ballots submitted on days other than the auto-submission date are manually submitted. Formally, we classify a ballot as *auto-submitted* if it was cast on the fund's auto-submission date or four days before the meeting (six days before a Monday meeting; see footnote

[14] This corresponds to three days before the voting deadline, which falls one business day prior to the meeting. For Monday meetings, the voting deadline is Friday of the preceding week, so for Monday meetings, three days before the deadline translates into an auto-submission date of six days before the meeting. Among the funds whose auto-submission date is not three days before the voting deadline, most either choose to auto-submit immediately upon receipt of the recommendation or do not enable auto-submission at all.

14).[15] Ballots cast on all other dates are classified as *manually submitted*. In Section 6, we use manual submission as a proxy for a fund's attention to voting, after first validating it.

Voting data. Our voting data from Glass Lewis are at the fund-ballot level. For each ballot cast by the fund, we observe the date it was cast (as described earlier), the fund's number of shares in the issuer, and whether the fund's ballot follows Glass Lewis benchmark recommendations on all proposals or deviates on at least one proposal on the ballot. Each institution and each fund have anonymized identification numbers, so we observe this information for each fund across years.

Other data. We use several additional data sources. ISS Voting Analytics provides information on shareholder meetings, proposals on the ballot, and ISS recommendations. Glass Lewis benchmark recommendations are taken from Zytnick (2025), who imputes them using Proxy Insight data on funds identified as "Glass Lewis followers" and shows that these imputations closely match actual recommendations, with a 99% agreement rate on a subset of proposals where the true benchmark recommendations are available. For activist events, we rely on FactSet SharkRepellent, and we define a firm's shareholder meeting as "connected to an activist" if there is a proxy campaign at that firm for which the campaign meeting date matches the date of the meeting. Finally, from the CRSP monthly stock file, we obtain stock prices, which we use to estimate funds' dollar stakes in companies. Online Appendix C.3 describes how we merge these datasets.

Discussion. We now discuss the limitations of our data and how we address them in our analysis.

First, our study is based on institutions that use Glass Lewis's vote execution services. To the extent that Glass Lewis clients differ from those of ISS, this may limit the external validity of our findings. Available evidence, however, suggests that this concern may be limited: ISS (2023) reports that custom policies are also widely used among its clients, and in Section 4.1 we show that customization rates in our sample are similar to those reported by ISS. Our discussions with ISS representatives further indicate that the motivations and patterns of customization among their clients resemble those we document for Glass Lewis. It is also worth noting that Glass Lewis is a major player in the industry: according to Shu (2024), its share of the U.S. proxy advice market reached 42% by 2021. In Section 7.4, we discuss how the possibility that investors choose between proxy advisors might shape sample composition and the interpretation of our findings.

[15] We observe auto-submission policies only at the institution level, and some institutions report multiple policies. As a result, we cannot always identify a fund's specific auto-submission policy, introducing some error into our measure. Hu, Malenko, and Zytnick (2024) document large concentrations of votes cast four days before the meeting even at institutions that specify immediate auto-submission or no auto-submission at all. They classify such votes as auto-submitted and validate this assumption using voting data. We adopt the same approach in this paper.

Second, we observe customization status as of May 2020 and July 2022 (or when the client became inactive, if earlier) but do not have a full time-series of funds' customization decisions over the sample period. While this is a limitation, both our conversations with Glass Lewis and supplementary empirical tests (see Section 6.3.4) suggest that funds classified as customizers in 2022 were likely already customizing at the start of our sample period.

Third, while we observe each fund's customization status, we do not observe the custom policies or custom recommendations themselves (these are proprietary to Glass Lewis's clients). However, as Section 4.2 shows, our data on auto-submitted ballots offer indirect evidence, allowing us to estimate how often custom recommendations differ from benchmark ones.

Finally, our data are at the fund-ballot level: we observe whether a fund deviated from Glass Lewis benchmarks on at least one proposal on the ballot, but do not observe proposal-level votes. We thus combine information on all proposals voted on at each meeting with meeting-level voting outcomes to infer vote choices and ideological patterns at the proposal level.

Summary statistics. Table 1 provides summary statistics for our main dataset, Glass Lewis data merged with ISS Voting Analytics and data on issuers. Our sample has 333 institutions and 25,046 funds that cast votes in more than 31,000 shareholder meetings at public U.S. firms over 2011-2017.

Panel A shows that 7.6% of shareholder meetings in our sample include at least one shareholder proposal on any topic; 3.1% include at least one on ES issues, and 5.9% at least one on governance issues. A large fraction of meetings involves some opposition from proxy advisors. For example, in nearly 45% (40%) of meetings, Glass Lewis (ISS) benchmark recommendations disagree with management on at least one proposal on the ballot.[16] These meeting-level opposition rates are much higher than proposal-level rates (e.g., for say-on-pay proposals, Ertimur et al. (2013) report opposition rates at 22% for Glass Lewis and at 11% for ISS). This is because these figures capture opposition on *any* proposal in a meeting, rather than opposition on one proposal.

Panels B and C present descriptive statistics for funds and institutions in our sample (variable definitions are provided in Online Appendix C.2). On average, an institution has 44 funds, and each fund holds 49 portfolio companies. Funds do not predominantly follow Glass Lewis or passively auto-submit their votes: 30% of fund ballots deviate from Glass Lewis on at least one proposal, and 36% are submitted manually. These averages, however, mask substantial differences between customizers and non-customizers, which we examine in subsequent analyses.

[16] Because Glass Lewis benchmark recommendations are not in ISS Voting Analytics and are imputed using Zytnick (2025)'s method, they are only available for a subsample of meetings: 25,574 out of 31,126, as shown in Table 1.

An average fund holds a $1.9 million stake in a typical portfolio company and $82 million across all holdings. These figures suggest that many 'funds' in our sample are quite small, and conversations with Glass Lewis indicate these likely correspond to separately managed accounts (SMAs), which their client institutions manage alongside pooled vehicles like mutual funds.[17] Our data thus offer insight into how large asset managers handle voting for SMA clients and the role of customization in this process—an issue directly related to pass-through voting, as discussed in Section 7. Importantly, our results are not driven by small funds or SMAs: First, as shown below, customization is especially prevalent among larger funds. Second, we replicate all analyses on a subsample restricted to funds with combined holdings above $100 million and show the robustness of our results; this analysis is presented in Supplemental Appendix E.4.

Investor ideology. In addition to investors' portfolio characteristics, our analysis requires measures of their voting ideologies. We construct three ideology scores, each ranging from -1 to 1. The *ES* (*Governance*) *score* reflects a fund's stance on environmental and social (governance) shareholder proposals relative to Glass Lewis benchmark policies, and the *Management score* captures its relative support for management proposals, including uncontested director elections and say-on-pay. Higher scores indicate greater support for the corresponding proposals relative to Glass Lewis, while scores near zero suggest ideological alignment. For example, a fund's ES score captures the difference between its support rate for ES proposals and Glass Lewis's support rate. Although our data are at the fund-ballot level, we isolate meetings where specific proposal types are the only likely contentious items, allowing us to infer funds' ideological positions. Online Appendix C.1 details the construction of these scores and validates them using data from ISS Voting Analytics, while the next section presents their distribution for customizers and non-customizers.

4. Frequency and characteristics of custom recommendations

This section documents new facts about customized proxy advice. While prior work focuses solely on benchmark recommendations, we show that few investors rely on them alone. Instead, customization is widely used, and custom recommendations often differ from benchmarks.

4.1 Prevalence of customization

Panel A of Figure 1 shows that only 20.3% of funds subscribe to benchmark recommendations, while 79.7% receive custom recommendations. Nearly all customizers (78.3% of the full sample)

[17] There are other reasons why our sample funds appear small. First, the figures are averaged across years, which puts more weight on small funds that appear only briefly in our data and do not grow over time. Second, they reflect only funds' equity holdings in U.S. firms, excluding other assets. See Supplemental Appendix E.4 for more details.

receive recommendations tailored to them, and only 1.4% subscribe to ready-made policies. We discuss possible reasons for this low share in Section 7.2. Our main analysis does not distinguish between tailored and ready-made customizers, but we analyze the latter separately in Section 6.3.3.

Customization is also common at the institution level: about 55% of institutions customize (Panel B). The lower frequency relative to the fund level suggests that customizing institutions tend to be larger and oversee more funds – a pattern we confirm in Section 5. Focusing on the dollar value of stakes held by customizers – effectively weighing shareholders by their assets under management (AUM) – reveals even greater prevalence: 89.7% of all AUM is customized, again indicating that larger shareholders are especially likely to adopt custom policies.

Figure 1 also illustrates customization at the intensive margin. Panel B shows that low- and medium-level customization are most common, used by 28.5% and 21.6% of institutions, respectively. However, when weighing by institution size (Panel C), the data show greater reliance on higher levels of customization: on an AUM-weighted basis, 49.5% of Glass Lewis clients use medium-level customization and 27.2% use high-level customization.

These numbers are consistent with the frequency of customization reported by ISS. According to ISS (2023), about 86% of voted shares processed by ISS in 2022 were linked to clients' custom policies. Panel D of Figure 1 presents the analogous measure for Glass Lewis clients, showing that around 76% of voted shares are held by customizers.

Finally, Table D.1 in the Online Appendix examines variation in customization within institutions. Most institutions subscribe to the same type of recommendations across all their funds – benchmark, ready-made, or tailored. However, even among institutions where all funds customize, there can be heterogeneity in the specific custom policies adopted. In addition, some institutions are "mixed," with only a subset of their funds customizing and the rest following benchmark recommendations. We analyze variation within institutions in Sections 5 and 6.3.

4.2 Differences between benchmark and custom recommendations

Although the use of custom recommendations is widespread, their adoption would be less interesting if they rarely deviated from benchmark recommendations. In this section, we show that there is in fact a substantial difference between the two.

Since we do not observe custom recommendations directly, we infer their deviation from benchmark recommendations using our auto-submission measure. Specifically, in Table 2 we restrict the sample to fund-ballots classified as auto-submitted and report the percentage that coincide with benchmark recommendations, separately for non-customizers (first column) and customizers (second column). An auto-submitted vote follows the pre-populated recommendation

– benchmark recommendations for non-customizers and custom recommendations for customizers. Hence, if our auto-submission measure were perfectly accurate, the first column of Table 2 would equal 100%, while the second column would reflect the statistic of interest – the share of ballots on which benchmark and custom recommendations coincide.

Consistent with this logic, Table 2 shows that for non-customizers, 95.4% of ballots classified as auto-submitted (i.e., close to 100%) match Glass Lewis benchmarks. In contrast, the number for customizers is much lower: their auto-submitted ballots agree with Glass Lewis benchmarks only 74.5% of the time. The 21-percentage-point gap (95.4% vs. 74.5%) indicates that custom recommendations differ from benchmark recommendations on a sizable share of ballots.[18]

When are deviations between benchmark and custom recommendations most pronounced? A natural hypothesis is that they arise on proposals that generate ideological disagreements among investors – namely, governance (Bubb and Catan, 2022) and environmental or social (ES) issues (Bolton et al., 2020). To test this, we repeat the analysis on two subsamples: meetings with at least one ES proposal and meetings with at least one governance proposal. Table 2 shows that for non-customizers, the share of auto-submitted votes coinciding with benchmarks remains at 95%, stable across subsamples. For customizers, however, this share drops sharply: to 58.6% in meetings with ES proposals and 62.6% in meetings with governance proposals, consistent with custom recommendations reflecting ideological differences. Table D.2 in the Online Appendix further shows that divergence is more likely at contentious meetings, where the proxy advisor's benchmark recommendation opposes management on at least one proposal, and is particularly pronounced for funds subscribing to ready-made custom policies.

Panel B of Table 2 shows that deviations are concentrated among medium- and high-level customizers. Because customization intensity is observed only at the institution level, we classify funds as low-, medium-, or high-level customizers based on their institution's level of customization.[19] Auto-submitted votes of medium- and high-level customizers coincide with benchmarks only 67% of the time, with agreement falling further to 50.5% and 54% in meetings with ES and governance proposals, respectively.[20] By contrast, low-level customizers remain

[18] The 4.6% deviation from 100% in the first column reflects measurement error: our classification overestimates auto-submission since it assumes that all ballots cast on the auto-submission date are auto-submitted, whereas some are manually submitted. In Supplemental Appendix E.2, we conduct a formal bounding exercise that accounts for potential misclassification of auto-submitted votes. This analysis shows that, for plausible classification error rates of up to 30%, custom recommendations differ from benchmarks on roughly 20% or more of ballots.

[19] Since some institutions include both customizing and non-customizing funds, this approach classifies a small set of non-customizing funds in such mixed institutions to the customizer group, but the number is negligible.

[20] Such ballot-level disagreement with Glass Lewis benchmarks likely reflects underlying disagreement on the ES and governance proposals themselves. In a validation exercise reported in Online Appendix Table C.1, using proposal-level

relatively close to benchmarks, with 80–90% agreement. This pattern is consistent with Glass Lewis's description of customization levels (see Section 3 and Online Appendix B).

Summary. Taken together, the data reveal three key facts. First, customization is widespread. Second, its extent varies across shareholders. Third, custom recommendations often differ from benchmarks, especially on issues where investors' ideological views diverge.

We next examine the explanations and implications of these findings, organizing the analysis around the two stages of shareholders' decision-making outlined in Section 2. The first stage – the decision to customize – is analyzed in Section 5, and the second – the ex-post allocation of attention and its interaction with customization – is analyzed in Section 6. Our baseline tests focus on the extensive margin of customization by comparing customizers and non-customizers. We show that our results also hold on the intensive margin in Supplemental Appendix E.3, where we replicate the tests at the institution level, comparing low-level with medium/high-level customizers.

5. Characteristics of customizers

This section examines which institutional investors choose to customize, guided by the predictions developed in Section 2.2.

Ideology. The first prediction in Section 2.2 links customization to ideological distance from the proxy advisor. We test this by comparing the voting behavior of customizers and non-customizers relative to Glass Lewis benchmarks in Figure 2. Panel A plots each shareholder's deviation rate—the fraction of ballots on which it departs from the benchmark on at least one proposal. While both groups include many investors with near-zero deviation rates, this is less pronounced among customizers, who deviate more frequently. Moreover, a sizeable share of customizers deviate over 50% of the time, a pattern that is rare among non-customizers.

Frequent deviations, however, do not necessarily imply consistent ideological differences. For example, an investor may have an ES score near zero if it departs from the benchmark in both pro- and anti-ES directions at similar rates. To capture consistent ideological differences, the remaining panels of Figure 2 display histograms of the three ideology scores, each measuring systematic deviations from Glass Lewis, and Table 3 Panel A reports their distributional statistics for customizers and non-customizers.

mutual fund votes from ISS Voting Analytics, we find that when a mutual fund disagrees with the Glass Lewis benchmark on at least one proposal in a ballot containing an ES proposal, it disagrees specifically on the ES proposal 75.4% of the time. Likewise, when a fund disagrees with the benchmark on at least one proposal in a ballot containing a governance proposal, it disagrees on the governance proposal 79.9% of the time.

These analyses show that while non-customizers' scores concentrate around zero, customizers' scores are much more dispersed, consistent with the model's first prediction. Interestingly, while customizers' ES scores are relatively evenly distributed around zero – some less pro-ES than Glass Lewis and others significantly more pro-ES – their governance scores are concentrated in negative territory and their management scores in positive territory. These patterns suggest that on traditional governance issues, such as board composition and executive compensation, Glass Lewis clients tend to give management more leeway than Glass Lewis itself. This is consistent with Bolton et al. (2020), who conclude that along the governance dimension Glass Lewis is "more management-disciplinarian than most mutual funds," and with Bubb and Catan (2022), who describe Glass Lewis as part of the "shareholder protest party," which opposes management at much higher rates on uncontested director elections and say-on-pay.

Supplemental Appendix E.3 shows similar patterns along the intensive margin: medium- and high-level customizers diverge more from Glass Lewis than low-level customizers across all three dimensions. Together, these results support the first prediction in Section 2.2: customizers deviate from Glass Lewis more often and in systematically ideological ways.

Portfolio characteristics. We next test the predictions linking customization to portfolio characteristics – the number of portfolio firms (economies of scale) and average stake size. Panel A of Table 3 shows that customizers hold more firms than non-customizers (51 vs. 40 on average; 27 vs. 20 at the median) and are substantially larger, both in average dollar stake per firm and in total holdings. These patterns are consistent with the second and third predictions in Section 2.2.

At the institution level (Supplemental Appendix E.3), results are similar: customizing institutions hold more portfolio firms and take larger stakes in the average firm. In addition, they manage substantially more funds (68 vs. 14 on average; 16 vs. 5 at the median), which helps explain why Figure 1 shows a higher share of customizing funds than customizing institutions. These patterns also persist along the intensive margin of customization.

Multivariate analysis. We next combine these predictors of customization in a multivariate regression (Table 3 Panel B), where the dependent variable is a fund's customization status. Column 1 includes the number of portfolio firms and the average stake size at the fund level, while Column 2 adds the corresponding institution-level characteristics, since vote-related decisions are typically made at the family level, by the family's stewardship team. Both columns support the economies-of-scale prediction: a 10% increase in the number of distinct companies held by the institution is associated with a 0.82-percentage-point higher probability of customization, roughly 1% of the

sample mean. The results also support the third prediction: larger average ownership stakes predict greater customization.

We also formally test the predictive power of ideology by including the absolute values of the ES, Governance, and Management scores as independent variables (Columns 3–5). Each strongly predicts customization. When all three scores and portfolio characteristics are included together, each remains statistically and economically significant (Column 6).

A potential challenge in linking customization and ideology is that votes used to measure ideology may themselves be influenced by customization. An ideological gap with the proxy advisor can prompt customization, but customization also creates a mechanical effect: if a fund follows custom recommendations, its votes will diverge from the benchmark even if those recommendations only partly reflect its true ideology (high-level customization is costly, so funds may not customize as fully as they would prefer). To separate these effects, we recompute each fund's ideology scores using only manually submitted votes: manual votes are less likely to follow pre-populated recommendations and more likely to reflect the fund's own preferences.

Using these refined ideology scores, we conduct two tests, reported in Table D.3 of the Online Appendix. First, we replace the ideology scores in Table 3 with scores based on manually submitted votes only and test whether they also predict customization. Panels A and B show that they do, though coefficients are smaller than in Table 3, suggesting that the baseline results may partly capture mechanical effects of customization. Second, we examine whether custom recommendations align with funds' true ideologies by comparing ideology scores from auto-submitted and manual votes for each customizing fund. Panels C and D show a strong positive relation between the two, suggesting that even though funds may not fully customize due to cost constraints, their custom policies still incorporate their underlying views. Together, these findings indicate that the results in Table 3 reflect shareholders actively shaping custom recommendations to express their own ideologies, rather than passively following advice unrelated to their views.

Having shown that customization is linked to portfolio scale and ideology at the fund level, we next turn to variation within institutions.

Within-institution variation in ideology. Customization can allow institutions with heterogeneous ideologies across their funds to express these differences. Table D.4 in the Online Appendix supports this hypothesis: funds within customizing institutions exhibit greater variation in ideological positions than those within non-customizing institutions. Column 1, based on auto-submitted votes, shows that within-institution voting dispersion is substantially higher for customizing institutions. Because auto-submitted votes reflect pre-populated custom

recommendations, this pattern implies that funds within such institutions receive systematically different recommendations, consistent with distinct custom policies tailored to their mandates or investor preferences. Columns 2–4 present similar evidence using ideological scores: within-institution variation is significantly larger for customizing than for non-customizing institutions.

These findings contribute to the literature on the internal organization of voting within asset managers. Prior work highlights strong coordination of votes within institutions, with centralized stewardship teams ensuring consistency across funds (e.g., Morgan et al., 2011). More recent work shows that funds within the same family may nevertheless diverge in ESG-related votes, particularly when catering to different investor clienteles (e.g., Dikolli et al., 2022). Our results suggest that such heterogeneity can be systematically implemented through customized proxy voting policies, supporting the view that customization serves an ideological function.

6. Attention to voting

In this section, we study the second stage of investor decision-making: attention allocation across proposals and its interaction with customization, testing the predictions of Section 2.1.

6.1 Measure of attention

We use manual submission as a proxy for *attention*: auto-submitted ballots indicate passive reliance on pre-populated choices, while manual submissions are more likely to reflect active engagement. To validate this measure, we focus on non-customizing funds – whose pre-populated ballots coincide with Glass Lewis benchmark recommendations – and test whether manual submissions are associated with greater deviations from those benchmarks.

Table 4 reports fund-ballot-level regressions where the dependent variable equals one if the fund's ballot deviates from the benchmark recommendation, and the key independent variable is an indicator for manual submission. Column 1, without controls, shows that manually submitted ballots deviate from benchmarks 21 percentage points more often than auto-submitted ones.[21] The coefficient declines only slightly – to between 17 and 19 percentage points – when adding fund-year and fund-firm fixed effects (columns 2–3), indicating that it reflects *within-fund* variation over time and across meetings, rather than persistent differences across investors or firms. A similar pattern persists when including institution-year and institution-firm fixed effects.

[21] In particular, as shown in Table D.6 in the Online Appendix, 95.4% of non-customizers' auto-submitted ballots, but only 74.5% of their manually submitted ballots, follow the benchmark. The 4.6% deviation from 100% for auto-submitted ballots reflects measurement error in our classification of auto-submission; see footnote 18.

These results confirm that auto-submitted ballots follow pre-populated choices, whereas manual submissions reflect "active voting" (Iliev and Lowry, 2015). Our measure thus provides a novel, granular proxy for attention, based on investors' actual use of the voting platform.[22]

6.2 Allocation of attention across meetings

Using this measure, we first examine how funds allocate their limited attention across shareholder meetings, without yet distinguishing between customizers and non-customizers. Table 5 reports fund-ballot-level regressions, where the dependent variable equals one if a fund manually submits its vote. Manual submission is more likely when the fund holds a larger stake or when the meeting is more contentious, consistent with common intuition and our model predictions (see Appendix A.4). Specifically, following the literature, we classify as contentious meetings where a proxy advisor recommends against management on at least one proposal on the ballot (Brochet, Ferri, and Miller, 2021), those linked to an activist investor (Brav et al., 2024), and special meetings (Li, Maug, and Schwartz-Ziv, 2022). Funds are more likely to vote manually in each of these cases, indicating greater attention to economically important or contentious issues and aligning with the evidence in Iliev, Kalodimos, and Lowry (2021).

These patterns hold after including fund-year and fund-firm fixed effects, showing that attention varies within funds over time and across firms: the same fund pays more attention to a company in some years than in others and, within a year, focuses more on select portfolio firms. The magnitudes are economically large: manual submission is about six percentage points higher when Glass Lewis recommends against management, three percentage points higher upon ISS opposition, and rises by more than 13 percentage points for special meetings.

Difference-in-differences regressions. To further examine the dynamics of strategic attention allocation, Figure 3 presents difference-in-differences (DiD) regressions, where a fund's voting behavior at a firm prior to that firm's contentious meeting, and its contemporaneous votes at other firms without such meetings, serve as controls for its votes at the treated meeting (the regression specification is provided in the figure caption). Each panel now focuses on one type of contentious meeting at a time: (A) ISS opposition, (B) Glass Lewis opposition, (C) special meetings, and (D) activist-connected meetings. To isolate potential pre-trends, we restrict the sample to firms that experience the event either never or exactly once and plot the resulting event-time coefficients.

[22] Prior work measures investor attention using views of proxy filings in EDGAR (Iliev, Kalodimos, and Lowry, 2021; Brav et al., 2024). We do not use that measure for two reasons. First, our data are anonymized, preventing us from linking investors to EDGAR activity. Second, the EDGAR-based measure can only be constructed at the institution level, while our measure captures attention at the fund level, allowing us to study within-institution variation.

Across all four panels, manual voting increases sharply at the time of the contentious meeting, with no evidence of pre-trends. For special meetings and meetings with ISS opposition, manual voting remains elevated in subsequent years, consistent with funds maintaining heightened attention to firms that previously experienced salient or contentious events.

While the two-way fixed-effects specification in Figure 3 provides a transparent baseline, variation in the timing of contentious meetings across firms can complicate interpretation. Following recent advances in staggered DiD estimation (Goodman-Bacon, 2021; Sun and Abraham, 2021; Callaway and Sant'Anna, 2021), we implement a stacked event-time DiD design, described in detail in Online Appendix D.2*,* where we also discuss the identifying assumptions and design choices. The results, presented in Figure D.3 and Table D.10 of the Online Appendix, confirm that investors respond to contentious meetings by increasing their rate of manual voting.

6.3 Customization and attention to voting

We now turn to the link between attention allocation (the second stage) and customization (the first stage of the decision-making process). The model's predictions in Section 2.1 suggest that customization helps shareholders reallocate attention: *substituting* for attention on proposals where preset rules already reflect the fund's preferred vote, and *complementing* attention by allowing greater focus on important, contentious proposals where additional research is most valuable.

6.3.1 Substitution

Our first and most direct evidence of substitution comes from our earlier analysis of auto-submission. As Section 6.1 and Table 4 show, non-customizing funds must allocate attention and manually vote to depart from the benchmark recommendation when it conflicts with their ideology. Customizers, instead, incorporate these ideological adjustments in their ex-ante policy choices: as shown in Table 2, they can rely on auto-submission to cast ideologically consistent votes automatically, reducing the need for attention at the voting stage.

While Tables 2 and 4 provide the main evidence of substitution, Figure 4 offers a simple visual illustration. It plots funds' deviation rates from Glass Lewis recommendations against their manual voting rates in binned scatterplots, separately for customizers and non-customizers. Consistent with Table 4, deviations rise with manual voting, reflecting that manual submissions represent active departures from pre-populated choices.[23] Importantly, for any given rate of manual

[23] For customizers, manual voting achieves deviations from their custom recommendations, which we do not directly observe. However, because custom policies often build on benchmark policies, especially for low-level customizers who find it too costly to fully customize, the upward sloping line remains consistent with the idea that manual voting allows funds to deviate from the recommendations they receive.

voting, customizers deviate more, consistent with the substitution effect. For example, among funds that rarely vote manually (below 10%), customizers deviate on roughly 20% of ballots, compared with about 5% for non-customizers.[24]

These results offer clear evidence of substitution. For funds that would otherwise auto-submit benchmark recommendations, customization shifts their default vote toward their ideology, thereby reducing the costs of not paying attention (motive 1 in Section 2.1). For funds that would otherwise conduct research and vote manually to express their ideology, customization allows them to do so automatically through pre-set rules, thus lowering the costs of paying attention (motive 2 in Section 2.1). In both cases, customization substitutes for attention at the voting stage.

Within-family variation. Within-family differences in voting behavior provide additional support for substitution. First, earlier evidence of within-family heterogeneity in fund ideologies (Section 5) supports the idea that families with diverse ideologies across their funds can use customization to substitute for fund-specific research – subscribing these funds to distinct custom policies and relying on auto-submission to implement them (Online Appendix Table D.4).

Next, we provide additional evidence of substitution using within-family differences in customization. A challenge in studying the relationship between customization and attention to voting is that it reflects both the treatment effects of customization (substitution and complementarity) and selection into customization. Our model predicts that investors who care more about voting are more likely to customize (Proposition 3 in Appendix A) and to pay closer attention and vote manually. While we can control for observable factors that capture the importance of voting to an investor, such as size and ownership stakes, unobserved factors may still drive selection, generating a positive correlation between customization and manual voting. In line with selection, Column 1 of Table 6 shows a positive coefficient on customization in fund-ballot-level regressions where the outcome variable equals one if a ballot was submitted manually.

To isolate the role of such unobserved family-level factors, we exploit within-family variation in customization. Several families in our sample include both customizing and non-customizing funds (Table D.1 in the Online Appendix). To the extent that factors such as the general importance of voting to the asset manager or stewardship culture are stable within a family, including institution fixed effects helps partially remove selection effects. Once these fixed effects

[24] Figure 4 shows that even among funds with high manual voting rates, customizers deviate more from benchmarks. This pattern likely reflects two factors. First, customizers are more ideological, as shown earlier. Second, as discussed in Online Appendix B, customization not only produces tailored recommendations, but also provides information on proposal characteristics relevant to the fund's ideology (e.g., whether the board provides oversight over ES issues), thereby reducing the information costs of ideological voting even when votes are cast manually (substitution).

are included (Column 2), the coefficient on customization turns negative and economically large: relative to a non-customizing fund in the same family, a customizing fund is 14 percentage points less likely to vote manually, a 40% reduction relative to the mean. The effect remains robust after controlling for portfolio characteristics (Columns 3–4).

While we caution against putting too much weight on this result, as it is based on only a few families, the negative coefficient is consistent with substitution. Stewardship teams typically centralize research and voting for most funds in the family (Morgan et al., 2011). However, if one fund follows a distinct ideology – such as an ESG fund within a non-ESG family – the stewardship team would need to generate two sets of recommendations and conduct separate, fund-specific research just for this fund alone. Instead, it can substitute this additional attention by subscribing that fund to custom recommendations, allowing it to auto-submit votes accordingly. The remaining funds continue to vote manually based on the stewardship team's centralized guidance.

Additional analyses support this mechanism. First, if non-customizing funds vote manually based on stewardship team recommendations, their votes should cluster – both in direction (for or against) and in timing, with votes concentrated on the same date. By contrast, customizing funds should follow their custom recommendations and vote on the auto-submission date. Panel A of Online Appendix Table D.5 confirms this: compared to non-customizing funds within a family, which tend to vote on the same day and in the same direction, customizing funds are more likely to vote on a different date and deviate from this "modal" direction. Second, if customization is used for funds with distinct ideological profiles, customizing funds' ideologies should differ systematically from non-customizers. Panel B of Table D.5 supports this prediction: within the same family, customizing funds have much higher ES scores than non-customizers.

6.3.2 Complementarity

Section 6.3.1 shows that customization allows funds to express their ideologies while devoting less attention to voting, often through auto-submission (substitution). This raises the question of whether funds use this flexibility solely to reduce attention and manual voting, or also to redirect attention to contentious issues (complementarity).

We begin by noting that customizers still manually submit a substantial number of votes. This is evident in Figure 4 and in Online Appendix Table D.7, which reports manual voting rates across meeting categories. Thus, while substitution occurs, it is not complete: customizers continue to devote attention ex post, rather than relying entirely on custom recommendations.

A key implication of complementarity is a *reallocation of attention*: by both freeing up investors' attention budget and alerting them to proposals where research is most valuable,

customization should make their attention more sensitive to meeting importance than that of non-customizers. While our ability to test complementarity is constrained by selection effects and the absence of exogenous variation in customization, we examine this mechanism as carefully as our cross-sectional data allow, combining graphical evidence with regression analyses.

Table 7 reports fund-ballot-level regressions where the dependent variable indicates whether a fund manually submitted the ballot, and the key explanatory variables are interactions between the fund's customization status and various measures of meeting contentiousness. Consistent with complementarity, customizers' manual voting is significantly more responsive to contentious meetings. This greater sensitivity holds across all categories of contentious meetings and remains after controlling for meeting, fund-year, and fund-firm fixed effects. In column 3, for example, a customizer's propensity to vote manually when ISS (Glass Lewis) opposes management rises by 2.2 (5.0) percentage points more than that of a non-customizer – an increase of about 6% (14%) relative to the sample mean. The gap in sensitivity is even larger for special meetings and those linked to an activist. Likewise, Online Appendix Table D.8 replicates Table 5 separately for customizers and non-customizers and shows that, while both allocate attention strategically, non-customizers are less responsive to important meetings. Institution-level results provide complementary evidence at the intensive margin: medium- and high-level customizers display greater sensitivity to important meetings than low-level customizers.

A potential concern is that these results may partly reflect selection rather than reallocation of attention. If non-customizers generally pay little attention to voting, while customizers are more attentive overall, the observed difference in sensitivity could simply reflect this baseline gap. To address this, Figure 5 plots each fund's rate of manual voting at contentious meetings against its overall manual voting rate, where the latter can be interpreted as fixing its total attention budget. The 45-degree line marks the benchmark where a fund allocates equal attention to contentious and non-contentious meetings. Both customizers and non-customizers lie above this line, indicating that all funds devote more attention to contentious meetings, consistent with Table 5. More importantly, the customizer curve lies systematically above that of non-customizers, showing that, holding total attention constant, customizers allocate a greater share of attention to contentious meetings. The confidence intervals, shown around each point estimate, are narrow and largely non-overlapping, reinforcing this conclusion. Thus, while we remain cautious about potential selection, the evidence appears consistent with a reallocation of attention rather than with selection alone.

6.3.3 Ready-made customizers

The evidence so far shows that, on average, customization does not fully crowd out attention to voting and can even complement it: customizers are active both ex ante, by shaping the recommendations they receive, and ex post, by manually voting on important matters. One subset of customizers, however, warrants closer attention. About 1.4% of funds in our sample subscribe to ready-made policies – pre-defined menus offered by the proxy advisor (Figure 1). This form of customization is less costly than tailored customization: it requires no additional work from the proxy advisor, resulting in lower fees, and allows investors to adopt pre-set policies without the costs of developing their own, though potentially at the expense of ideological precision. Ready-made customization is therefore more likely to attract investors who place relatively little value on voting. Because such investors have limited incentive to conduct research even when customization is available, our model predicts that customization in this context serves only as a substitute for attention, with the complementarity effect less likely to arise (see Proposition 2 in Appendix A).

We begin by describing the characteristics of ready-made customizers. The first observation is that these funds are highly ideological. Panels A–C of Figure 6 show that they are more management-disciplinarian on governance and management proposals and substantially more ES-friendly than either benchmark policies or tailored customizers. This is in line with Online Appendix Figure D.1, which shows that most ready-made customizers select either the *ESG* policy, which emphasizes ES issues, or the *Taft-Hartley* policy, which prioritizes labor concerns such as worker rights and fair pay. Ready-made policies diverge from benchmarks even more than tailored ones: the average ready-made auto-submitted ballot coincides with the benchmark only about 50% overall and just 32–39% when ES or governance proposals are on the ballot (Online Appendix Table D.2). These patterns align with Glass Lewis disclosures showing large gaps between ready-made and benchmark policies (see Online Appendix B).

The second observation is that, unlike tailored customizers, ready-made customizers rarely vote manually. Panel D of Figure 6 and Online Appendix Table D.7 show that their manual-voting rates seldom exceed 5–7%, even in contentious meetings. Furthermore, within-meeting regressions in Online Appendix Table D.9 show that, relative to non-customizers, ready-made customizers are significantly more likely to auto-submit their ballots. This pattern follows naturally from their characteristics: ready-made customizers hold especially broad portfolios – roughly twice as many firms as tailored or non-customizing funds (Online Appendix Table D.9) – and thus face high costs of reviewing each meeting. Adopting a standardized ideological policy allows them to ensure that votes reflect their stance while minimizing attention costs.

Overall, for ready-made customizers, customization primarily substitutes for attention to voting – consistent with the model's prediction that complementarity arises only when investors place sufficiently high value on voting. Given their broad portfolios and reliance on pre-determined menus, ready-made customizers appear to place limited weight on individual votes.

6.3.4 Discussion

Together, our evidence aligns with the three motives for customization in Section 2.1. The auto-submission results in Sections 6.3.1 and 6.3.3 support substitution: customization allows funds to express their ideologies, reducing both the costs of inattention (motive 1) and the costs of paying attention (motive 2), and Section 6.3.2 offers evidence consistent with complementarity (motive 3).

A cleaner test of complementarity – and a sharper distinction between motives 1 and 2 – is challenging because we do not observe the counterfactual. If a fund did not customize, would it simply follow benchmark recommendations, diverging from its ideology, or would it invest resources to vote in line with its views? Disentangling these motives would require exogenous shocks that randomly induce some funds to customize – a question we leave for future research.

If we had longer time-series and data on funds' historical customization status, we could conduct within-fund time-series analysis, comparing a fund's voting behavior and propensity to auto-submit before and after it adopted customized advice. While such analysis would not provide clean counterfactuals – since the decision to customize is endogenous and may reflect shifts in ideology or in the fund's broader approach to stewardship – it could still be informative. Unfortunately, Glass Lewis did not keep the data on historical customization status of its clients. Moreover, according to our discussions with them, few clients switched their customization status during our sample period. To explore potential time-series dynamics within funds, we examined their voting behavior year by year, looking for structural breaks – discrete shifts in ideological voting or in the propensity to auto-submit – that might signal the adoption of customization. However, we did not find any such breaks, consistent with what Glass Lewis indicated to us.[25]

As an additional check, we replicate Table 2 on a year-by-year basis. Because our classification of funds as customizers and non-customizers is based on their 2022 status, a gradual transition into customization during our sample period should manifest as a decline in the second column of Table 2: early in the sample, "customizers" would in fact be following benchmark recommendations, giving much higher agreement with benchmarks. Figure D.2 in the Online Appendix plots these results year-by-year. The red line, representing customizers, shows no such

[25] This is also consistent with our finding that only one institution changed its customization status between 2020 and 2022; see footnote 13.

decline and is consistently lower than the blue line, representing non-customizers. If anything, the red line slightly trends upward, which may reflect benchmark recommendations gradually reflecting the average ideology of the proxy advisor's clients over time. Overall, this pattern is consistent with customizers having adopted customization before our sample period.

7 Implications

In this section, we discuss the implications of our results for recent institutional and regulatory developments and highlight some open questions.

7.1 Pass-through voting

Customization is becoming increasingly relevant given the rise of pass-through voting, which allows fund investors to exercise their own voting rights, rather than delegate them to the fund manager (Fisch and Schwartz, 2023; Malenko and Malenko, 2024). Large asset managers, notably BlackRock, Vanguard, and State Street, now offer this option to their clients, including retail investors, and it has long been available to clients in separately managed accounts (SMAs). BlackRock reports that over 20% of eligible AUM (about $700 billion of $3 trillion) have opted to exercise their own voting rights, mostly institutional clients.

In practice, pass-through voting involves significant use of custom recommendations. Asset managers typically offer investors a menu of ready-made policies developed by major proxy advisors, covering a range of ideologies. In fact, for retail clients, adopting one of these ready-made policies is the only option offered by asset managers. Institutional clients who choose to exercise their voting rights can also purchase tailored recommendations: as BlackRock explains, "clients either develop their own processes and policies to be implemented by an in-house team or contract directly with a third-party proxy advisor to develop and implement a custom policy."[26] Based on conversations with Glass Lewis, some funds in our sample include SMAs, and thus, our paper shows how customization has already been used to implement pass-through voting for these accounts. Overall, the growth of pass-through voting is likely to expand the use of custom policies and highlights the need to better understand the evolving role of proxy advisors in this context.

7.2 Ready-made menus

Our analysis shows that ready-made policies are chosen by funds with strong ideologies, who then largely rely on these ready-made custom recommendations in their votes. What is puzzling, however, is why so few funds subscribe to ready-made policies (Figure 1). A likely explanation

[26] See BlackRock Voting Choice, which includes a discussion of the options available to pooled fund clients and SMAs, as well as the menu of available ready-made policies.

could be the limited menu available during our sample period. Glass Lewis offered only five ready-made policies, concentrated on one side of the ideological spectrum: supportive of ES issues and frequently opposing management on governance matters (Figure 6 and Table B.1).

Given this limited ideological coverage, shareholders unwilling to purchase more expensive tailored advice may instead subscribe to benchmark recommendations, explaining the low prevalence of ready-made customizers in our sample. With the growth of pass-through voting, however, ready-made policies may become more prominent. First, mechanically, they will attract additional followers from investors of large asset managers that offer pass-through voting. Second, and more importantly, these asset managers are actively selecting menus for their pass-through programs, and proxy advisors have responded by expanding their own menus to cover other points on the ideological spectrum (Brav et al., 2025). Examples include ISS's "Board-Aligned" policy and Glass Lewis's "Corporate Governance Focused" policy introduced in 2023, both of which tend to follow management's recommendations, including on environmental and social issues.

Whether this expansion will improve preference aggregation is unclear. On the one hand, it could give funds that previously relied on benchmark policies a closer ideological match. On the other hand, the lower cost of ready-made policies may induce some funds that previously used tailored advice to switch, resulting in coarser preference representation for them. Overall, the growth of pass-through voting, by reshaping the menus of available options, is likely to change how direct clients of proxy advisors balance between tailored and ready-made customization.

7.3 Policy debates on proxy advisors

Our analysis also informs ongoing policy debates. For example, regulators have considered prohibiting pre-populated ballots and the automatic submission of votes, aiming to push shareholders toward more independent research (SEC, 2019). While assessing the net welfare effects of such regulations requires a formal analysis that is beyond the scope of this paper, our findings point to potential unintended consequences. First, because auto-submission is partly how institutional investors manage their limited attention through customization, making it less accessible could reduce the use of customization. This, in turn, could increase reliance on benchmark recommendations, which is the outcome regulators have tried to avoid. It would also mean that investors' individual preferences are less fully reflected in their votes, even as regulatory initiatives like the INDEX Act call for the opposite. On the information side, the complementarity effect we document implies that restricting auto-submission could actually reduce research efforts, especially on the proposals where it is most valuable—the opposite of what regulators may intend.

The regulatory debate over proxy advisors has only intensified in recent years. In 2020, under the Trump Administration, the SEC imposed new restrictions, including company feedback requirements and enhanced oversight. In 2022, the Biden Administration reversed most of these rules, while retaining conflict-of-interest disclosures. The legal status of these regulations remains unsettled: the 2022 rule has been struck down in one federal circuit, upheld in another, and both the 2020 and 2022 rules were struck down in a third. During the second Trump Administration, both the House Financial Services Committee and House Judiciary Committee have launched investigations of the proxy advisors, and the state of Texas passed a law requiring proxy advisors to provide detailed economic justifications for recommendations that oppose management, rely on nonpecuniary factors, or – most relevant for our study and new to the regulatory debate – differ across clients.[27] With regulators now turning their attention to custom recommendations, understanding their role becomes especially important. Our paper takes a first step in this direction.

7.4 Switching proxy advisors and the design of benchmark policies

Investors may sort across proxy advisors based on ideological alignment with their benchmark policies, switching if the match is imperfect. Shu (2024) documents some switching, though it appears rare (Section 3.3 in his paper) – likely due to fixed costs of changing voting platforms and the limited scope for sorting given that only two major proxy advisors exist. Even so, the possibility of sorting has several implications for our results. First, the extent of customization in Figure 1 can be viewed as a lower bound on what would occur absent sorting. Second, the ideological deviations of custom recommendations from benchmarks (Table 2) are likely smaller than they would be without sorting.

The possibility of switching also raises interesting questions about how proxy advisors design their benchmark policies. On the one hand, if a benchmark policy is too far from clients' ideologies, investors may find it more cost-effective to switch to another, ideologically closer proxy advisor, rather than remain and customize. On the other hand, if benchmark policies are too closely aligned with clients' ideologies, investors have little incentive to purchase the more expensive custom recommendations. Future research could examine how proxy advisors balance this trade-off and how the design of benchmark policies interacts with investors' custom policies.

[27] See Texas Senate Bill 2337, which was scheduled to take effect on September 1, 2025. With respect to recommendations that vary across clients (i.e., custom recommendations), the law requires that when a proxy advisor provides "materially different" advice to different clients, it must notify each shareholder receiving the advice, as well as the Texas attorney general and the company about which the recommendations are made (see Sec. 6A.102).

8 Conclusion

This paper presents the first empirical analysis of custom proxy voting advice. We document that customization is widely used and that custom recommendations differ substantially from benchmark recommendations. Using a theoretical framework and proprietary data from Glass Lewis, we show that customization serves two key purposes. First, it enables shareholders to express their ideologies through voting. Second, it streamlines the decision-making process by reducing the need to pay attention to each individual proposal, allowing investors to concentrate their research on the more crucial and contentious matters.

Our results offer a new perspective on institutional investor decision-making and the role of proxy advisors. We argue that most investors' use of proxy advisors is best described by a two-stage process. In the first stage, investors work with the proxy advisor to set their custom voting policies, thereby actively shaping the recommendations they receive. In the second stage, they decide whether to follow these recommendations or to conduct additional research.

These results have important implications for ongoing policy debates surrounding institutional voting and proxy advisors. They suggest that recent efforts by lawmakers to restrict the use of proxy advisory services (SEC, 2019; HFSC, 2023) may be misplaced, as any regulatory actions should account for the growing use of customization. For example, policymakers often highlight the concentration of proxy advisors as a concern, given the perceived excess influence of a single recommendation. Our paper shows that, due to the widespread use of customization, proxy advisors provide far more than one recommendation on a given proposal. More broadly, we suggest moving away from exclusively focusing on benchmark recommendations.

References

Albuquerque, A.M., M.E. Carter, and S. Gallani, 2020, Are ISS Recommendations Informative? Evidence from Assessments of Compensation Practices, Working paper.

Alexander, C. R., M. A. Chen, D. J. Seppi, and C. S. Spatt, 2010, Interim News and the Role of Proxy Voting Advice, *Review of Financial Studies* 23, 4419-4454.

Bebchuk, L., and S. Hirst, 2019, Index Funds and the Future of Corporate Governance: Theory, Evidence, and Policy, *Columbia Law Review* 119, 2029-2146.

Blackrock, 2022, It's All About Choice, available at https://www.blackrock.com/corporate/literature/publication/its-all-about-choice.pdf.

Bolton, P., T. Li, E. Ravina, and H. Rosenthal, 2020, Investor Ideology, *Journal of Financial Economics* 137, 320-352.

Boot, A. W. A., and A. V. Thakor, 2001, The Many Faces of Information Disclosure, *Review of Financial Studies* 14, 1021-1057.

Brav, A., W. Jiang, T. Li, and J. Pinnington, 2024, Shareholder Monitoring through Voting: New Evidence from Proxy Contests, *Review of Financial Studies* 37, 591-638.

Brav, A., T. Li, D. Lund, and Z. Pan, 2025, The Proxy Voting Choice Revolution, Working paper.

Brochet, F., F. Ferri, and G. Miller, 2021, Investors' Perceptions of Activism via Voting: Evidence from Contentious Shareholder Meetings, *Contemporary Accounting Research*, 38, 2758-2794.

Bubb, R., and E. Catan, 2022, The Party Structure of Mutual Funds, *Review of Financial Studies* 35, 2839-2878.

Buechel, B., L. Mechtenberg, and A. F. Wagner, 2024, When Two Experts Are Better Than One: The Example of Shareholder Voting, Working paper.

Callaway, B., and P. H. C. Sant'Anna, 2021, Difference-in-Differences with Multiple Time Periods, *Journal of Econometrics* 225, 200-230.

Calluzzo, P., and E. Dudley, 2019, The Real Effects of Proxy advisors on the Firm, *Financial Management* 48, 917-943.

Calluzzo, P., and S. Kedia, 2022, Managing the Workload of the Proxy Season, Working paper.

Camara, O., Matsusaka, J. G., and C. Shu, 2025, Shareholder Democracy and the Market for Voting Advice, Working paper.

Choi, S., J. E. Fisch, and M. Kahan, 2010, The Power of Proxy Advisors: Myth or Reality, *Emory Law Journal* 59, 869-918.

Choi, S., J. E. Fisch, and M. Kahan, 2013, Who Calls the Shots: How Mutual Funds Vote on Director Elections, *Harvard Business Law Review* 3, 35-81.

Correia, S., 2015, Singletons, Cluster-Robust Standard Errors and Fixed Effects: A Bad Mix, Working paper.

Couvert, M., 2025, What Is the Impact of Mutual Funds' ESG Preferences on Portfolio Firms? Working paper.

Davis, G. F., and E. H. Kim, 2007, Business Ties and Proxy Voting by Mutual Funds, *Journal of Financial Economics* 85, 552-570.

Dey, A., A. Starkweather, and J. T. White, 2024, Proxy Advisory Firms and Corporate Shareholder Engagement, *Review of Financial Studies* 37, 3877-3931.

Diamond, D. W., 1985, Optimal Release of Information by Firms, *Journal of Finance* 40, 1071-1094.

Dikolli, S. S., M. M. Frank, Z. M. Guo, and L. J. Lynch, 2022, Walk the Talk: ESG Mutual Fund Voting on Shareholder Proposals, *Review of Accounting Studies* 27(3), 864-896.

Edmans, A., T. Gosling, and D. Jenter, 2025, Sustainable Investing: Evidence from the Field, Working paper.

Ertimur, Y., F. Ferri, and D. Oesch, 2013, Shareholder Votes and Proxy Advisors: Evidence from Say on Pay, *Journal of Accounting Research* 51, 951-996.

Ertimur, Y., F. Ferri, and D. Oesch, 2018, Understanding Uncontested Director Elections, *Management Science* 64, 3400-3420.

Fisch, J. E., and J. Schwartz, 2023, Corporate Democracy and the Intermediary Voting Dilemma, *Texas Law Review* 102, 1-64.

Goldstein, I., and L. Yang, 2017, Information Disclosure in Financial Markets, *Annual Review of Financial Economics* 9, 101-125.

Goodman-Bacon, A., 2021, Difference-in-Differences with Variation in Treatment Timing, *Journal of Econometrics* 225, 254-277.

House Financial Services Committee (HFSC), 2023, Protecting Investor Interests: Examining Environmental and Social Policy in Financial Regulation, available at https://democrats-financialservices.house.gov/events/eventsingle.aspx?EventID=410595.

Hu, E., N. Malenko, and J. Zytnick, 2024, Shareholder Vote Timing, Working paper (the current draft is not yet online; please refer to an earlier draft, which combines the results of both papers; see Table 2 and Figure 3 for the results referenced in this manuscript).

Iliev, P., Kalodimos, J. and M. Lowry, 2021. Investors' Attention to Corporate Governance, *Review of Financial Studies* 34, 5581-5628.

Iliev, P., and M. Lowry, 2015, Are Mutual Funds Active Voters? *Review of Financial Studies* 28, 446-485.

Institutional Shareholder Services (ISS), 2023, Testimony of Steven Friedman, General Counsel at ISS, available at https://corpgov.law.harvard.edu/2023/07/19/testimony-at-the-committee-on-financial-servicess-hearing-oversight-of-the-proxy-advisory-industry/.

Kacperczyk, M., S. Van Nieuwerburgh, and L. Veldkamp, 2016, A Rational Theory of Mutual Funds' Attention Allocation, *Econometrica* 84, 571-626.

Kempf, E., A. Manconi, and O. Spalt, 2017, Distracted Shareholders and Corporate Actions, *Review of Financial Studies* 30, 1660-1695.

Larcker, D. F., A. L. McCall, and G. Ormazabal, 2015, Outsourcing Shareholder Voting to Proxy Advisory Firms, *Journal of Law and Economics* 58, 173-204.

Levit, D., N. Malenko, and E. G. Maug, 2024, Trading and Shareholder Democracy, *Journal of Finance* 79, 257-304.

Li, T., 2018, Outsourcing Corporate Governance: Conflicts of Interest Within the Proxy Advisory Industry, *Management Science* 64, 2951-2971.

Li, T., S. L. Naaraayanan, and K. Sachdeva, 2023, Conflicting Objectives of ESG Funds: Evidence from Proxy Voting, Working paper.

Li, S. Z., E. Maug, and M. Schwartz-Ziv, 2022, When Shareholders Disagree: Trading after Shareholder Meetings, *Review of Financial Studies* 35, 1813-1867.

Ma, S., and Y. Xiong, 2021, Information Bias in the Proxy Advisory Market, *Review of Corporate Finance Studies* 10, 82-135.

Malenko, N., and Y. Shen, 2016, The Role of Proxy Advisory Firms: Evidence from a Regression-Discontinuity Design, *Review of Financial Studies* 29, 3394-3427.

Malenko, A., and N. Malenko, 2019, Proxy Advisory Firms: The Economics of Selling Information to Voters, *Journal of Finance* 74, 2441-2490.

Malenko, A., and N. Malenko, 2024, Voting Choice, Working paper.

Malenko, A., N. Malenko, and C. S. Spatt, 2025, Creating Controversy in Proxy Voting Advice, *Journal of Finance* 80, 2303-2354.

Meirowitz, A., S. Pi, and M. C. Ringgenberg, 2025, Voting for Socially Responsible Corporate Policies, Working paper.

Michaely, R., S. Rubio, and I. Yi, 2025, Voting Rationales, Working paper.

Morgan, A., A. Poulsen, J. Wolf, and T. Yang, 2011, Mutual Funds as Monitors: Evidence from Mutual Fund Voting, *Journal of Corporate Finance* 17, 914-928.

Securities and Exchange Commission, 2019, Proposed Rule: Exemptions from the Proxy Rules for Proxy Voting Advice, available at https://www.sec.gov/rules/proposed/2019/34-87457.pdf.

Securities and Exchange Commission, 2020, Supplement to Commission Guidance Regarding Proxy Voting Responsibilities of Investment Advisers, available at https://www.sec.gov/files/rules/policy/2020/ia-5547.pdf.

Shu, C., 2024, The Proxy Advisory Industry: Influencing and Being Influenced, *Journal of Financial Economics* 154, 103810.

Sun, L., and S. Abraham, 2021, Estimating Dynamic Treatment Effects in Event Studies with Heterogeneous Treatment Effects, *Journal of Econometrics* 225, 175-199.

Zachariadis, K.E., D. Cvijanovic, and M. Groen-Xu, 2025, Free-Riders and Underdogs: Participation in Corporate Voting, Working paper.

Zytnick, J., 2024, Do Mutual Funds Represent Individual Investors? Working paper.

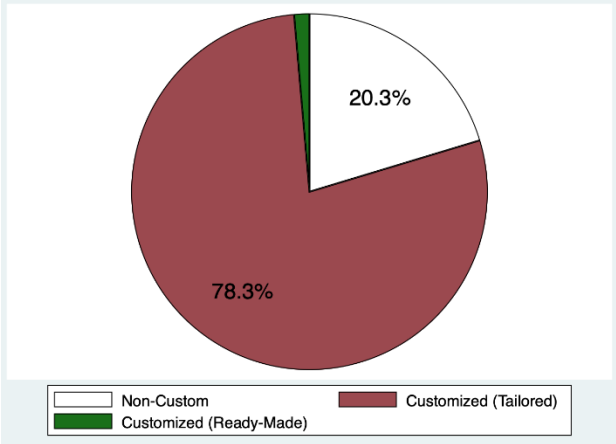
Zytnick, J., 2025, Imputing Proxy Advisors' Recommendations. *Journal of Empirical Legal Studies*, https://doi.org/10.1111/jels.70006.

Figures and tables

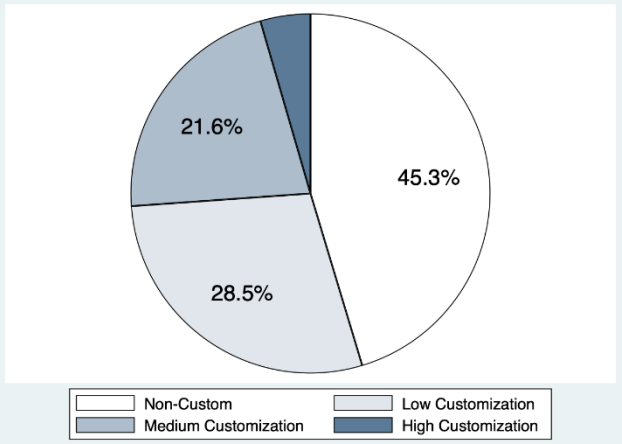
Figure 1. Frequency of customization

This figure presents pie charts illustrating the extent of customization in our sample. Panel A reports the percentage of funds that customize, breaking them down into tailored and ready-made customizers. Panel B reports the percentage of institutions that customize, breaking them down into low, medium, and high levels of customization. Panel C reports the dollar value of shares that are voted by customizers, approximating the proportion of AUM voted by customizers vs. non-customizers: we compute this by summing the dollar value of each ballot separately for non-customizers and for institutions with low, medium, and high levels of customization. Panel D shows the proportion of shares voted by customizers: for each shareholder meeting, we calculate the share of votes cast by non-customizers, low-level, medium-level, and high-level customizers, and then average it across meetings, giving equal weight to all meetings.

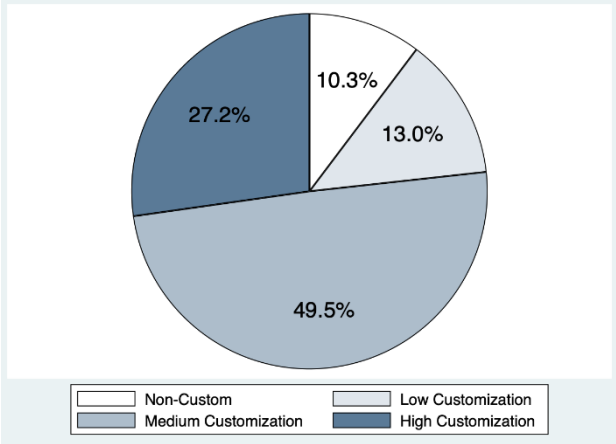
A: Proportion of Funds Using Customization



B: Proportion of Institutions Using Customization



C: Proportion of AUM with Customization



D: Proportion of Voted Shares with Customization

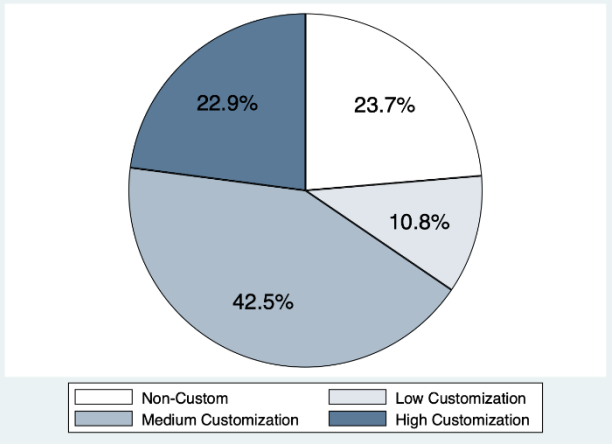
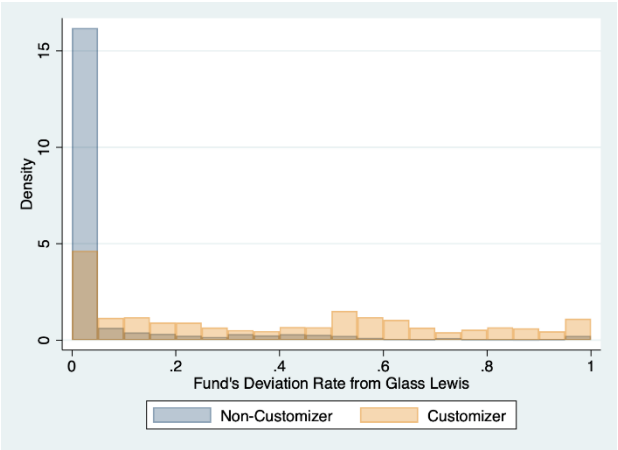


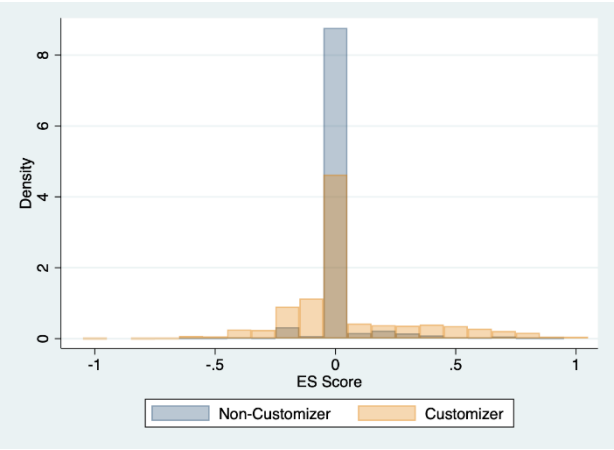
Figure 2. Ideology scores by customization status

This figure presents histograms of ideology at the fund level, comparing customizers and non-customizers. Panel A presents each fund's deviation rate from Glass Lewis, defined as the fraction of the fund's ballots that disagree with Glass Lewis recommendations on at least one proposal. The other three panels present funds' ES scores, Governance scores, and Management scores, respectively. The ideology scores are defined as the fund's fraction of votes in favor of proposals of a given type minus Glass Lewis's fraction of recommendations in favor of such proposals, aggregated to the ballot level; the detailed methodology on their construction is described in Online Appendix C.1.

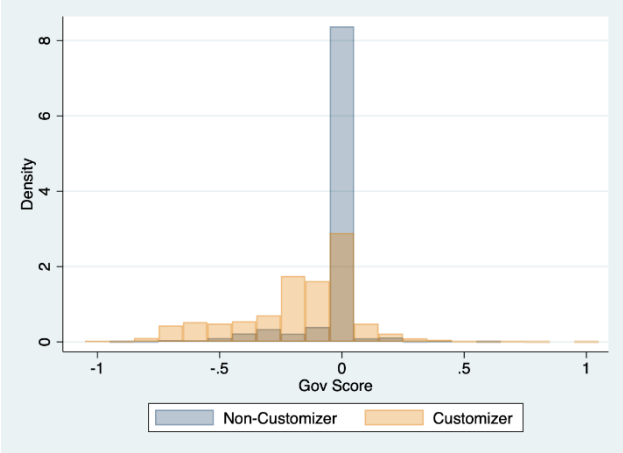
A: Deviation rate from Glass Lewis



B: ES scores



C: Governance scores



D: Management scores

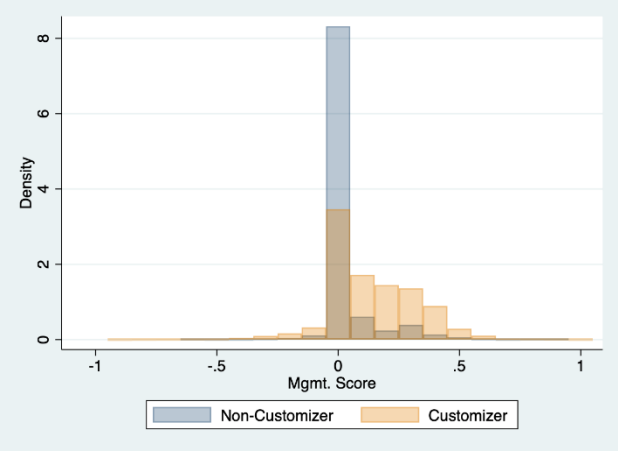


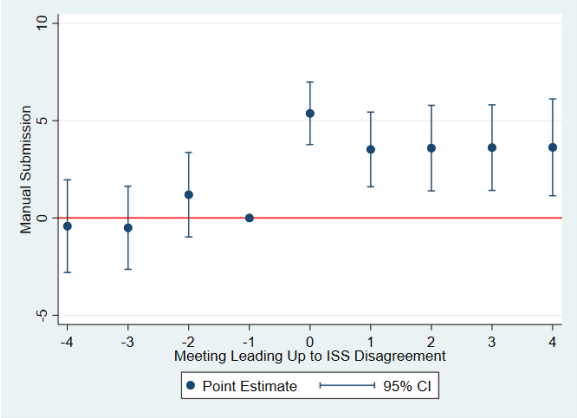
Figure 3. Manual voting around contentious meetings

This figure plots coefficients from difference-in-differences regressions of manual voting on event-time indicators around contentious meetings. For each meeting m of firm j in year t, define τ as the meeting sequence (e.g., $\tau = 3$ for the third meeting), T as the year that meeting m is contentious, and $k = \tau - T$ as the meeting in event time. We estimate the following regression:

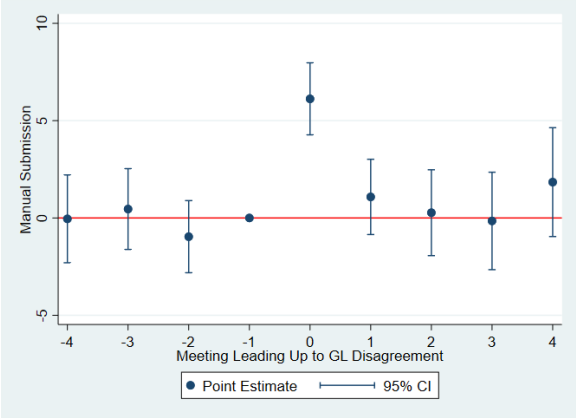
$$ManualVote_{im} = \beta_0 + \sum_{k=-4}^{4} \beta_k W_m^k + \theta_\tau + \phi_{it} + \psi_{ij} + \varepsilon_{im},$$

where $ManualVote_{im}$ indicates whether fund i votes manually in meeting m (expressed in percentage points), W_m^k indicates whether meeting m is contentious, θ_τ, ϕ_{it} and ψ_{ij} denote meeting sequence, fund-year and fund-firm fixed effects, respectively, and a contentious meeting is defined in four ways: meetings in which ISS recommends against management on at least one proposal (Panel A); meetings in which Glass Lewis does so; special meetings (Panel C); and activist-connected meetings (Panel D). Each panel limits the sample to firms with exactly one such contentious meeting in the sample period (treated firms) and firms with no such meetings (controls). For treated firms, the contentious meeting defines event time zero; for never-treated firms, all event-time indicators equal zero. Standard errors are clustered at the fund and ballot level.

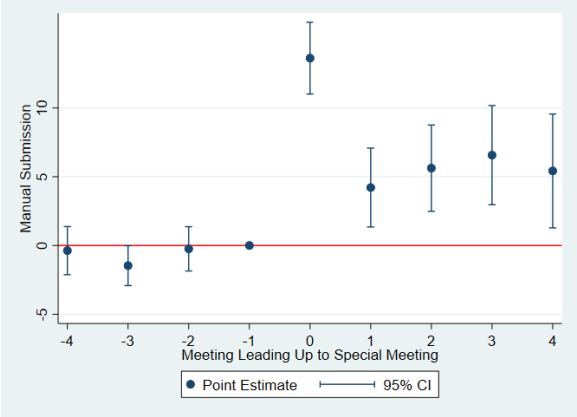
A: ISS Disagrees with Management



B: GL Disagrees with Management



C: Special Meeting



D: Activist-Connected Meeting

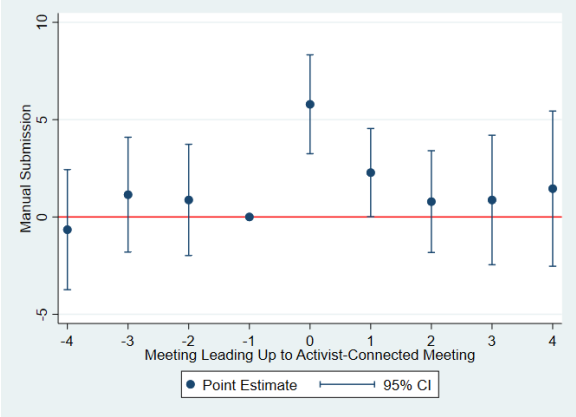


Figure 4. Manual voting rate and deviations from the benchmark

This figure presents binned scatterplots and lines of best fit relating funds' rate of deviation from Glass Lewis benchmark recommendations (y-axis) to their manual voting rate (x-axis), both expressed in percentage points, shown separately for customizing and non-customizing funds. To construct the scatterplots, we aggregate all funds by dividing the x-axis into ventiles (20 groups) and computing the mean of the y-axis variable within each ventile. A fund's *Deviation Rate from Glass Lewis* is defined as the fraction of ballots in which the fund's vote on at least one proposal does not follow Glass Lewis's benchmark recommendation. A fund's *Manual Voting Rate* is defined as the fraction of ballots not submitted on the fund's auto-submission date or exactly four days before the meeting (or six days before a Monday meeting). The line of best fit represents the results of a univariate regression at the fund level.

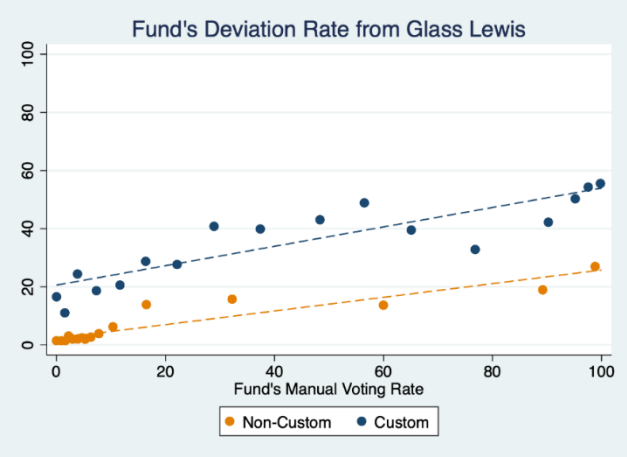


Figure 5. Manual voting rate on contentious ballots

The figure presents interval scatterplots relating funds' manual voting rate at contentious meetings (y-axis) to their manual voting rate at all meetings (x-axis), both expressed in percentage points, shown separately for customizing and non-customizing funds. To construct the scatterplots, we aggregate all funds by dividing the x-axis into 20 equally spaced intervals and computing the mean of the y-axis variable within each interval, along with 95% confidence intervals. A fund's *Manual Voting Rate* is defined as the fraction of ballots not submitted on the fund's auto-submission date or exactly four days before the meeting (or six days before a Monday meeting). A meeting is classified as *contentious* if either ISS or Glass Lewis benchmark recommendations oppose management on at least one proposal, or if the meeting is special or linked to an activist. The dashed line represents the 45-degree line.

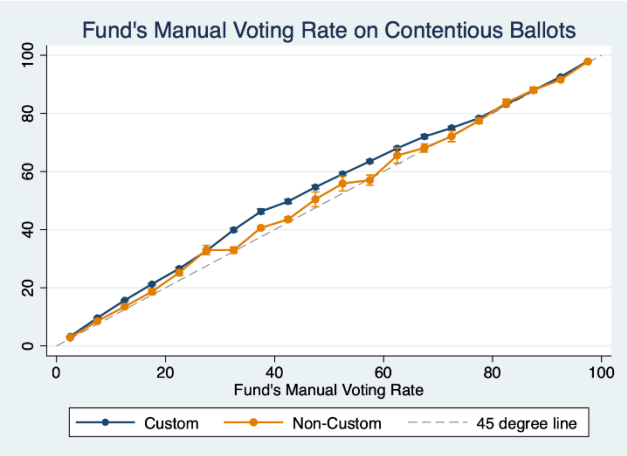
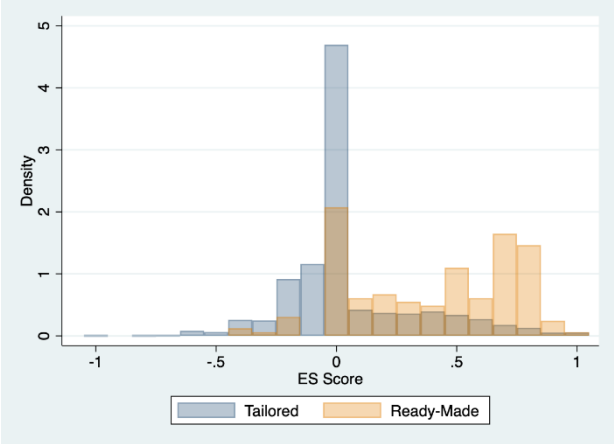


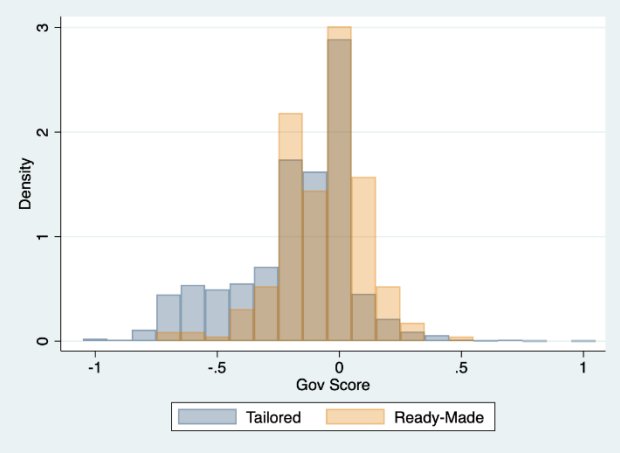
Figure 6. Comparison of tailored and ready-made customizers

This figure compares, within the sample of customizing funds, funds subscribing to ready-made custom recommendations and those subscribing to tailored custom recommendations. Panels A-C present funds' ES scores, Governance scores, and Management scores, respectively. The ideology scores are defined as the fund's fraction of votes in favor of proposals of a given type minus Glass Lewis's fraction of recommendations in favor of such proposals, aggregated to the ballot level; the detailed methodology on their construction is described in Online Appendix C.1. Panel D presents funds' manual voting rates. A fund's *Manual Voting Rate* is defined as the fraction of its ballots that are not submitted on the fund's auto-submission date or exactly four days before the meeting (or six days before a Monday meeting), expressed in percentage points.

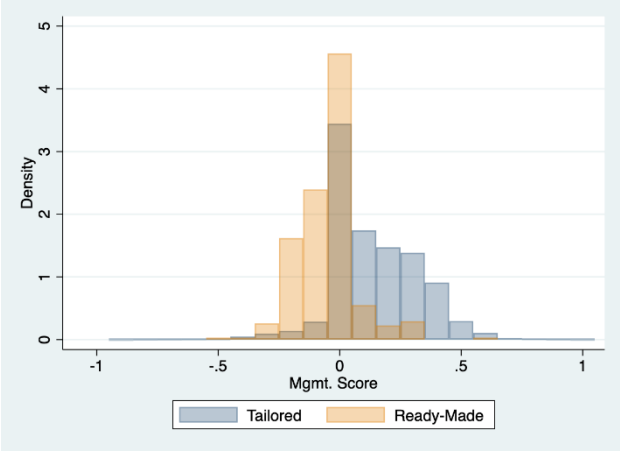
A: ES scores



B: Governance scores



C: Management scores



D: Manual voting rates

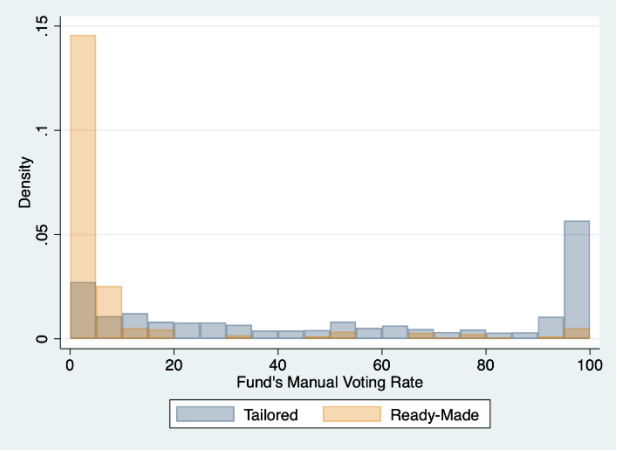


Table 1. Summary statistics

This table presents summary statistics at the meeting level (Panel A); fund and fund-ballot level (Panel B); and institution and institution-ballot level (Panel C). Panel A reports the fraction of shareholder meetings, expressed in percentage points, that include a shareholder proposal (ES proposal, governance proposal) or can be considered non-routine for other reasons. In particular, *ISS disagrees with management* if ISS gives a recommendation opposing management on at least one proposal on the ballot. *GL disagrees with management* is defined similarly (because GL recommendations are imputed and not directly observable, the sample size in this line is smaller than in others). A meeting is *activist-connected* if there is a proxy campaign for which the campaign meeting date matches the date of the meeting. In Panel B, *Fund total (mean) stake size* is the sum (average) of the dollar value of the fund's stake across portfolio firms. *Fund number of stakes* is the number of distinct companies held by the fund. A fund's ballot *deviates from Glass Lewis benchmark recommendations* if it deviates from at least one benchmark recommendation on the ballot. A fund's ballot is *manually submitted* if it is not submitted on the fund's auto-submission date or exactly four days before the meeting (or six days before a Monday meeting). Institution-level variables are defined similarly. More detailed variable definitions are in Online Appendix C.2.

Panel A: Shareholder meetings

	mean	sd	p25	p50	p75	count
At least one shareholder proposal	7.56	26.44				31,126
At least one ES proposal	3.11	17.36				31,126
At least one governance proposal	5.90	23.55				31,126
GL disagrees with management	44.46	49.69				25,574
ISS disagrees with management	39.88	48.97				31,126
Special meeting	7.54	26.40				31,126
Activist-connected meeting	2.62	15.96				31,126

Panel B: Funds

	mean	sd	p25	p50	p75	count
Fund Level						
Fund total stake size ($mil)	82.07	881.58	0.33	2.44	21.78	25,046
Fund mean stake size ($mil)	1.87	11.12	0.02	0.13	0.82	25,046
Fund number of stakes	48.83	128.48	9.00	25.50	45.50	25,046
Fund-Ballot Level						
Percent deviating from GL benchmark recommendations	30.10	45.87				4,821,806
Percent manually submitted	35.78	47.94				4,821,806

Panel C: Institutions

	mean	sd	p25	p50	p75	count
Institution Level						
Institution total stake size ($mil)	5542.48	19088.90	118.19	501.80	2869.01	333
Institution mean stake size ($mil)	13.32	31.76	0.96	3.40	11.56	333
Institution number of stakes	463.75	667.04	50.00	184.00	568.00	333
Institution number of funds	43.80	127.25	3.75	8.40	27.00	333
Institution-Ballot Level						
Percent deviating from GL benchmark recommendations	26.77	43.67				872,937
Percent manually submitted	30.51	45.83				872,937

Table 2. Differences between benchmark and custom recommendations

This table reports fund-ballot level analysis, where the outcome variable equals one if the ballot fully follows Glass Lewis recommendations and zero if it deviates on at least one proposal. Panel A compares averages for non-customizing vs. customizing funds. Panel B restricts the sample to customizers and compares averages for funds in institutions with low vs. medium/high customization levels. Both panels express these averages in percentage points. In each panel, the third column reports the difference between the first two. Results are shown for three samples: (i) all meetings; (ii) meetings with at least one ES shareholder proposal; and (iii) meetings with at least one governance shareholder proposal. *Note*: The customizer sample in Panel B differs slightly from that in Panel A, since Panel B uses the institution-level customization variable: a non-customizing fund within a partially customizing institution is treated as a customizer. Standard errors are clustered at the fund and ballot level. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

	Percent of ballots following GL's benchmark recommendations		
Panel A: Customizers vs. non-customizers	**Non-Custom**	**Custom**	**Difference**
All meetings	95.41	74.43	20.98***
			(1.16)
N	619,969	2,476,632	3,096,601
Meetings with ES proposals	95.74	58.60	37.14***
			(1.31)
N	94,862	334,046	428,908
Meetings with governance proposals	95.21	62.55	32.66***
			(1.23)
N	129,628	469,442	599,070
Panel B: Low-level vs. medium- & high-level customizers	**Low**	**Medium/High**	**Difference**
All meetings	90.78	67.08	23.70***
			(1.30)
N	885,448	1,684,371	2,569,819
Meetings with ES proposals	82.12	50.51	31.61***
			(1.93)
N	115,920	238,857	354,777
Meetings with governance proposals	84.80	54.10	30.70***
			(1.69)
N	165,350	330,137	495,487

Table 3. Predictors of customization

Panel A reports fund-level summary statistics by customization status, where *Custom* equals one if the fund is a customizer. Panel B reports fund-level regressions with *Custom* as the dependent variable; robust standard errors are in parentheses. Both panels express *Custom* in percentage points. Total stake size, mean stake size, and number of stakes are calculated for each fund-year, then averaged across years for the fund; institution-level variables are defined similarly. Variable definitions are in Online Appendix C.2. Ideology scores equal the fund's share of votes supporting a given proposal type minus Glass Lewis's share of favorable recommendations for that type; Online Appendix C.1 details their construction. To reduce noise, ideology scores are computed only for funds casting a sufficient number of votes on the relevant proposal types, which lowers sample size in analyses involving those scores, especially for ES scores. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Panel A: Univariate comparison between customizers and non-customizers

	Custom	mean	sd	p25	p50	p75	count
Fund Total Stake Size ($mil)	No	47.55	274.24	0.20	1.27	12.57	5,093
	Yes	95.65	1038.16	0.39	2.98	25.70	19,953
Fund Mean Stake Size ($mil)	No	1.63	7.16	0.01	0.08	0.72	5,093
	Yes	1.93	11.92	0.03	0.14	0.85	19,953
Fund Number of Stakes	No	39.67	85.32	6.00	20.00	39.50	5,093
	Yes	51.16	137.25	10.67	27.00	46.00	19,953
Fund ES Score	No	0.01	0.11	0.00	0.00	0.00	1,023
	Yes	0.06	0.27	-0.07	0.00	0.08	6,370
Fund Governance Score	No	-0.04	0.12	-0.00	0.00	0.00	1,651
	Yes	-0.18	0.24	-0.30	-0.12	0.00	8,786
Fund Management Score	No	0.03	0.10	-0.00	0.00	0.01	3,983
	Yes	0.13	0.18	0.00	0.10	0.26	16,453

Panel B: Multivariate analysis

Dep. variable: Custom	(1)	(2)	(3)	(4)	(5)	(6)
Log(Fund Number of Stakes)	1.95***	1.37***				0.51
	(0.18)	(0.16)				(0.47)
Log(Fund Mean Stake Size)	1.03***	0.39***				0.06
	(0.11)	(0.10)				(0.18)
Log(Institution Number of Stakes)		8.93***				6.11***
		(0.21)				(0.43)
Log(Institution Mean Stake Size)		9.64***				8.55***
		(0.21)				(0.45)
Abs(ES Score)			34.13***			27.76***
			(1.41)			(1.51)
Abs(Governance Score)				48.89***		13.61***
				(1.41)		(1.54)
Abs(Management Score)					78.76***	13.50***
					(1.67)	(3.11)
Constant	61.70***	-144.56***	81.08***	75.15***	69.59***	-108.30***
	(1.40)	(3.73)	(0.55)	(0.54)	(0.43)	(7.64)
Mean dep. variable	79.67	79.67	86.16	84.18	80.51	85.96
N	25,046	25,046	7,393	10,437	20,436	6,754
R^2	0.01	0.21	0.05	0.08	0.10	0.24

Table 4. Manual voting and deviations from benchmark recommendations

This table presents results of regression estimations at the fund-ballot level. The sample is limited to non-customizing funds. The dependent variable, *Deviation from GL Benchmark Recommendations*, is an indicator equal to one if the fund's ballot deviates from Glass Lewis's benchmark on at least one proposal on the ballot, expressed in percentage points. The key independent variable, *Manually-submitted*, equals one if the fund's ballot is manually submitted. Variable definitions are in Online Appendix C.2. Column 1 includes no fixed effects; column 2 includes fund-year fixed effects; column 3 includes fund-year and fund-firm fixed effects; column 4 includes institution-year fixed effects; and column 5 includes institution-year and institution-firm fixed effects. Standard errors are clustered at the fund and ballot level. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

	Deviation from GL Benchmark Recommendations				
	(1)	(2)	(3)	(4)	(5)
Manually-submitted	20.96***	17.43***	18.92***	15.64***	17.33***
	(1.66)	(2.27)	(2.12)	(1.99)	(1.89)
Constant	4.59***	5.33***	4.91***	5.71***	5.35***
	(0.71)	(0.39)	(0.44)	(0.35)	(0.37)
Mean dep. variable	9.00	9.00	9.12	9.00	9.02
N	785,359	784,146	575,329	785,350	760,546
R^2	0.09	0.47	0.69	0.44	0.68
Fixed Effects	None	Fund-Year	Fund-Year and Fund-Firm	Institution-Year	Institution-Year and Institution-Firm

Table 5. Allocation of attention across meetings

This table presents results of regression estimations at the fund-ballot level. The dependent variable equals one if a fund manually submits its vote on a given ballot, expressed in percentage points. The key explanatory variables are meeting-level indicators capturing contentious meetings and the fund's log of its dollar stake value in the firm. Variable definitions are in Online Appendix C.2. Column 1 includes fund-year fixed effects; column 2 includes fund-year and fund-firm fixed effects; column 3 includes institution-year fixed effects; and column 4 includes institution-year and institution-firm fixed effects. Standard errors are clustered at the fund and ballot level. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

	Fund-ballot was manually submitted			
	(1)	(2)	(3)	(4)
Log Stake Value	1.23***	0.36***	0.65***	0.16***
	(0.08)	(0.07)	(0.06)	(0.04)
ISS Disagrees with Management	2.80***	1.70***	3.67***	1.77***
	(0.31)	(0.30)	(0.35)	(0.34)
GL Disagrees with Management	6.25***	5.72***	6.56***	6.21***
	(0.36)	(0.39)	(0.40)	(0.41)
Special Meeting	13.61***	13.36***	13.27***	13.55***
	(0.87)	(0.97)	(0.88)	(0.97)
Activist-Connected Meeting	6.16***	2.78***	8.41***	3.08***
	(0.71)	(0.71)	(0.76)	(0.84)
Intercept	15.39***	26.02***	21.53***	28.75***
	(1.02)	(0.81)	(0.80)	(0.54)
Mean dep. variable	35.54	34.95	35.55	35.66
N	4,541,431	3,467,580	4,547,262	4,493,184
R^2	0.61	0.77	0.55	0.73
Fixed Effects	Fund-Year	Fund-Year and Fund-Firm	Institution-Year	Institution-Year and Institution-Firm

Table 6. Relation between manual voting rates and customization

This table presents regression estimations at the fund-ballot level. The outcome variable in each panel is whether a given fund-ballot is manually submitted, and the main explanatory variable is whether the fund is a customizer. Specifically, we estimate the following regressions:

$$ManualVote_{im} = \beta_0 + \beta_1 Custom_i + \theta_t + \phi_I + \psi_m + \varepsilon_{im},$$

where $ManualVote_{im}$ indicates whether fund i votes manually in meeting m (expressed in percentage points), θ_t, ϕ_I, and ψ_m denote year, institution, and meeting fixed effects, respectively, and I is the institution to which fund i belongs. Column 1 includes year fixed effects; column 2 includes year and institution fixed effects, and columns 3–4 include meeting and institution fixed effects. Mean stake size and number of stakes are fund-year variables; *Mean Stake Size* is defined as the average of the value of the fund's stakes, and *Number of Stakes* is defined as the number of distinct companies held by the fund in that year. Institution mean stake size and number of stakes are analogously defined for each institution-year pair. Variable definitions are in Online Appendix C.2. We remove singleton observations within fixed effects groups (Correia, 2015). Standard errors are clustered at the fund and ballot level. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Dep. Variable: Manual Submission	(1)	(2)	(3)	(4)
Custom	16.44***	-14.02***	-11.59***	-11.07***
	(1.55)	(1.70)	(1.84)	(1.88)
Log(Fund Number of Stakes)				-1.06***
				(0.18)
Log(Fund Mean Stake Size)				0.14
				(0.09)
Log(Institution Number of Stakes)				0.69
				(0.69)
Log(Institution Mean Stake Size)				3.02***
				(0.72)
Constant	22.02***	47.52***	45.48***	-4.66
	(1.23)	(1.46)	(1.56)	(13.31)
Mean dep. variable	35.78	35.78	35.78	35.78
N	4,821,806	4,821,800	4,819,352	4,819,352
R^2	0.03	0.48	0.58	0.58
Fixed Effects	Year	Year and Inst.	Meeting and Inst.	Meeting and Inst.

Table 7. Sensitivity of manual voting to contentious proposals

This table presents results of regression estimations at the fund-ballot level. The outcome variable is whether a given ballot is manually submitted by the fund. The key explanatory variables are interactions of meeting-level variables with the indicator for whether the fund is a customizer. Specifically, we estimate the following regressions:

$$ManualVote_{im} = \beta_0 + \beta_1 Custom_i + \sum_{w \in \{ISS,GL,Special,Activist\}} \beta_w Custom_i \times 1\{W_m^w = 1\} + \theta_m + \phi_{it} + \psi_{ij} + \varepsilon_{im},$$

where $ManualVote_{im}$ indicates whether fund i votes manually in meeting m (expressed in percentage points), $1\{W_m^w = 1\}$ indicates that meeting m in firm j is of contentious type w, and θ_m, ϕ_{it}, and ψ_{ij} denote meeting, fund-year, and fund-firm fixed effects, respectively. Column 1 includes meeting fixed effects; column 2 includes meeting and fund-year fixed effects; and column 3 includes meeting, fund-year, and fund-firm fixed effects. Variable definitions are in Online Appendix C.2. We remove singleton observations within fixed effects groups (Correia, 2015). Standard errors are clustered at the fund and ballot level. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Dep. Variable: Manual Submission	(1)	(2)	(3)
Custom	6.64***		
	(1.77)		
ISS Disagrees with Mgmt x Custom	5.71***	2.22***	2.19***
	(0.82)	(0.45)	(0.46)
GL Disagrees with Mgmt x Custom	7.95***	5.99***	4.95***
	(0.75)	(0.49)	(0.54)
Special Meeting x Custom	12.15***	10.96***	11.68***
	(1.60)	(1.23)	(1.27)
Activist-Connected Meeting x Custom	13.27***	7.54***	4.13***
	(1.60)	(0.90)	(0.86)
Intercept	23.03***	31.25***	31.29***
	(1.27)	(0.27)	(0.29)
Mean dep. variable	35.76	35.75	35.11
N	4,707,129	4,701,668	3,576,646
R^2	0.17	0.68	0.81
Fixed Effects	Meeting	Meeting and Fund-Year	Meeting, Fund-Year, and Fund-Firm

Appendix A: Model

This appendix describes the setup of the model, presents the analysis, and describes the results. We also discuss the connection between these theoretical results and the empirical analyses we perform. The proofs of the results are relegated to Section F in the Supplemental Appendix.

A.1 Setup

Consider a fund that owns N firms and votes on a proposal in each of the firms. In any given firm, the fund's value if the proposal is rejected is 0. If the proposal is accepted, the fund's value is

$$(X + \beta Y)s, \tag{1}$$

where $X \in \{-1,1\}$ and $Y \in \{0,1\}$ are unknown, independent of each other, proposal characteristics, with $\Pr(X = 1) = \Pr(Y = 1) = \frac{1}{2}$. The variables X and Y are independent of the corresponding variables at other firms, so we can analyze the fund's decisions separately across firms.

The term X captures common value, which is the same for all shareholders and, as becomes clear below, reflects what the proxy advisor's benchmark recommendations are based on. The term βY is the fund's private value, reflecting its unique preferences. We focus on $\beta > 0$, as the case $\beta < 0$ is similar. The component βY captures the idea that the fund has a systematic ideology: it is consistently more inclined to support certain proposals (those with $Y = 1$), compared to shareholders who only care about X. Parameter β captures the gap between the fund's ideology and that of the proxy advisor's benchmark recommendations.

The parameter $s > 0$ reflects the importance of the proposal to the fund: s is larger when the vote outcome has a greater impact on the fund's value. For example, s is likely to increase with the fund's stake in the firm and is higher for major proposals such as proxy contests. An alternative way to think of the fund's utility, $(X + \beta Y)s$, is that it represents the value the fund derives from voting "for" the proposal, regardless of whether the proposal ultimately passes. The fund manager can derive such value due to, for example, reputational considerations and the desire to cater to investors' preferences. This alternative specification would imply similar results.

To illustrate these preferences on a simple example, consider director elections. Then X could reflect a director's monitoring characteristics, such as busyness: $X = -1$ if a director is busy given his positions as an executive or director at other firms. Like all other shareholders, the fund cares about director busyness, but unlike other shareholders, the fund may be more lenient if the director performs well on another dimension important to the fund ($Y = 1$). For instance, in line with the examples in Online Appendix B, if the fund cares about ESG, Y could capture whether the director or the board provides oversight on ESG issues ($Y = 1$ if yes, $Y = 0$ if no). In this case, the fund may still support a busy director as long as the board provides sufficient ESG oversight.

The fund is a client of a proxy advisor and receives benchmark (i.e., non-customized) recommendations by default. We model the fund's decision-making as a two-stage process. At the first stage, the fund can pay an additional cost c_{cust} to subscribe to customized advice. In practice, this stage takes place before the proxy season starts, i.e., before actual proposals appear on companies' ballots. If the fund pays the cost of customization, then for all firms in its portfolio, the proxy advisor creates a custom recommendation tailored to the fund. In particular:

- If the fund does not pay the cost of customization, it only receives the benchmark recommendation, which is based on a noisy signal x about X with precision p_x:

  $$\Pr(x = 1|X = 1) = \Pr(x = -1|X = -1) = p_x.$$

  The benchmark recommendation is to vote in favor if and only if $x = 1$.

- If the fund pays the cost of customization, the proxy advisor finds out Y and combines it with its signal x to issue the "optimal" custom recommendation for the fund given the fund's ideology (we derive this custom recommendation in the analysis below).[28]

The second stage can be thought of as taking place during the proxy season and describing the fund's decision for each individual firm and proposal. At this stage, the fund decides whether to pay attention to the proposal – formally, whether to conduct additional research. Specifically, the fund decides whether to pay cost c_{res} to learn X and Y with certainty. In practice, based on our conversations with Glass Lewis and ISS: (i) funds easily see whether the proxy advisor's recommendation is positive or negative – the voting platform allows setting a simple alert about all negative recommendations, without any extra cost for the fund, and even if it is not a customizer; and (ii) customizing funds observe both custom and benchmark recommendations (see Online Appendix B). Given (i) and (ii), we assume that the fund makes its decision about independent research after observing the proxy advisor's recommendations, and that for customizers, this decision is based upon observing both the custom and the benchmark recommendation, while for non-customizers, it is only based on the benchmark recommendation.

Overall, the timeline is as follows. At the first (customization) stage, the fund decides whether to pay a cost to become a customizer. At the second (attention/research) stage, it observes the benchmark recommendations—as well as the custom recommendations if it decided to customize—and decides, on a proposal-by-proposal basis, whether to pay a cost to conduct research and learn additional information about that proposal. The fund then votes on the proposal based on all the available information, and its payoff is realized. Following the literature on shareholder voting, we assume that the fund votes as-if-pivotal.

[28] The assumption that the proxy advisor perfectly observes Y is made for simplicity and is not crucial: because the custom recommendation combines information about x and Y, the information received by the fund is generally a noisy signal about Y.

A.2 Difference between benchmark and custom recommendations

We start by deriving the custom recommendation that is "optimal" for the fund given its ideology: we assume that the proxy advisor observes Y and a noisy signal x about X and designs its custom recommendation to maximize the fund's utility, determined by $X + \beta Y$.

The custom recommendation is for the fund to vote in favor if and only if $\mathbb{E}[X + \beta Y | x, Y] > 0$. The following cases are possible:

1. If the proxy advisor gets $x = 1$ (i.e., the benchmark recommendation is positive), then $\mathbb{E}[X + \beta Y | x, Y] = 2p_x - 1 + \beta Y > 0$ for any Y. Hence, if the benchmark recommendation is positive, the custom recommendation is also positive.
2. If the proxy advisor gets $x = -1$ (i.e., the benchmark recommendation is negative), there are two cases:
    a. If $Y = 0$, then $\mathbb{E}[X + \beta Y | x, Y] = 1 - 2p_x < 0$, so the custom recommendation is to vote against, which coincides with the benchmark recommendation.
    b. If $Y = 1$, then $\mathbb{E}[X + \beta Y | x, Y] = 1 - 2p_x + \beta$. Hence, if $\beta \leq 2p_x - 1$, the custom recommendation is to vote against, in line with the benchmark recommendation. In contrast, if $\beta > 2p_x - 1$, the custom recommendation is to vote in favor, which deviates from the benchmark recommendation.

Therefore, the optimal custom recommendation always coincides with the benchmark recommendation if $\beta \leq 2p_x - 1$, i.e., if the fund's ideological deviation from the proxy advisor is not too large and the proxy advisor's information about X is precise enough. This automatically implies, as we formally state in Proposition 3 below, that it is never optimal for the fund to pay the cost of customization if its ideological gap with the proxy advisor is small, $\beta \leq 2p_x - 1$.

We next solve the model by backwards induction. We first analyze the fund's voting decision. Then, we analyze its decision about independent research, taking its customization status as given. Finally, we analyze the fund's decision to customize.

A.3 Voting decision

First, consider the fund's voting decision taking its decisions about customization and independent research as given. If the fund conducts independent research, it learns X and Y and votes in favor if and only if $X + \beta Y > 0$. If it does not conduct independent research, it votes according to the information it receives from the proxy advisor.

Note that if the fund does not conduct research and does not customize, it may find it optimal to disregard the benchmark recommendation and vote ideologically – e.g., support the proposal even if the benchmark recommendation is negative. This happens if the fund's ideological deviation from the proxy advisor (i.e., its concern about Y, captured by β) is so strong that it outweighs the

information in the recommendation. In particular, the fund's benefit of voting "for" conditional on a negative benchmark recommendation ($x = -1$) is $\mathbb{E}[X + \beta Y | x = -1] = 1 - 2p_x + \frac{\beta}{2}$, which is positive if $\beta > 4p_x - 2$. In what follows, we assume that

$$\beta \leq 4p_x - 2.$$

This assumption ensures that if the fund only observes the benchmark recommendation, it chooses to follow it, rather than disregard it and always vote in favor, i.e., ideologically. For brevity, we do not state this assumption in every single result, as it is made throughout the model.

In contrast, if the fund does not conduct research but customizes, it finds it optimal to follow the custom recommendation, regardless of β. This is because the custom recommendation optimally incorporates the fund's ideology given the proxy advisor's information: it is based on the sign of $\mathbb{E}[X + \beta Y | x, Y]$. These arguments can be summarized as follows.

Lemma 1 (voting).

(i) If the fund does not conduct independent research, it follows the benchmark recommendation if it does not customize, and it follows the custom recommendation if it customizes.

(ii) If the fund conducts independent research, it votes according to its private information and does not follow the proxy advisor's recommendation.

In practice, the behavior described in part (i) can be thought of as capturing auto-submission. As we discuss in Section 3, the fund's vote on Glass Lewis's platform is pre-populated with the recommendation it subscribes to (benchmark or custom). The easiest way to follow this recommendation (if the fund does not pay attention) is to simply allow this pre-populated vote to be auto-submitted. This motivates our empirical analysis of auto-submissions.

Note also that even though the fund does not blindly follow the benchmark recommendation when it either customizes or conducts independent research, its vote often *coincides* with the benchmark recommendation. Since both $X + \beta Y$ and $\mathbb{E}[X + \beta Y | x, Y]$ are closer to x when β is smaller and p_x is larger, the fund's vote is more likely to coincide with the benchmark recommendation if its ideological deviation from the proxy advisor is weaker and the quality of the proxy advisor's information is higher.

Overall, Lemma 1 shows the first effect of customization: for proposals on which the fund does not conduct independent research, it allows the fund's "default" (e.g., auto-submitted) vote to align more closely with its ideology.

A.4 Decision whether to conduct independent research

In this section, we take the fund's customization status as given and analyze the fund's decision on independent research. We first consider the research effort of a non-customizing fund and then

compare it to that of a customizing fund. These results thus describe the causal effects of customization on research and attention to voting.

A.4.1 Research effort of a non-customizing fund

If the fund does not customize, it decides whether to conduct independent research based on the benchmark recommendation alone. Denote the fund's probability of being pivotal by P_{piv} (for simplicity, we assume that it is a parameter that is independent of all other variables). In practice, the probability of being pivotal is likely higher for funds with larger ownership stakes and for contentious proposals, where the vote outcome is expected to be close. The following result summarizes the fund's strategy.

Proposition 1. *Suppose the fund does not customize. There exist cutoffs* $\underline{c}$ *and* $\overline{c}$, $\underline{c} < \overline{c}$, *which both decrease in* p_x, *such that the fund:*

(i) follows the benchmark recommendation if $\frac{c_{res}}{sP_{piv}} \geq \overline{c}$;

(ii) follows a positive benchmark recommendation but conducts independent research upon a negative benchmark recommendation if $\underline{c} \leq \frac{c_{res}}{sP_{piv}} < \overline{c}$;

(iii) conducts independent research regardless of the benchmark recommendation if $\frac{c_{res}}{sP_{piv}} < \underline{c}$.

Proposition 1 implies that, in line with intuition, the fund is more likely to conduct research if:

1. the proposal is more contentious or more important to the fund;
2. the fund has a larger stake in the firm.

In particular, the first prediction follows from Proposition 1 and the fact that $\frac{c_{res}}{sP_{piv}}$ decreases in P_{piv} (P_{piv} captures how contentious a proposal is, since being contentious increases the fund's probability of being pivotal) and in s (the importance of the proposal to the fund). The second prediction follows from the idea that a fund's stake in a firm increases both the importance it places on proposals in this firm (s) since they have a larger effect on the fund's value, and the probability that the fund's vote can affect the outcome (P_{piv}). In addition, the result that $\underline{c}$ and $\overline{c}$ decrease in p_x implies that the fund is more likely to conduct research if the benchmark recommendation has lower quality.

A.4.2 Does customization reduce or increase the fund's propensity to conduct research?

Suppose now that the fund has paid the cost of customization, so the proxy advisor gives recommendations based on both x and Y. Recall, as shown above, that it is never optimal to customize if $\beta \leq 2p_x - 1$. Therefore, it is sufficient to focus on $\beta > 2p_x - 1$.

First, the proof of Proposition 2 shows that, similarly to a non-customizing fund, a customizing fund is more likely to conduct independent research when the proposal is more

contentious (higher P_{piv}), more important to the fund (higher s), and the fund's stake in the firm is larger (higher s and P_{piv}). Together with Proposition 1 and predictions 1 and 2 following this proposition, this yields the unconditional (on customization status) prediction about the likelihood of independent research that we test in Section 6.2 of the paper.

Next, we ask whether a customizing fund is more or less likely to conduct independent research than a non-customizing fund. The following result presents this comparison.

Proposition 2. *Suppose the fund is a customizer and* $\beta > 2p_x - 1$. *Then:*

1. *If the benchmark recommendation is positive, the fund is as likely to conduct independent research as if it did not customize.*
2. *If the benchmark recommendation is negative, then:*
   i. *If the custom recommendation is also negative, the fund is less likely to conduct research than if it did not customize (**substitution**).*
   ii. *If the custom recommendation is positive, then the fund is more likely to conduct research than if it did not customize if* $\beta < \frac{2(2p_x-1)}{1+p_x}$ *(**complementarity**). However, if* $\beta \geq \frac{2(2p_x-1)}{1+p_x}$, *the fund is less likely to conduct research than if it did not customize (**substitution**).*
   iii. *For complementarity to arise,* $\frac{c_{res}}{sP_{piv}}$ *must be sufficiently small, i.e., the fund must care enough about voting.*

The reason for part 1 is that if the benchmark recommendation is positive ($x = 1$), then regardless of the realization of Y, the custom recommendation is positive as well (since $\beta Y \geq 0$). Hence, the fund observes exactly the same information as if it did not customize, and as a result, its incentives to conduct research are unaffected by customization.

Part 2 shows that customization always crowds out independent research when the two recommendations agree with each other. However, when the two recommendations disagree (which can be thought of as a "contentious" proposal), customization encourages more research unless β is very large. The intuition is the following:

- The reason customization crowds out independent research is that it aligns the default vote of the fund (which is fully based on the custom recommendation – e.g., if it is auto-submitted) more closely with the fund's preferences by reflecting its concern about Y. As a result, additional information becomes less important.

- The reason customization can encourage more research is that it helps focus the fund's research efforts on those proposals where research is most cost-effective (in the model, these are proposals for which the benchmark recommendation is negative but the custom recommendation is positive). Intuitively, without customization, the fund decides against conducting research,

because it is unlikely that additional information from such research would change its voting decision. But once the fund customizes, it can more easily identify proposals for which further research is particularly useful and would change its voting decision. As a result, its propensity to conduct research increases for such proposals.

To see this intuition more precisely, consider the scenario where the two recommendations disagree, i.e., the custom recommendation is positive, whereas the benchmark is negative. This happens if $x = -1$ but $Y = 1$. The fund's default decision (if it does not conduct research) is to vote in favor, following the custom recommendation. Suppose, however, that β is not too large (below $\frac{2(2p_x-1)}{1+p_x}$ in Proposition 2). Then, if $X = -1$, the fund would optimally prefer to vote against, even though $Y = 1$, because it cares about common value. Moreover, conditional on the benchmark recommendation being negative ($x = -1$), the chance that $X = -1$ is rather high. Hence, the probability that further research will change the fund's vote (from "for" to "against") is especially large, making research cost-effective. In contrast, without customization, the fund does not conduct research upon a negative benchmark recommendation, because the likelihood that research will change the fund's vote is small (such a change would occur only if $Y = 1$, but the probability of $Y = 1$ is only 0.5). As a result, customization increases the likelihood of research for contentious proposals.

While this narrower definition of contentious proposals (as those featuring disagreement between benchmark and custom recommendations) allows us to show complementarity within a simple model with minimal assumptions, in practice, the mechanisms for complementarity are broader. In particular, the complementarity effect can arise through two other, closely related channels, which broaden the set of "contentious" proposals we analyze in our empirical analysis of complementarity:

1. **"Attention budget" channel**. The baseline model features a single proposal, implicitly assuming that research decisions are independent across proposals. If, however, a fund faces a limited attention budget (for example, due to a small stewardship team), these decisions are no longer independent: devoting attention to one proposal reduces the capacity to analyze others. Such a limited attention budget could be modeled, for example, as an "information capacity constraint" in Kacperczyk, Van Nieuwerburgh, and Veldkamp (2016). In this setting, customization implies that the fund no longer needs to allocate attention to proposals where its preferences are straightforward to articulate, since custom recommendations on these proposals closely match the fund's preferred vote (this also follows from the substitution results of Proposition 2). This, in turn, frees up attention to focus on other proposals, where policies are harder to specify in advance, such as proxy contests or contentious M&A deals.

2. **"Customized alerts" channel**. In practice, customization involves not only custom recommendations, but also a sophisticated system of "alerts," specified by the fund and implemented through the voting platform; these alerts are much more elaborate and complex than those available to non-customizers (see Online Appendix B). The goal of these alerts is to

direct the fund's attention to particular proposals – those that are flagged by the fund as being particular important given its voting priorities (e.g., on environmental topics), or those in firms where the fund holds a particularly large stake. Such proposals can be thought of as having a large parameter s in Eq. (1), since s reflects the importance of the proposal to the fund.

An extension of our simple model that would give rise to the complementarity effect through such "customized alerts" channel would be as follows: (i) without customization, the fund does not easily observe s and hence does not conduct independent research given uncertainty about s, whereas (ii) by paying a cost to customize its alerts, the fund receives a signal if s exceeds a certain cutoff, which motivates it to conduct research on sufficiently important proposals.

These two channels broaden the set of "contentious" proposals for which complementarity can arise. Our baseline channel (disagreement between benchmark and custom recommendations as an encouragement to conduct research) has two appealing features relative to these other channels: (1) it allows us to derive the complementarity result within a very simple model with minimal assumptions; and (2) this channel is not immediately obvious without a model, unlike the "attention budget" and "alert" channels. However, all these channels are likely to play a role in practice. Distinguishing between them would require additional information, such as the size of the asset manager's stewardship team and information about the set of "alerts" specified by the customizers. Moreover, we cannot directly test our model's complementarity channel since we do not observe custom recommendations directly. For these reasons, in our empirical analysis, we test complementarity using a broader definition of contentious proposals.

Importantly, as part 2 (iii) shows, complementarity can only be observed if the fund cares sufficiently about voting (s is large enough). If s is small, customization does not increase the fund's propensity to do research, so only substitution happens.

A.4.3 Decision to customize

In this section, we analyze the fund's decision on whether to pay the cost to become a customizer. The logic described in the previous section implies the following three motives for the fund to customize (these motives are formally derived in the proof of Proposition 3).

1. **Customization allows the fund's "default" vote to reflect its preferences more closely.** If the fund's costs of conducting research are high (c_{res} is large relative to $P_{piv}s$), it relies on the proxy advisor's recommendations, and customization then helps bring the "default" vote of the fund closer to its preferences. In particular, a non-customizing fund follows the benchmark recommendation (which is only based on x), whereas a customizing fund follows the custom recommendation (which is based on both x and βY). As the appendix shows, the extra payoff from this motive is captured by $P_{piv}s(1 - 2p_x + \beta)$ and thus increases in the fund's ideological gap from the proxy advisor (β). In practice, such "default" voting according to the recommendation is typically implemented by auto-submitting the pre-populated vote.

2. **Customization reduces the need to conduct research on proposals where custom policies accurately describe the fund's vote.** Without customization, the fund opts to conduct research – at least partly, to learn about Y. Customization decreases the need to conduct research aimed at learning about Y, since it already incorporates information about Y into the fund's custom recommendation. Thus, the fund can follow this custom recommendation and achieve a similar outcome, thereby reducing its research expenses. As the proof of Proposition 3 shows, the extra payoff from this motive increases with c_{res}, the costs of conducting research.

3. **Customization directs the fund's focus to proposals where research is most valuable.** This motive is related to part 2(ii) in Proposition 2: customization enables the fund to concentrate its attention and research efforts on proposals where research is most cost-effective. As the proof of Proposition 3 shows, this motive reflects the extra payoff that the fund gets from conducting research and learning value-relevant information about contentious proposals relative to the payoff it would get from not conducting research and voting in line with the benchmark recommendation.

The first and second motives reflect ***substitution*** between customization and attention to voting: the fund can rely on either one or the other to align its votes with its ideology. In particular, the first motive is to avoid the costs of deviating from ideology when the fund does not pay attention,[29] while the second motive is to lower the direct expenses associated with paying attention, which the fund would otherwise incur to vote in line with its ideology. The third motive, in contrast, reflects ***complementarity*** between customization and attention to voting.

The analysis of these three motives allows us to derive testable predictions about the determinants of customization, which are summarized in the following result.

Proposition 3 (determinants of customization).

1. *If $\beta \leq 2p_x - 1$, the fund will not customize for any positive cost c_{cust}.*
2. *If $\beta > 2p_x - 1$, the fund will only customize:*
    a. *if the number of firms in its portfolio (N) is large enough;*
    b. *if P_{piv}s is large enough.*

Part 1 follows from the observation made earlier: if β is small, custom recommendations will coincide with benchmark recommendations, and hence even an infinitely small but positive cost of customization is not worth the benefit. An immediate implication of this result is that the *difference*

[29] Departures from the fund's stated ideology can be costly for the fund manager, either because fund investors expect it to honor the commitments made in its prospectus or voting policies, or because the fund manager has personal beliefs about appropriate governance practices.

between the fund's ideology and the proxy advisor's ideology (as captured by the proxy advisor's benchmark recommendations) must be large enough for customization to be optimal, and this required gap is larger if benchmark recommendations are more accurate (p_x is higher).

Part 2a implies that there are *economies of scale from customization*. Intuitively, by establishing a set of rules and policies that the proxy advisor will apply across all portfolio firms, customization reduces the fund's need to conduct research on proposals at each individual firm; this effect is larger when the number of portfolio firms is larger. In contrast, a fund with a stake in a single firm would gain relatively little from customization and could instead pay close attention to that firm's shareholder meetings.[30]

Part 2b suggests that customization will be more prevalent among funds with a large average stake in their portfolio firms (recall that both P_{piv} and s are likely to increase with the fund's stake). The reason for this result is that $P_{piv}s$ increases the fund's benefit from voting "optimally" (i.e., based on information about $X + \beta Y$), which is facilitated by customization.

More generally, Part 2b predicts that funds will customize only if they care enough about voting, i.e., parameter s (which captures the importance of voting to the fund) is large enough.

Finally, the proof of Proposition 3 shows that the effect of s is non-monotonic: If s is very large, the fund conducts research whether it customizes or not, which makes customization suboptimal. For this reason, Proposition 3 is an "only if" result. In our empirical analysis, we focus on the positive effect of s.

A.5 Summary

To conclude, our analysis reveals that customization has implications for two key roles of shareholder voting: aggregation of preferences and aggregation of information. In particular, the first motive to customize described in Section A.4.3 reflects the preference aggregation role of customization. The second and third motives in Section A.4.3 reflect the idea that customization not only changes the information provided to the fund, but also helps the fund allocate its attention more efficiently and thereby influences the extent of information aggregation in voting outcomes.

[30] The economies of scale result relies on the assumption that the cost of customization does not grow quickly with the number of firms in the fund's portfolio (in the model, this cost is fixed and does not grow with N at all). This assumption about the cost structure of custom advice is consistent with our conversations with proxy advisors. Moreover, part of the customization cost stems from developing voting policies and communicating them to the proxy advisor—costs that similarly do not grow with portfolio size.

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For completeness, we provide a Supplemental Appendix with additional robustness checks and proofs. These materials are provided for readers seeking further detail; none are required to follow or evaluate the main analysis. This Supplemental Appendix is available here and includes the following sections:

- E.1 presents the robustness of the difference-in-differences analyses.
- E.2 evaluates robustness to potential uncertainty in classifying auto- vs. manually-submitted ballots.
- E.3 replicates the results at the institution-level and along the intensive margin of customization.
- E.4 re-estimates the results using only large funds.
- F presents the proofs of the theoretical results presented in Appendix A of the paper.

B. Examples of custom policies and institutional background

Our conversations with Glass Lewis, ISS, and institutional investors using customized advice revealed examples of custom policies and their implementation, summarized in this section.

Both proxy advisors promote their custom voting policy services on their websites and describe how customization works in practice (see Glass Lewis here and ISS here). While they do not disclose clients' tailored policies, as these are proprietary to each client (for this reason, we do not have access to custom policies and custom recommendations of Glass Lewis clients), they do publish the details of their ready-made policies, which are not client-specific. For example, ISS ready-made policies are described under "Specialty Policies" here, and Glass Lewis ready-made policies are described under "Thematic Voting Policies" here.[1] The examples below draw on our discussions with Glass Lewis, ISS, and institutional investors, as well as our review of proxy advisors' publicly available ready-made policies.

- Environmental and social (ES) issues. Many custom policies reflect a stance on ES issues. For example, a fund may systematically support ES proposals more than the proxy advisor's benchmark policies or seek to integrate its ES views into other votes, such as director elections. Glass Lewis's ready-made *Climate* policy illustrates this approach. It is "designed for clients with a strong focus on environmental risk mitigation as well as those who look to promote enhanced climate disclosure and climate-related risk mitigation strategies." Among other provisions, this policy recommends a "vote against the board chair or the chair of the audit committee if a company has not established proper risk oversight of material environmental and social risks." Our discussions with institutional investors suggest that many clients incorporate similar ESG-related criteria into their tailored policies on director elections as well.

- Governance issues. Different institutional investors hold distinct views on governance, including which matters should be decided by the board versus shareholders (Bubb and Catan, 2022). Such perspectives inform customization. Another area of customization on governance issues involves cutoff rules: benchmark policies of proxy advisors sometimes specify a certain voting recommendation once a particular cutoff is reached, but an investor may view the cutoff as too restrictive or too lenient and choose to modify it. A typical example concerns overboarded directors. Glass Lewis benchmark policy recommends voting against a director who serves on more than five boards, whereas a custom policy can adjust this threshold. For instance, Glass Lewis "Corporate Governance Focused" ready-made policy is more lenient toward busy directors, applying a cutoff of six (rather than five) board seats before recommending a vote against a

[1] These policies also appear in the menus provided by large asset managers (e.g., Vanguard or BlackRock) to their fund clients through pass-through voting programs.

director. According to Glass Lewis, custom policies feature both such quantitative criteria and purely qualitative criteria.

- Level of customization. A custom policy with only a few such deviations from the benchmark is classified by Glass Lewis as having a *low level* of customization. *Medium level* customization is characterized by numerous departures from the existing policy across multiple proposal types, reflecting the client's distinct views on a range of issues. The degree of customization is also related to the complexity of the policy itself: more customized policies tend to include intricate conditions that specify how recommendations should be applied to different types of proposals. Institutions with *high levels* of customization have policies that are almost entirely tailored and have minimal alignment with Glass Lewis guidelines across most proposals; they also tend to involve complex conditions on a given proposal. During the proxy season, these highly customized institutions also communicate regularly with the Glass Lewis team for tailored advice.

  The following example, shared by Glass Lewis's policy team, illustrates how a customized rule on board gender diversity may differ from the benchmark policy. Under the standard Glass Lewis benchmark, the rule would typically state that if a board falls below a certain gender diversity threshold, Glass Lewis will recommend voting against the chair of the nominating committee, without any additional conditions. By contrast, a custom policy could introduce multiple layers of conditionality. It could apply the gender diversity test only to companies that are underperforming their peers, where underperformance is measured using one- or three-year total shareholder returns or performance relative to an industry benchmark. It could further specify that the vote should target a particular director, such as the chair of the nominating or governance committee, but only if that individual is standing for election at the meeting; if not, the policy could direct the vote against the chair of the board instead. Some clients may add another layer, applying different diversity thresholds across markets to reflect regional norms.

- If an institution has developed internal voting guidelines, its custom policy typically builds on them: they are used as the starting point for discussions with the proxy advisor, and the custom policy then translates the institution's internal principles into concrete voting instructions. Another common way for an investor to construct its custom policy is to take one of the ready-made policies as a starting point and then introduce various tweaks to it.

- Ready-made policies. We provide detailed descriptions of the five ready-made custom policies used by funds in our sample in Table B.1 at the end of this section.

- Customization happens prior to the proxy season and is done at the portfolio level, rather than on a firm-by-firm basis.

- Differences from benchmark recommendations. Custom policies often produce substantially different voting recommendations than benchmark policies. Our analysis in Table 2, as well as the additional analysis in Online Appendix Table D.2, show deviation rates for the entire sample of custom policies based on auto-submitted votes. In addition, Glass Lewis has historically disclosed the comparison between its ready-made and benchmark recommendations, showing that they can differ markedly. For example, according to Glass Lewis, while its benchmark policy opposes directors in 2.1% of cases and supports shareholder proposals 50.8% of the time, its "Public Pension" policy opposes directors 18.5% of the time and supports shareholder proposals 82% of the time. Similarly, while its benchmark policy opposes say-on-pay proposals in 10.7% of cases, the opposition rate is 22.8% under the "Public Pension" policy and rises to 58.3% under the "Climate" policy.

- Voting platform and customized alerts. Our conversations with Glass Lewis, ISS, and institutional investors highlighted a key role of the voting platform in facilitating customization. The platform helps automate votes, provides additional information, and issues alerts to clients. Specifically, the customizing fund's ballot on Glass Lewis's platform is pre-populated with the custom recommendation. Customizers can also view the proxy advisor's benchmark recommendation and, by clicking on additional fields, access detailed information that shaped each recommendation. The system can auto-submit this pre-populated vote in line with the fund's auto-submission policy (see Section 3), or the fund can manually submit the vote through the platform. On the voting platform, customizers observe not only their custom recommendations, but also the proxy advisor's benchmark recommendations.

  Importantly, the system also issues "alerts," or "flags," for proposals or companies that warrant special attention from the client. The number and focus of these alerts—by topic, proposal type, or company—are determined by the client. For example, a fund may limit alerts and watchlists to certain categories of proposals or to portfolio companies in which it holds a large stake. The ability to design such sophisticated alerts is substantially greater for customizers: while non-customizers can create a limited set of alerts, these are typically very basic (e.g., an alert when the benchmark recommendation opposes management).

- Unfortunately, we do not have data on the pricing of custom recommendations. Conversations with Glass Lewis and institutional investors suggest that pricing depends on the degree of customization, and high levels of customization are quite costly. As a result, funds carefully consider whether to add extra provisions to their custom policy at additional cost.

Table B.1. Descriptions of ready-made policies used by funds in our sample

The following descriptions of four ready-made policies used by funds in our sample are based on Glass Lewis's 2022 summary document "Thematic Policies Overview", available here. The fifth policy, MacBride, was more special and designed for proposals submitted at firms that operate in Northern Ireland. MacBride principles called on companies operating in Northern Ireland to adopt and demonstrate strong equal opportunity employment practices, with shareholder proposals evaluated based on firms' existing policies and records of workplace discrimination. The MacBride policy was removed from the menu right before the 2022 proxy season, because there had not been shareholder proposals on the corresponding topics for many years (see here).

	Catholic	ESG	Public Pension	Taft Hartley
Overall description	The Catholic Policy provides an additional level of analysis on behalf of customers that wish to vote in a manner relevant to the unique fiduciary responsibility of Catholic investors. Glass Lewis recognizes that Catholic institutions are concerned not only with economic returns but with the overall social impact of their investments.	Glass Lewis' ESG Policy includes an additional level of analysis on behalf of customers seeking to vote consistent with widely-accepted enhanced environmental, social and governance practices. The ESG Policy is designed for investors seeking enhanced investment return with a focus on disclosing and mitigating company risk regarding ESG issues.	The Public Pension Policy is designed to ensure compliance with the special fiduciary responsibilities of public pension plan sponsors in voting proxies on behalf of public employees. This policy reflects the perspectives of many of our public pension clients and is designed for investors with extremely long-term investment horizons.	The Taft-Hartley Policy is fully compliant with the fiduciary voting responsibilities of the Taft Hartley Labor Act, as well as the fiduciary requirements imposed by ERISA requiring a plan sponsor to protect a labor fund's assets. … The policy includes careful review of companies' labor practices including compliance with the EEOC, company treatment of union members and union members' job safety.
Policies on shareholder proposals	The Catholic Policy will support proposals that serve to protect and/or increase the rights of workers as well as those proposals to increase corporate responsibility. The Catholic Policy will also support the adoption of corporate policies on equal pay and promotion opportunities for women. In addition, the policy generally supports proposals seeking improved reporting and disclosure about a company's impact on the environment.	The ESG Policy will support most governance-related shareholder proposals and all environmental and social shareholder proposals aimed at enhancing a company's policies and performance or increasing a company's disclosures with respect to such issues.	The Public Pension Policy will support most governance shareholder proposals and will support all environmental and social proposals aimed at increasing a company's disclosure of environmental or social issues. However, the policy will not support resolutions requesting that companies take specific actions or adopt specific policies.	The Taft-Hartley Policy supports most governance shareholder proposals and generally supports social and environmental proposals, especially those seeking increased disclosure.

C. Variable definitions and data matching

C.1 Construction and validation of ideology scores

In this section, we discuss how we construct funds' ideological scores and then validate them using fund-level voting data from ISS Voting Analytics.

C.1.1 Construction

Recall that we do not observe funds' votes on individual proposals. However, we impute Glass Lewis benchmark recommendations using Zytnick (2025)'s imputations and, for each fund-ballot, we observe whether the ballot deviated from Glass Lewis benchmark recommendations on any proposal. Using this information, we can construct an ideology score on a proposal type by comparing a fund's number of deviations on ballots in which Glass Lewis recommended in favor of such proposals to its number of deviations on ballots in which Glass Lewis opposed those proposals. We construct each fund's ideology scores as follows.

To calculate the *ES score*, we limit the set of shareholder meetings to those where (i) Glass Lewis benchmark recommendations support all management proposals; (ii) there are no governance shareholder proposals on the ballot, and (iii) there is at least one ES shareholder proposal on the ballot. In such meetings, whether a fund-ballot deviates from benchmark recommendations is likely to reflect the fund's stance on ES proposals on the ballot (as we validate using data from ISS Voting Analytics in Online Appendix Section C.1.2). We further limit the set of meetings to those where Glass Lewis benchmark recommendations are not split on ES issues, i.e., they are either in favor of *all* ES proposals (we call this set $M_{support\ ES}$) or against *all* ES proposals on the ballot (we call this set $M_{oppose\ ES}$). Next, for any fund, let $N_{support\ ES}$ ($N_{oppose\ ES}$) be the total number of meetings from the set $M_{support\ ES}$ ($M_{oppose\ ES}$) in which the fund casts a vote, and let $N^{follow}_{support\ ES}$ ($N^{follow}_{oppose\ ES}$) be the number of such meetings where the fund follows Glass Lewis benchmark ballot. To reduce noise, we only calculate the ES score for funds that cast ballots on at least five qualifying meetings, i.e., for funds for which $N_{support\ ES} + N_{oppose\ ES} \geq 5$. This restriction limits the set of funds for which this score can be calculated, which explains the lower sample size in analyses involving ES scores.

We can then measure the fund's support rate for ES proposals as

$$Fund\ Support\ Rate_{ES} = \frac{N^{follow}_{support\ ES} + (N_{oppose\ ES} - N^{follow}_{oppose\ ES})}{N_{support\ ES} + N_{oppose\ ES}}.$$

Intuitively, the numerator captures the number of meetings in which the fund supported ES proposals on the ballot. The first term in the numerator is the number of meetings in which Glass Lewis supported all ES proposals and the fund followed Glass Lewis. The second term in the numerator is the number of meetings in which Glass Lewis opposed all ES proposals but the fund deviated from Glass Lewis (likely to support ES proposals). Collectively, the numerator represents the number of

meetings in which the fund appears to support ES proposals. Because the denominator measures the total number of meetings in which the fund cast votes on ES proposals, the ratio captures the fund's ES stance.

Similarly, we measure Glass Lewis's support rate for ES proposals as

$$GL\ Support\ Rate_{ES} = \frac{N_{support\ ES}}{N_{support\ ES} + N_{oppose\ ES}}.$$

We then calculate the fund's ES score as the difference between the fund's support rate for ES proposals and Glass Lewis's support rate for ES proposals:

$$\theta_{ES} = Fund\ Support\ Rate_{ES} - GL\ Support\ Rate_{ES}.$$

For example, an ES score close to 0 implies that the fund's support rate for ES proposals is similar to that of Glass Lewis, i.e., that their ES ideologies are similar. A positive (negative) score implies that the fund is consistently more (less) supportive of ES proposals than Glass Lewis.

To calculate the *Governance score*, we follow a similar procedure, except that in the first step, we restrict the set of meetings to those with no ES shareholder proposals and at least one governance shareholder proposal. Finally, to calculate the *Management score*, we again follow a similar procedure, this time restricting the set of meetings to those with no shareholder proposals.

We calculate institution-level ideology scores by the same process. First, we calculate an institution's opposition to Glass Lewis benchmarks for each meeting as the average of the institution's funds' opposition to Glass Lewis benchmarks. For example, if an institution has three funds which voted at a given company's 2017 annual meeting, two of which deviated from Glass Lewis benchmark recommendations and one of which followed Glass Lewis benchmark recommendations, then this institution's deviation rate from Glass Lewis benchmark recommendations would be ⅔. Then, using these institution-ballot level votes, we calculate the institution's ideology score as we did for the funds.

C.1.2 Validation

In constructing ideology scores, a key limitation is that we cannot observe a fund's votes on individual proposals. Instead, we only see whether the fund's ballot agreed with all Glass Lewis benchmark recommendations or deviated on at least one proposal on the ballot. As detailed in Section C.1.1, we thus restrict the set of meetings used to construct each of the scores, so as to isolate the corresponding proposals only. In this section, we validate that our ballot-level ideology scores constructed this way properly capture proposal-level ideology. To do so, we replicate our ballot-level methodology using a different set of voters, for whom complete proposal-level voting data are available through ISS Voting Analytics: mutual funds, which disclose their votes on Form N-PX. Because mutual fund votes can be observed at the proposal level, we can test whether our ballot-level imputation accurately reflects proposal-level ideological tendencies.

Specifically, for the validation tests, we use ISS Voting Analytics from 2011–2017 only (i.e., we do not rely on Glass Lewis data), supplementing it with Glass Lewis recommendations from Zytnick (2025). Using this dataset, we assess validity in the following two ways.

First, we ask whether a fund's ballot-level deviations from Glass Lewis in fact correspond to deviations on the proposal type of interest (which is our assumption in constructing the scores in Section C.1.1). Online Appendix Table C.1 shows that they do: conditional on *any* disagreement with Glass Lewis on the ballot on the set of meetings we use to construct ES (governance) scores in Section C.1.1, funds in ISS Voting Analytics disagree with Glass Lewis on an ES proposal 75.4% of the time and on a governance proposal 79.9% of the time. For management proposals, since the set of meetings to construct management scores is restricted to ballots without shareholder proposals, the correspondence is 100% by construction. These high rates indicate that ballot-level scores contain strong information about proposal-level behavior.

Next, we construct two sets of ideological scores – one similar to ours (ballot-level), and the other based on proposal-level voting information – and compare them to each other. We illustrate this validation test using ES scores, but the same procedure applies to Governance and Management scores. First, using all mutual fund votes from 2011–2017 in ISS Voting Analytics, we calculate each fund's "proposal-level" ES ideology as the fraction of ES proposals it supported. Second, we construct "ballot-level" ES scores for funds in ISS Voting Analytics using our method in Section C.1.1: restricting to the same set of meetings first, recording whether the fund deviated from Glass Lewis on at least one proposal on the ballot, computing the support rate implied by those deviations, and subtracting Glass Lewis's own support rate. This parallel construction allows a direct comparison between our measure and the proposal-level ideology measure.

We then examine whether ballot-level scores track funds' proposal-level ideological positions. To do so, we regress each fund's proposal-level ideology measure on its ballot-level score. Results in Online Appendix Table C.2 confirm that our measure captures a large share of the variation in proposal-level positions. The explanatory power is especially strong for ES and Governance scores ($R^2 = 0.54$ and 0.42, respectively), while lower but still substantial for Management scores ($R^2 = 0.21$), reflecting the less ideological nature of management votes.

Taken together, these validations suggest that our ballot-level construction produces ideology scores that reliably approximate funds' proposal-level voting preferences.

Table C.1. Disagreement rate with Glass Lewis on specific proposals

This table reports the extent to which ballot-level disagreements with Glass Lewis benchmark recommendations correspond to disagreements on the relevant proposal category. It shows the disagreement rate with Glass Lewis on specific proposals, conditional on ballot-level disagreement with Glass Lewis. Using all mutual fund votes from ISS Voting Analytics over 2011–2017, we restrict the sample to meetings used in the construction of each ideology score and then to fund-ballots that disagree with Glass Lewis benchmarks on at least one proposal. For each proposal category (ES shareholder proposals; governance shareholder proposals; management proposals), we report the fraction of such ballots in which the fund also disagrees with Glass Lewis on at least one proposal of that type, expressed in percentage points. By construction, the rate is 100% for management proposals, since management scores are based on the subsample of ballots without ES or governance shareholder proposals.

	ES	Governance	Management
Percentage disagree with GL on any in-category proposal on the ballot	75.4	79.9	100.0
Number of fund-ballots	39,327	97,159	1,655,152

Table C.2. Relation between ballot-level ideology scores and proposal-level ideology

This table evaluates the validity of ballot-level ideology scores using the sample of all mutual fund votes from ISS Voting Analytics over 2011–2017. For each proposal category (ES shareholder proposals; governance shareholder proposals; management proposals), we first calculate a proposal-level ideology measure as the fraction of proposals of that type supported by the fund across all meetings. We then calculate ballot-level ideology scores using the ballot-level methodology described in Online Appendix C.1.1, which includes restricting the set of meetings using the criteria applied in the corresponding score construction. We regress proposal-level ideology measures on the corresponding ballot-level scores and report the coefficients. Robust standard errors are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

	(1) Proposal-level ES ideology	(2) Proposal-level governance ideology	(3) Proposal-level management ideology
ES Score	0.65***		
	(0.01)		
Governance Score		0.61***	
		(0.01)	
Management Score			0.24***
			(0.01)
Constant	0.20***	0.61***	0.87***
	(0.00)	(0.00)	(0.00)
N	4,310	6,212	10,360
R^2	0.54	0.42	0.21

C.2 Definitions of other variables

Fund-ballot level	
Deviates from GL Benchmark Recommendations	Equals 1 if the fund's vote deviates from Glass Lewis benchmark recommendation on at least one proposal on the ballot, and 0 otherwise.
Auto-Submitted	Equals 1 if the fund's ballot was cast either on the fund's auto-submission date or exactly four days before the meeting (or six days before a Monday meeting; see footnote 14), and 0 otherwise.
Manually-Submitted	Equals one minus *Auto-Submitted.*
Log Stake Value	The fund's log dollar stake value in the firm; it equals the logarithm of the product of (i) the fund's number of shares voted in that shareholder meeting and (ii) the firm's most recent monthly stock price from CRSP.
Fund level	
Fund Number of Stakes	The number of distinct portfolio companies held by the fund. For each fund, we calculate this measure separately for each year. For fund-level summary statistics, we average it across years within the fund to get a fund-level variable.
Fund Mean Stake Size	The average value of the dollar value of the fund's ownership stakes across its portfolio firms. For each fund, we calculate this measure separately for each year. For fund-level summary statistics, we average it across years within the fund to get a fund-level variable.
Fund Total Stake Size	The total dollar value of the fund's ownership stakes across its portfolio firms. For each fund, we calculate this measure separately for each year. For fund-level summary statistics, we average it across years within the fund, to get a fund-level variable.
Fund's Deviation Rate from Glass Lewis	The fraction of the fund's ballots in which the fund's vote on at least one proposal does not follow Glass Lewis benchmark recommendation.
Fund's Manual Voting Rate	The fraction of the fund's ballots that are not submitted on the fund's auto-submission date or exactly four days before the meeting (or six days before a Monday meeting; see footnote 14).
The construction of fund-level ideology scores (*ES Score, Governance Score, Management Score*) is explained in Online Appendix C.1.	
Institution level	
We define institution-level variables similarly to fund-level variables, by aggregating across all funds within an institution. To explain this aggregation, we use the example of an institution that has two funds, with the first fund holding firms A and B ($1 million in each), and the second fund holding firms A and C ($2 million in each).	
Institution Number of Stakes	The number of distinct portfolio firms held by all funds within the institution. In the above example, *Institution Number of Stakes* is three (firms A, B, and C). For each institution, we calculate this measure separately for each year. For institution-level summary statistics, we average it across years within the institution to get an institution-level variable.
Institution Mean Stake Size	The average value of *Institution Stake Size* across all firms held by the institution, where *Institution Stake Size* for a given firm is the dollar value of the ownership stake the institution as a whole (aggregated across all its funds) holds in this firm. In the above example, *Institution Stake Size* in firms A, B, and C is $3 million, $1 million, and $2 million, respectively, and its *Institution Mean Stake Size* is $2 million. For each

	institution, we calculate this measure separately for each year. For institution-level summary statistics, we average it across years within the institution to get an institution-level variable.
Institution Total Stake Size	The total dollar value of the institution's stakes across its portfolio firms. In the above example, *Institution Total Stake Size* is $6 million. For each institution, we calculate this measure separately for each year. For institution-level summary statistics, we average it across years within the institution to get an institution-level variable.
Shareholder Meeting level	
At Least One Shareholder Proposal	Equals 1 if the meeting has at least one shareholder proposal on the ballot, and 0 otherwise.
At Least One ES Proposal	Equals 1 if the meeting has at least one environmental and social shareholder proposal on the ballot, and 0 otherwise.
At Least One Governance Proposal	Equals 1 if the meeting has at least one governance-related shareholder proposal on the ballot, and 0 otherwise.
GL Disagrees with Management	Equals 1 if Glass Lewis benchmark recommendations oppose management on at least one proposal on the ballot, and 0 otherwise.
ISS Disagrees with Management	Equals 1 if ISS benchmark recommendations oppose management on at least one proposal on the ballot, and 0 otherwise.
Special Meeting	Equals 1 if the meeting is defined as "special."
Activist-Connected Meeting	Equals 1 if there is a proxy campaign at that firm for which the campaign meeting date matches the date of the shareholder meeting, and 0 otherwise (we use FactSet SharkRepellent to identify activist events).

C.3 Data matching

In this section, we describe the variables in the dataset obtained from Glass Lewis and explain how we matched it to the other datasets used in the paper.

The data provided by Glass Lewis consists of the following data sets:

- Votes datasets (2011–2017): Annual datasets, unique at the fund-ballot level, containing:
  - Portfolio company name
  - Portfolio company ticker
  - Glass Lewis meeting identifier
  - Fund ID
  - Institution ID
  - Meeting date
  - Meeting type (annual or special)
  - Number of shares voted
  - Fund-ballot identifier
  - Date the Glass Lewis benchmark recommendations for the meeting were released
  - Date the fund cast its ballot
  - Indicator for whether the fund's ballot contained at least one vote against the Glass Lewis benchmark

- Institution policies (as of 2020): A dataset, unique at the institution level, containing:
    - Institution ID
    - Institution-level voting policy (benchmark, custom, or multiple policies)
    - Institution-level policy intensity (benchmark, low, medium, or high)
    - Vote execution policy (e.g., auto-submit 4 days prior to the meeting)
- Fund policies (as of 2022): A dataset, unique at the fund level, containing:
    - Fund ID
    - Fund-level voting policy (benchmark, tailored, or ready-made)

Other data sources:

- ISS Voting Analytics: Dataset of proposals and associated ISS recommendations
- CRSP Monthly Securities File: Provides security identifiers and stock-level data
- SharkRepellent: dataset of activist events

We compile and clean the Glass Lewis data as follows. We append the annual votes datasets (2011–2017) into a single panel. Duplicate observations occasionally arise when a fund has multiple records for the same meeting or company–meeting date. If duplicates share the same voting dates and choices, we retain a single observation, summing their shares. If voting dates or choices differ, we drop all such observations.

We clean ISS Voting Analytics as follows. First, we remove exact duplicates across all fields. Second, for proposal IDs with both pending and non-pending versions, we remove the pending version. Third, we drop ballot items that are not true proposals, which we identify as ones where the ISS recommendation is "Refer" or "None." Fourth, we merge this dataset with imputed Glass Lewis recommendations from Zytnick (2025) and classifications of proposals into categories like "Environmental and Social" or "Governance" from Brav, Cain, and Zytnick (2022). Fifth, because the Glass Lewis data is at the ballot level, not the proposal level, we aggregate proposal-level variables to create ballot-level variables (e.g., whether a ballot includes at least one shareholder proposal).

We merge Glass Lewis data to ISS Voting Analytics as follows. We merge at the shareholder meeting level in two stages. First, we do an exact match on ticker and meeting date. Second, for unmatched cases, we do an exact match on meeting date plus a fuzzy match on company name. For the fuzzy match, we apply a match score threshold and manually curate a small set of edge cases.

We merge ISS Voting Analytics to CRSP as follows. First, we do an exact match on 8-digit CUSIP. Second, for unmatched cases, we do an exact match on ticker and a fuzzy match on company name. We hand-check all fuzzy company name matches. We match to SharkRepellent using an exact match on ticker and a campaign announcement date on or prior to the meeting date.

We drop nine meetings for which the total number of shares owned by Glass Lewis customers exceeds the total number of outstanding shares. We drop observations for which we are missing ISS recommendations, fund-level customization data, or data on whether a fund's ballot opposed Glass Lewis benchmarks.

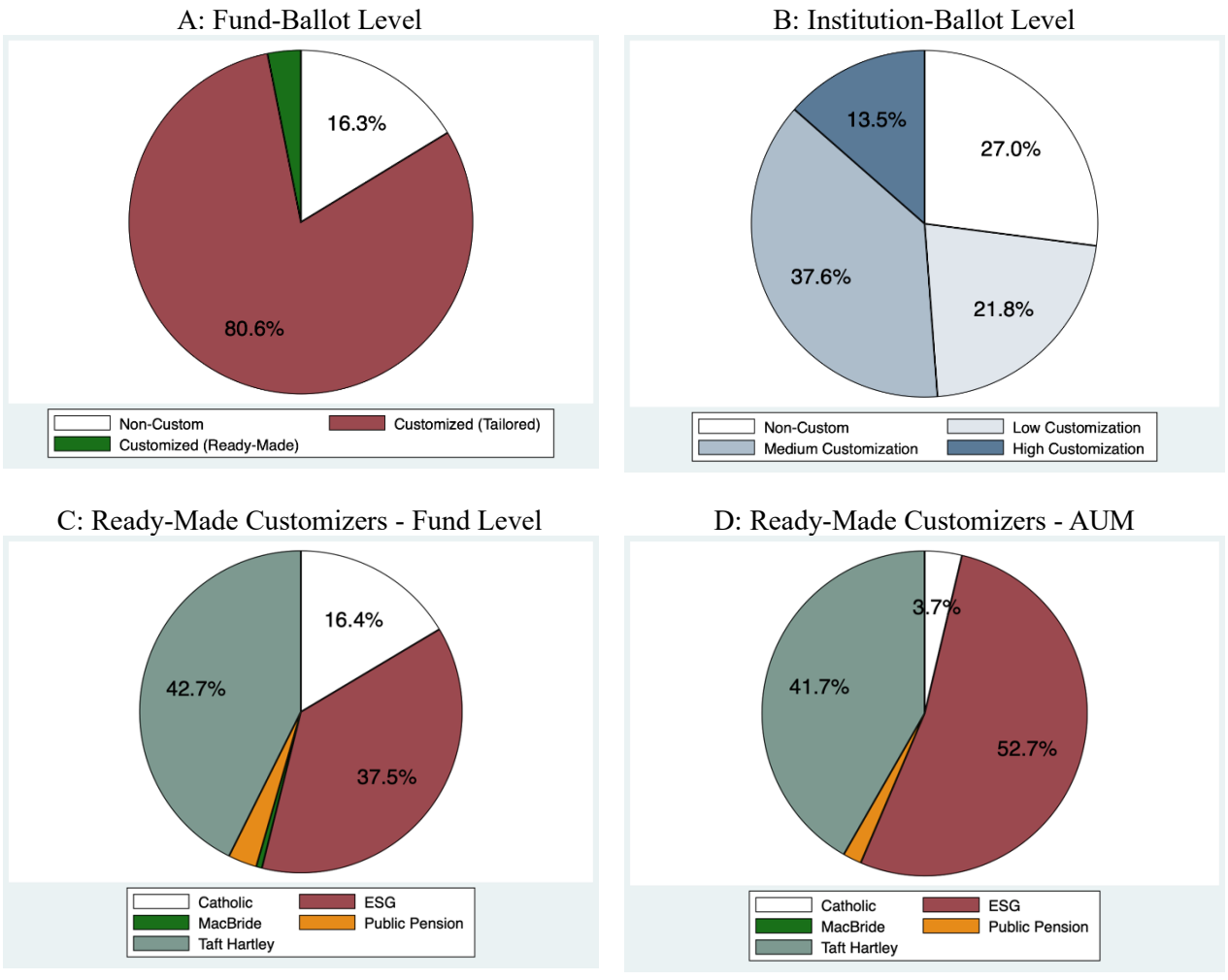
D. Additional results

This section provides additional analyses that complement the discussions in the main paper.

D.1 Additional figures and tables

Figure D.1. Frequency of customization - additional analysis

Panels A and B complement Figure 1 in the paper by illustrating the frequency of customization at the fund-ballot level (Panel A) and institution-ballot level (Panel B). The institution-ballot level pie chart aggregates all ballots of the institution's funds for a particular meeting. Panel A separates customizing funds into those receiving tailored recommendations and those receiving ready-made recommendations. Panel B separates customizing institutions into those that have low, medium, and high levels of customization. Panels C and D consider the subset of ready-made customizers and display the percentages (at the fund level and AUM level, respectively) that selected each of the five ready-made policies; these ready-made policies are described in Online Appendix B and Table B.1.



Note: Compared with Panels A and B of Figure 1 in the main paper, Panels A and B of this figure display higher customization levels. This difference arises because customizers tend to hold more portfolio firms (see Section 5 of the paper), leading them to submit more ballots.

Figure D.2. Differences between benchmark and custom recommendations – by year

This figure replicates the first row of Table 2, Panel A (all meetings) on a year-by-year basis. The sample is restricted to include only auto-submitted fund-ballots. The outcome variable equals one if the ballot fully follows Glass Lewis benchmark recommendations and zero if it deviates on at least one proposal, expressed in percentage points. The blue (red) line presents averages for funds classified as non-customizers (customizers) based on their 2022 customization status.

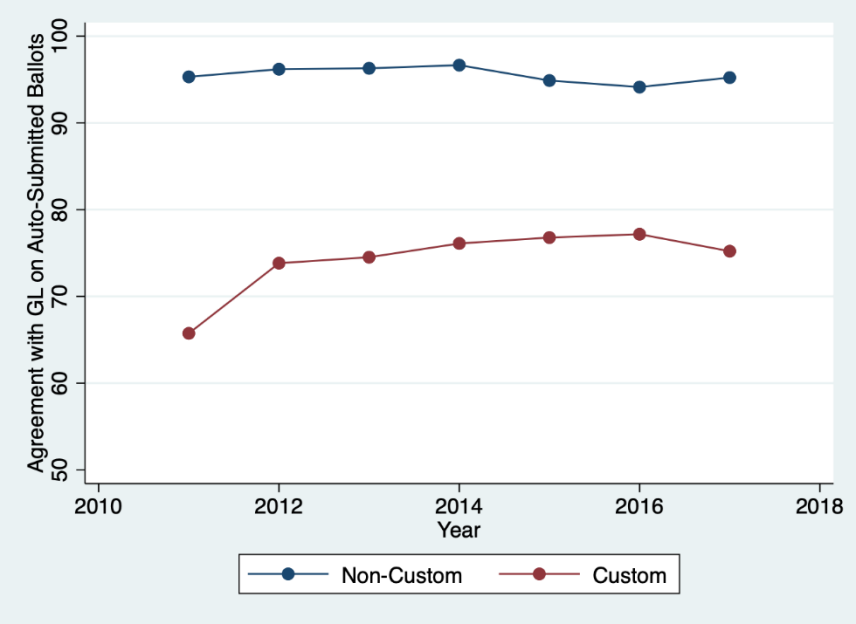


Table D.1. Variation in customization across funds within an institution

This table presents summary statistics regarding the fund-level customization within institutions. Panel A breaks down institutions based on whether their funds are uniformly within a single customization category or, rather, mixed. For each category, it displays the average number of funds at each institution. Panel B limits the sample to institutions whose funds have a mix of customization categories and presents a breakdown of customization categories at the funds of such institutions. An institution is defined to have a majority of funds with a certain customization type if at least 50% of its funds have this customization type.

Panel A: Types of institutions by customization

Institution type	Number of Institutions	Percentage	Average Number of Funds
All Funds Non-Customizers	151	45.3	27
All Funds Tailored	151	45.3	76
All Funds Ready-Made	9	2.7	16
Mixed Institution	22	6.6	428

Panel B: Mixed institutions only

Mixed: customizing and non-customizing funds	Number of Institutions	Avg. Number of Non-Customizing Funds	Avg. Number of Customizing Funds
Majority Non-Customizers	6	177.2	12.0
Majority Customizers	2	1.0	503.0
Mixed: all customizing funds, but different types of customization	**Number of Institutions**	**Avg. Number of Tailored Funds**	**Avg. Number of Ready-Made Funds**
Majority Tailored	14	510.6	9.7
Majority Ready-Made	0		

Table D.2. Differences between benchmark and custom recommendations - more samples

This table reports fund-ballot level analysis, where the outcome variable equals one if the ballot fully follows Glass Lewis recommendations and zero if it deviates on at least one proposal. Panel A compares averages for non-customizing vs. customizing funds. Panel B restricts the sample to customizers and compares averages for funds with tailored vs. ready-made recommendations. Both panels express these averages in percentage points. In each panel, the third column reports the difference between the first two. Standard errors are clustered at the fund and ballot level. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

	Percent of ballots following GL's benchmark recommendations		
Panel A: Customizers vs. non-customizers	Non-Custom	Custom	Difference
Meetings with shareholder proposals	95.31	62.63	32.68***
			(1.21)
N	165,135	609,962	775,097
Meetings without shareholder proposals	95.45	78.29	17.16***
			(1.25)
N	454,834	1,866,670	2,321,504
Meetings where GL disagrees with management	94.55	63.42	31.13***
			(1.35)
N	314,956	1,206,995	1,521,951
Meetings where GL agrees with management	96.36	85.46	10.89***
			(1.08)
N	291,129	1,211,473	1,502,602
Meetings where ISS disagrees with management	94.97	67.60	27.37***
			(1.24)
N	265,286	1,024,596	1,289,882
Meetings where ISS agrees with management	95.74	79.25	16.49***
			(1.15)
N	354,683	1,452,036	1,806,719

Panel B: Tailored vs. ready-made customizers	Tailored	Ready-Made	Difference
All meetings	75.91	50.52	25.39***
			(3.84)
N	2,332,174	144,458	2,476,632
Meetings with ES proposals	60.34	32.51	27.83***
			(4.71)
N	313,109	20,937	334,046
Meetings with governance proposals	64.18	38.55	25.64***
			(4.48)
N	439,600	29,842	469,442

Note: The number of observations in this table is smaller than that in the corresponding regressions in the paper, because the construction of scores based on manually submitted ballots requires enough votes that are manually submitted by the fund on a given proposal type. This limits the set of funds for which these scores can be constructed.

Table D.3. Customization decisions and ideology scores from manually submitted ballots

This table presents regressions studying the relation between customization and ideology scores from manually submitted ballots. In Panel A, the outcome variable is whether the fund is a customizer, expressed in percentage points, and the explanatory variable is the fund's absolute value of the corresponding ideology score, calculated using solely its manually submitted ballots (as described in Online Appendix C.1). Panel B repeats this analysis at the institution level. In Panel C, the outcome variable is the fund's ideology score calculated using solely its auto-submitted ballots, and the explanatory variable is the fund's ideology score calculated using solely its manually submitted ballots; Panel D repeats this analysis at the institution level. Robust standard errors are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Panel A: Customization and ideology scores from manually submitted ballots, fund-level

Dep. variable: Custom	(1)	(2)	(3)
Abs(ES Score Manual submissions)	9.79***		
	(1.25)		
Abs(Gov Score Manual submissions)		18.95***	
		(1.21)	
Abs(Mgmt Score Manual submissions)			12.50***
			(1.29)
Constant	92.17***	86.19***	85.13***
	(0.53)	(0.67)	(0.45)
Mean dep. variable	93.94	91.63	88.14
N	3,847	5,056	14,073
R^2	0.01	0.04	0.01

Panel B: Customization and ideology scores from manually submitted ballots, institution-level

Dep. variable: Custom	(1)	(2)	(3)
Abs(ES Score Manual submissions)	43.39***		
	(11.18)		
Abs(Gov Score Manual submissions)		69.35**	
		(26.81)	
Abs(Mgmt Score Manual submissions)			67.15***
			(23.48)
Constant	70.26***	65.52***	56.08***
	(6.06)	(5.37)	(4.62)
Mean dep. variable	82.41	73.53	64.89
N	108	136	225
R^2	0.09	0.04	0.04

Panel C: Customizers' ideology scores from auto- vs. manually submitted ballots, fund-level

	(1) ES Score Auto-submissions	(2) Gov Score Auto-submissions	(3) Mgmt Score Auto-submissions
ES Score Manual submissions	0.30***		
	(0.02)		
Gov Score Manual submissions		0.29***	
		(0.03)	
Mgmt Score Manual submissions			0.21***
			(0.01)
Constant	0.15***	-0.11***	0.03***
	(0.01)	(0.01)	(0.00)
N	1,073	1,737	9,201
R^2	0.13	0.12	0.10

Panel D: Customizers' ideology scores from auto- vs. manually submitted ballots, institution-level

	(1) ES Score Auto-submissions	(2) Gov Score Auto-submissions	(3) Mgmt Score Auto-submissions
ES Score Manual submissions	0.52***		
	(0.09)		
Gov Score Manual submissions		0.35**	
		(0.15)	
Mgmt Score Manual submissions			0.59***
			(0.07)
Constant	0.04	-0.05***	0.00
	(0.04)	(0.02)	(0.01)
N	56	85	179
R^2	0.36	0.11	0.45

Table D.4. Within-institution voting dispersion

This table presents different metrics of within-institution voting dispersion, regressed on an indicator variable for whether the institution receives customized recommendations. In column (1), the dependent variable is the fraction of time the institution's funds agree, calculated as follows. First, we limit to auto-submitted ballots, to capture only the effects of custom policies. Second, we limit to meetings that an institution has at least two funds auto-submitting on. Third, we indicate whether a given fund ballot disagreed with the institution's modal ballot (as measured by whether it opposed Glass Lewis benchmarks on any proposal on the ballot). Then, we average across ballots at the institution to generate an institution-level measure of vote choice dispersion, expressed in percentage points. In columns (2)–(4), the dependent variable is the average deviation in ideology score of the institution's funds, calculated as follows. First, we calculate, for each fund, the absolute value of the fund's ideology score minus the institution's average ideology score across its funds. We then aggregate to the institution level. In these columns, we control for the institutions' number of funds (*Institution Number of Funds*) and the average number of companies held by each fund at the institution (*Institution Number of Stakes Per Fund*). All regressions are at the institution level and include robust standard errors in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Dispersion	(1) Vote Dispersion	(2) ES Score Dispersion	(3) Gov. Score Dispersion	(4) Mgmt. Score Dispersion
Custom Institution	0.81***	0.06***	0.05***	0.03***
	(0.25)	(0.01)	(0.01)	(0.01)
Institution Number of Stakes Per Fund		0.00	-0.00	-0.00**
		(0.00)	(0.00)	(0.00)
Log Institution Number of Funds		0.01***	0.01***	0.01***
		(0.00)	(0.00)	(0.00)
Constant	0.22**	-0.01	0.00	0.01**
	(0.09)	(0.01)	(0.01)	(0.01)
Mean dep. variable	0.66	0.06	0.06	0.05
N	292	238	257	315
R^2	0.03	0.27	0.23	0.18

Table D.5. Within-institution analysis for mixed institutions

Panel A presents fund-ballot level analysis of clustering behavior of funds within mixed institutions. For each institution-meeting pair, we define (1) the *Modal Voting Date*, which is the date on which most funds in the institution cast their ballots for that meeting; and (2) the *Modal Voting Choice*, which is the voting direction taken by most funds in the institution for that meeting (i.e., whether they voted with or against Glass Lewis benchmark recommendations). Next, for each fund-ballot, *Voted on Modal Voting Date* is an indicator equal to one if the fund cast its ballot on the modal date of its institution, and *Voted the Modal Voting Choice* is an indicator equal to one if the fund cast its vote in the same direction as the modal voting choice of its institution; both are expressed in percentage points. Columns (1) and (2) regress *Voted on Modal Voting Date* on the indicator for whether the fund is a customizer (*Customizing Fund*), including institution and institution-meeting fixed effects, respectively. Columns (3) and (4) repeat this analysis, but using *Voted the Modal Voting Choice* as the outcome variable. Panel B presents fund-level analysis of voting ideology within mixed institutions. Standard errors clustered at the fund and ballot level are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Panel A: Vote timing and voting decisions of funds within mixed institutions

	Voted on Modal Voting Date		Voted the Modal Voting Choice	
	(1)	(2)	(3)	(4)
Customizing Fund	-6.95***	-9.69***	-37.80***	-38.27***
	(1.73)	(2.39)	(6.61)	(7.45)
Intercept	104.10***	106.44***	130.32***	130.72***
	(1.48)	(2.05)	(5.67)	(6.39)
Mean dep. variable	98.15	98.15	98.02	98.02
N	4,434,311	4,434,311	4,424,789	4,424,789
R^2	0.10	0.33	0.13	0.23
Fixed Effects	Institution	Institution-Meeting	Institution	Institution-Meeting

Panel B: Ideology scores of funds within mixed institutions

	(1) ES Score	(2) Governance Score	(3) Management Score
Customizing Fund	0.21***	-0.04**	-0.11***
	(0.05)	(0.02)	(0.01)
Constant	-0.13***	-0.12***	0.20***
	(0.04)	(0.02)	(0.01)
Mean dep. variable	0.05	-0.16	0.11
N	7,358	10,410	20,415
R^2	0.66	0.67	0.55
Fixed Effects	Institution	Institution	Institution

Interpretation of this table: A negative coefficient on *Customizing Fund* in Panel A indicates that non-customizers cluster in both vote timing and vote direction relative to customizers within the same institution. A large positive coefficient on *Customizing Fund* in Panel B column (1) indicates that customizing funds exhibit a more pro-ES ideology relative to non-customizers within the same institution.

Table D.6. Deviations from GL benchmarks on auto- and manually submitted ballots

This table presents the rate of following Glass Lewis benchmark recommendations, separately for auto-submitted and manually submitted ballots. Panel A restricts the sample to auto-submitted ballots, and Panel B to manually submitted ballots. The outcome variable equals one if the fund's ballot fully follows Glass Lewis benchmark recommendations and zero if it deviates on at least one proposal on the ballot, expressed in percentage points. Columns 1 and 2 present averages for non-customizing and customizing funds, respectively. Column 3 presents the difference. Variable definitions are in Online Appendix C.2. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

	Percent of ballots following GL's benchmark recommendations		
	Non-Custom	Custom	Difference
Panel A: Auto-submitted ballots	95.41	74.43	20.98***
			(1.16)
N	619,969	2,476,632	3,096,601
Panel B: Manually submitted ballots	74.45	52.08	22.37***
			(1.66)
N	165,390	1,559,815	1,725,205

Table D.7. Manual voting rates, fund-ballot level

This table presents the average percentage of fund-ballots submitted manually (as opposed to being auto-submitted) for several categories of shareholder meetings across non-customizers, tailored customizers, and ready-made customizers. Definitions of meeting categories are provided in Online Appendix C.2.

	Percent of ballots submitted manually		
	Non-customizers	Tailored customizers	Ready-made customizers
All meetings	21.06	39.98	4.10
At least one shareholder proposal	20.39	51.32	4.80
At least one ES proposal	19.86	54.33	5.24
At least one governance proposal	20.74	51.58	4.64
GL disagrees with management	21.63	45.79	4.54
ISS disagrees with management	21.46	45.95	4.91
Special meeting	22.71	47.53	7.13
Activist-connected meeting	21.11	56.27	6.29

Table D.8. Allocation of attention across meetings - by customization status

This table presents fund-ballot level regressions replicating Table 5 by customization status: Panel A includes only non-customizing funds; Panel B includes only customizing funds. The dependent variable equals one if a fund manually casts its ballot, expressed in percentage points. The key explanatory variables are meeting-level indicators capturing contentious meetings and the fund's log of its dollar stake value in the firm. Variable definitions are in Online Appendix C.2. Standard errors are clustered at the fund and ballot level. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Panel A. Non-Customizing Funds

Dep. Variable: Manual Submission	(1)	(2)	(3)	(4)
Log Stake Value	0.27***	0.10	-0.03	0.06*
	(0.07)	(0.07)	(0.08)	(0.03)
ISS Disagrees with Management	1.01**	-0.53	0.99*	-0.14
	(0.48)	(0.56)	(0.51)	(0.59)
GL Disagrees with Management	1.36***	2.42***	1.27**	2.49***
	(0.48)	(0.65)	(0.51)	(0.68)
Special Meeting	3.72***	3.35***	3.41***	3.61***
	(1.20)	(1.10)	(1.23)	(1.26)
Activist-Connected Meeting	0.73	-0.20	0.71	-0.15
	(0.75)	(0.87)	(0.76)	(1.03)
Intercept	16.44***	19.79***	19.78***	18.84***
	(0.90)	(0.87)	(1.00)	(0.52)
Mean dep. variable	20.76	22.08	20.77	20.87
N	740,012	543,692	741,327	718,826
R^2	0.72	0.84	0.67	0.82
Fixed Effects	Fund-Year	Fund-Year and Fund-Firm	Institution-Year	Institution-Year and Institution-Firm

Panel B. Customizing Funds

Dep. Variable: Manual Submission	(1)	(2)	(3)	(4)
Log Stake Value	1.45***	0.45***	0.77***	0.20***
	(0.09)	(0.08)	(0.07)	(0.04)
ISS Disagrees with Management	3.13***	2.10***	4.16***	2.09***
	(0.34)	(0.33)	(0.39)	(0.37)
GL Disagrees with Management	7.24***	6.34***	7.63***	6.89***
	(0.41)	(0.44)	(0.45)	(0.45)
Special Meeting	15.57***	15.10***	15.24***	15.27***
	(0.97)	(1.09)	(0.98)	(1.07)
Activist-Connected Meeting	7.05***	3.25***	9.69***	3.59***
	(0.80)	(0.77)	(0.86)	(0.91)
Intercept	14.61***	26.70***	21.87***	30.50***
	(1.17)	(1.00)	(0.91)	(0.62)
Mean dep. variable	38.42	37.35	38.43	38.48
N	3,801,419	2,923,888	3,805,934	3,774,116
R^2	0.59	0.75	0.52	0.71
Fixed Effects	Fund-Year	Fund-Year and Fund-Firm	Institution-Year	Institution-Year and Institution-Firm

Table D.9. Analysis of ready-made customizers

Panel A presents summary statistics, at the fund level, split out by customization status: we restrict the sample to customizing funds and compare those with tailored policies and those with ready-made policies. Variable definitions are in Online Appendix C.2. Ideology scores are defined as the fund's fraction of votes in favor of proposals of a given type minus Glass Lewis's fraction of recommendations in favor of such proposals, aggregated to the ballot level; the methodology on their construction is described in Online Appendix C.1. To reduce noise, this methodology restricts the set of funds for which ideology scores are calculated to those that cast a sufficient number of votes on the corresponding types of proposals, which explains the lower sample size in samples involving those scores, especially for ES scores. Panel B presents regression estimations at the fund-ballot level, where we limit the sample to funds that are either non-customizers or have ready-made customization. The outcome variable is whether a given fund-ballot is manually submitted, expressed in percentage points. Standard errors are clustered at the fund and ballot level. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Panel A: Comparison between tailored and ready-made customizers

	Type	mean	sd	p25	p50	p75	count
Fund Total Stake Size ($mil)	Tailored	96.05	1046.25	0.38	2.88	25.44	19,606
	Ready-Made	73.09	353.57	2.23	9.73	36.50	347
Fund Mean Stake Size ($mil)	Tailored	1.94	12.01	0.03	0.14	0.85	19,606
	Ready-Made	1.12	3.70	0.05	0.22	0.75	347
Fund Number of Stakes	Tailored	50.42	135.92	10.50	27.00	45.50	19,606
	Ready-Made	93.25	194.01	22.50	56.33	105.29	347
Fund ES Score	Tailored	0.05	0.26	-0.08	0.00	0.07	6,206
	Ready-Made	0.39	0.34	0.00	0.45	0.71	164
Fund Governance Score	Tailored	-0.18	0.25	-0.31	-0.12	0.00	8,557
	Ready-Made	-0.07	0.18	-0.19	-0.00	0.00	229
Fund Mgmt Score	Tailored	0.14	0.18	0.00	0.10	0.27	16,144
	Ready-Made	-0.05	0.12	-0.13	-0.02	0.00	309

Panel B: Manual voting rates for ready-made customizers compared to non-customizers

Dep. Variable: Manual Submission	(1)	(2)	(3)	(4)	(5)	(6)
Ready-Made	-17.45***	-16.89***	-16.81***	-14.68***	-11.15***	-10.92***
	(1.31)	(1.57)	(1.97)	(1.90)	(1.63)	(1.63)
Log(Fund Number of Stakes)			-0.09			-1.04***
			(0.68)			(0.23)
Log(Fund Mean Stake Size)			1.30***			0.05
			(0.45)			(0.11)
Log(Institution Number of Stakes)			-5.44***			-0.12
			(0.88)			(1.02)
Log(Institution Mean Stake Size)			5.17***			1.26
			(1.77)			(1.26)
Constant	21.14***	21.06***	-37.75	20.69***	20.14***	6.30
	(1.22)	(1.11)	(31.50)	(0.47)	(0.29)	(21.23)
Mean dep. variable	18.33	18.34	18.34	18.33	18.34	18.34
N	935,995	932,778	932,778	935,991	932,774	932,774
R^2	0.04	0.32	0.40	0.59	0.76	0.76
Fixed Effects	Year	Meeting	Meeting	Year and Inst.	Meeting and Inst.	Meeting and Inst.

D.2 Difference-in-differences analysis of manual votes

In this section, we describe our use of a staggered-treatment difference-in-differences (DiD) design to estimate how a contentious meeting affects a fund's likelihood of manually submitting its votes.

In the main paper, we estimate two-way fixed-effects models that regress manual voting on indicators for four types of "contentious" meetings: (i) meetings in which ISS issued at least one recommendation against management, (ii) meetings in which Glass Lewis did so, (iii) special meetings, and (iv) meetings connected to activist campaigns. Here, we formalize that analysis using a stacked design, which addresses the limitations of two-way fixed-effects (TWFE) estimation with staggered treatment timing.

Identification and intuition. The basic intuition is straightforward. A firm's contentious meeting represents a discrete shock that increases the value of active decision-making at that firm for the funds that own it. If funds generally follow stable patterns of voting automation across their portfolios, then any within-fund, within-firm deviation in manual voting around the contentious meeting can plausibly be attributed to the meeting itself. Our design captures this deviation by comparing (i) the fund's manual voting for the same firm before the firm's contentious meeting and (ii) the fund's contemporaneous manual voting at other, untreated firms.

This structure relies on the standard difference-in-differences identifying assumptions. The first is parallel trends: in the absence of treatment, the change in manual voting at treated firms would have mirrored that at untreated firms. After absorbing fund-firm and fund-year fixed effects, this assumption implies that any remaining average change in manual voting at untreated firms provides an unbiased counterfactual for how treated firms would have evolved absent the event. The second is no anticipation: funds do not change their voting behavior at a firm before its contentious meeting in expectation of the event.

Both assumptions are plausible in our context. Contentious meetings – especially those involving an ISS or Glass Lewis disagreement – are not predictable far in advance. They typically reflect either the firm's agenda (for example, the proposals management puts forward for a given year or the presence of an activist campaign) or the proxy advisors' contemporaneous evaluation of those proposals. Funds learn proxy advisors' recommendations only shortly before the meeting date, leaving little time or reason to alter their prior-year voting behavior in anticipation. Likewise, because manual voting is a fund-specific operational decision (depending on internal systems and staffing), it is unlikely to vary systematically with unobserved firm-level shocks that also predict contention. These features make our setting well-suited to a difference-in-differences design.[2]

For each variable representing a contentious meeting, our estimates do not necessarily isolate the causal effect of that variable per se. For example, an increase in manual voting at meetings where ISS recommends against management need not reflect a direct response to ISS's recommendation. Instead, it may reflect funds' reactions to the underlying governance or

[2] To the extent that the no-anticipation assumption is violated, we would expect funds to increase their manual voting in advance of contentious meetings, which would bias our estimates downwards. In any event, the pre-trends in Online Appendix Figure D.3 show no evidence of such anticipation.

performance concerns that prompted ISS's opposition. In either case, we interpret the estimated effects as capturing investor responses to contentious meetings – that is, to the set of circumstances in which such contention arises.

Empirical implementation. For each of the four contentious-meeting variables, we define event time relative to the first treated year for each firm ($k = 0$). For a treated firm i, D_{im}^{k} equals one if meeting m occurs k years from the firm's first treatment year, and zero otherwise. For never-treated firms, $D_{im}^{k} = 0$ for all k and m.

Stacked DiD regressions. For every possible treatment year, we create a separate stack containing the firms first treated in that year and their corresponding control firms. We then append these stacks and estimate a single pooled regression of the form:

$$ManualVote_{im} = \sum_{k=-4}^{4} \beta_k D_m^k + \mu_{ij}^{s} + \gamma_{it}^{s} + \varepsilon_{im} ,$$

where the unit of observation is a fund-meeting pair. Each meeting m is associated with firm $j(m)$ and year $t(m)$. For simplicity, we omit the parentheses and index the firm as j and year as t. The terms μ_{ij}^{s} and γ_{it}^{s} denote fund-firm-stack and fund-year-stack fixed effects, respectively, and standard errors are two-way clustered at the fund and meeting levels. The omitted time period is $k = -1$, shown in figures as a baseline point at zero with zero standard error.

Two modeling choices merit note. First, the control group in each stack can include either (i) never-treated firms only or (ii) both never-treated and not-yet-treated firms – those whose contentious meeting occurs later in the sample. Second, we can restrict the sample to firms with at most one contentious meeting in the sample period or retain multi-treated firms by designating the first event as the treatment year. Our baseline in Figure D.3 and Table D.10 uses the first option in each pair – never-treated controls and once-treated firms – and we report the alternatives as robustness checks in Supplemental Appendix E.1.

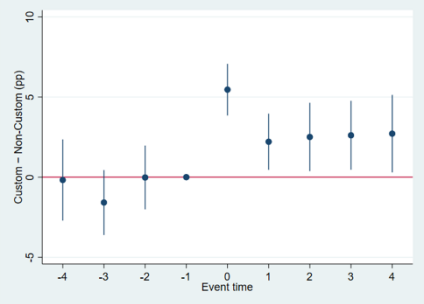
Results. Online Appendix Table D.10 and Online Appendix Figure D.3 present the results. The coefficients trace the dynamic response of manual voting around the event. In every specification, the pre-event coefficients are small and statistically indistinguishable from zero, indicating parallel pre-trends and no anticipatory effects. Manual voting rises sharply in the treatment year, consistent with a causal response to the event.

One question of potential interest is whether the effects of the contentious meeting linger following the contentious meeting. The baseline specification, which limits the sample to firms that have at most one contentious meeting of the given type, shows evidence of some lingering effects, suggesting that funds sustain higher attention toward firms that have previously encountered salient or contentious events. Unsurprisingly, Panels C and D in Supplemental Appendix E.1, which include firms that have multiple contentious meetings, show even more pronounced evidence of lingering effects after event time 0, presumably because the firm continues to experience contentious meetings.

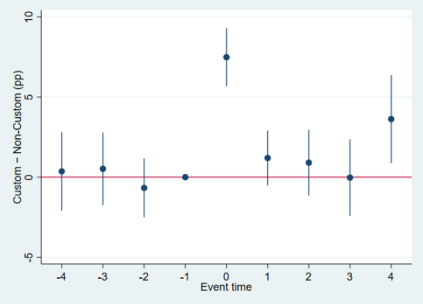
Figure D.3. Manual voting around contentious meetings

This figure plots coefficients from stacked event-time difference-in-differences regressions at the fund-ballot level. The dependent variable equals one if a fund manually casts its vote, expressed in percentage points. The four quadrants in each panel correspond to four definitions of contentious meetings: (a) ISS disagrees with management on at least one proposal, (b) Glass Lewis disagrees with management on at least one proposal, (c) special meetings, (d) activist-connected meetings. Data are divided into stacks, each consisting of firms first treated in a given year together with all control firms. All regressions include fund-year-stack and fund-firm-stack fixed effects, and standard errors are two-way clustered at the fund and ballot levels. The omitted period is $k = -1$, shown as a baseline point of zero. In the baseline specification, reported here, we limit the sample to never- or once-treated firms and restrict controls to never-treated firms. Alternative specifications are reported in Supplemental Appendix E.1.

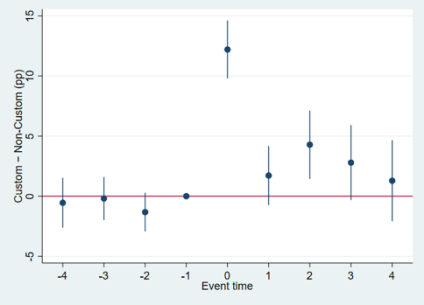
(a) ISS Disagrees with Management



(b) GL Disagrees with Management



(c) Special Meeting



(d) Activist-Connected Meeting

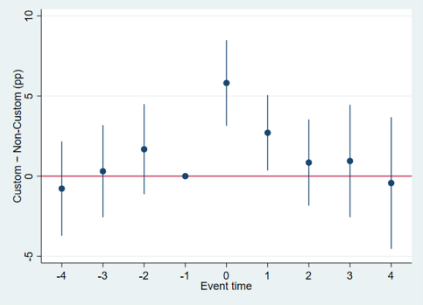


Table D.10. Stacked event-time difference-in-differences around contentious meetings

This table analyzes manual voting around contentious meetings, reporting coefficients from stacked event-time difference-in-differences regressions at the fund-ballot level. The dependent variable equals one if a fund manually casts its vote, expressed in percentage points. Columns correspond to four types of contentious meetings: (1) ISS disagrees with management on at least one proposal, (2) Glass Lewis disagrees with management on at least one proposal, (3) special meetings, and (4) activist-connected meetings. Data are divided into stacks, each consisting of firms first treated in a given year together with all control firms. All regressions include fund-year-stack and fund-firm-stack fixed effects, and standard errors are two-way clustered at the fund and ballot levels. The omitted period is $k = -1$, shown as a baseline point of zero. In the baseline specification, reported here, we limit the sample to never- or once-treated firms and restrict controls to never-treated firms. Alternative specifications are reported in Supplemental Appendix E.1. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Event Time	(1) ISS Disagrees with Management	(2) GL Disagrees with Management	(3) Special Meeting	(4) Activist-Connected Meeting
-4	-0.18	0.36	-0.55	-0.77
	(1.29)	(1.25)	(1.06)	(1.50)
-3	-1.58	0.52	-0.19	0.30
	(1.03)	(1.16)	(0.91)	(1.46)
-2	-0.02	-0.67	-1.32	1.68
	(1.02)	(0.94)	(0.82)	(1.43)
-1 (baseline)	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)
0	5.46***	7.48***	12.20***	5.81***
	(0.82)	(0.92)	(1.23)	(1.36)
1	2.21**	1.20	1.72	2.71**
	(0.89)	(0.87)	(1.25)	(1.20)
2	2.51**	0.90	4.28***	0.85
	(1.09)	(1.04)	(1.45)	(1.37)
3	2.61**	-0.03	2.79*	0.94
	(1.10)	(1.22)	(1.59)	(1.79)
4	2.71**	3.62***	1.29	-0.43
	(1.23)	(1.40)	(1.72)	(2.09)
Constant	28.31***	25.87***	34.53***	31.85***
	(0.21)	(0.23)	(0.11)	(0.10)
Mean dep. variable	28.70	26.32	34.60	31.89
N	2,885,358	1,603,723	17,372,321	15,898,812
R^2	0.80	0.81	0.77	0.78
Fixed Effects	Fund-Year-Stack and Fund-Firm-Stack	Fund-Year-Stack and Fund-Firm-Stack	Fund-Year-Stack and Fund-Firm-Stack	Fund-Year-Stack and Fund-Firm-Stack

The Supplemental Appendix, containing Sections E.1, E.2, E.3, E.4, and F, is available here. It is not essential for understanding the paper and is provided for readers interested in additional details.

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