Exit or Voice? Divestment, Activism, and Corporate Social Responsibility

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Abstract

This paper investigates the effectiveness of shareholder strategies–divestment threats (*exit*) and active engagement (*voice*)–in driving socially responsible corporate behavior and the conditions under which they succeed. Using a novel classification of U.S. mutual funds based on their portfolio holdings and votes, I find that voice is generally effective, particularly when board directors are up for reelection. The exit strategy, which relies on the threat of stock price depreciation, is effective primarily in firms with high CEO wealth-performance sensitivity. These results suggest that the career concerns of management drive pro-social change when shareholders demand it.

Keywords: exit vs voice, divestment, activism, corporate social responsibility, career concerns

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1 Introduction

More than 5,000 institutional investors, representing $128 trillion in assets under management, have signed the UN's Principles for Responsible Investments.[1] The rising trend of responsible investing has spurred debates about the power of shareholders to influence corporate behavior. Institutional investors rely on two strategies: divestment threats (*exit*, following Hirschman, 1970) and active engagement (*voice*). But under what conditions do these strategies lead to meaningful change in corporate social responsibility (CSR)?

This paper investigates the effectiveness of socially motivated exit and voice pressures, focusing on their ability to leverage the financial and career concerns of firm management to drive pro-social behavior. This agency channel provides an alternative to the cost-of-capital mechanism typically associated with exit strategies and offers a nuanced perspective on recent findings suggesting their ineffectiveness (e.g., Berk and van Binsbergen, 2024, Hartzmark and Shue, 2022). It could also explain why some ESG-motivated activist campaigns are successful (e.g., Naaraayanan *et al.*, 2021). Yet, an empirical evaluation of these mechanisms faces at least three challenges: *i)* measuring the exit and voice pressures faced by firms, *ii)* finding exogenous variations in these pressures, and *iii)* finding a proxy for firms' CSR efforts.

This paper makes two main contributions. First, it introduces a novel, dynamic classification of U.S. mutual funds into exit, voice, both, or none. This classification, based on quarterly data for nearly 2,000 funds from 2013 to 2020, enables the construction of firm-level measures of exit and voice pressures. Then, by leveraging large redemptions as exogenous shocks to these pressures, the paper provides a causal framework to *infer* funds' influence on CSR efforts, using different proxies.[2] The second contribution is to provide causal evidence on how personal incentives of management mediate the effectiveness of these strategies. It highlights a critical channel through which shareholders' non-pecuniary preferences shape firms' behavior. This paper thus contributes to the debate on the effectiveness of ESG-motivated investing and offers new insights into aligning corporate behavior with social goals.

I first identify *exit funds* using portfolio holdings data. I uncover funds' preference for pro-social stocks by estimating their demand function (Koijen and Yogo, 2019, Koijen *et al.*, 2023). Namely, in each quarter, I regress the weight of each stock in a fund's portfolio on its most important financial characteristics and its (industry adjusted) Environmental, Social, and

[1] UN PRI's September 2024 Signatory update.

[2] I focus on the *social* dimension of firms' externalities as most of the ESG-related votes that reflect disagreement among shareholders and with the management fall into the "S" category. Moreover, funds that divest from firms with low environmental standards generally divest from whole industries (e.g., "Fossil Fuel Free" funds) rather than individual stocks. Finally, firms' pro-social efforts are more comparable across corporations and industries than their environmental efforts.

Governance scores. The coefficient on Social score (β_S) indicates whether, all else equal, a fund invests more in stocks with a higher level of CSR. A non-index fund with a positive β_S in a given quarter is classified as an exit fund.[3] This classification aligns with name-based fund classifications and predicts actual divestment behavior. For every firm in every quarter, I build a measure of the *threat of exit* that the firm faces from its fund shareholders, as the share of its equity owned by exit funds.

I identify *voice funds* based on their voting behavior at the Annual General Meetings (AGMs) of firms in their portfolios. While an imperfect proxy, I provide evidence that votes not only matter to corporate decision-makers (Bach and Metzger, 2019, Aggarwal *et al.*, 2019) but also serve as a reflection of behind-the-scenes engagement. Using data from the Securities and Exchange Commission's website, I focus on S-related shareholder-sponsored resolutions that are opposed by management. A fund's voice score for a given quarter is defined as the percentage of times its fund company voted in favor of these resolutions during the previous four quarters. I construct a firm-level measure of voice pressure as the share of equity owned by funds with a voice score exceeding 85% (i.e., above the percentage of favorable recommendations from proxy advisors for the same resolutions). This classification aligns well with funds' communications: voice funds are three times more likely to reference both engagement and ESG-related terms in their prospectuses.

Next, I develop a portable framework to evaluate funds' influence on firm policies. Since shareholder composition is endogenous, I causally identify the impact of exit and voice strategies on CSR efforts by leveraging plausibly exogenous changes in funds' influence caused by large fund redemptions (Coval and Stafford, 2007). The idea is that when funds are forced to fire-sell assets, their ability to exert exit or voice pressure diminishes. For each firm and quarter, I calculate the hypothetical percentage of equity sold by exit and voice funds due to large redemptions, assuming proportional liquidation. First, using these shocks as instruments in a shift-share framework (Borusyak *et al.*, 2022), I estimate the causal impact of changes in firms' exposure to exit and voice funds on their behavior. Then, I employ these shocks in an event study design.

I measure firms' CSR efforts using different proxies. Among them, my preferred measure is based on recent misbehaviors reported in the media (*controversies*), because they directly link managerial incentives to CSR efforts. Indeed, controversies trigger strong reactions from investors, in the form of negative abnormal returns and managerial turnover. When controversies occur, exit funds–but not others–divest, and managerial turnover is concentrated among firms with high voice ownership. It is precisely the fear of such punishments that

[3] Index funds, by definition, cannot use the threat of exit.

may prompt managers to act in response to exit and voice pressures. Additionally, they are observable at high frequency and encompass all dimensions of CSR, including intangible aspects like corporate culture.

My first result is that, in general, only voice is effective at promoting pro-social efforts. When voice funds are forced to sell 1% of a firm's equity, the probability that the firm faces a controversy over the next year increases by almost 30%. This result is consistent with the theoretical prediction of Broccardo *et al.* (2022), aligns with investors' perception (Krueger *et al.*, 2020), and is robust to multiple specifications and alternative classifications of exit and voice funds.[4] The result is not driven by a change in media coverage or marketing efforts: neither changes in exit or voice pressures affect the number of non-ESG news, the report of old misconduct, or advertising expenses. It also extends to alternative measures of controversies such as NGO campaigns, and positive measures of CSR such as ESG scores, charitable donations, board gender diversity, and employees' satisfaction.

My second finding is that the unconditional null effect of exit hides some interesting heterogeneity. I find that firms with high CEO wealth-performance sensitivity (WPS) respond to the threat of exit. However, even among firms in the top quartile of the WPS distribution, the effect of exit is smaller in magnitude than the effect of voice. This result adds nuance to recent literature suggesting that pro-social divestment is ineffective: the personal exposure of executives to short-term stock price fluctuations can serve as an effective trigger for action.

My third result shows that firms respond more to voice pressure when board directors are seeking reelection. Exploiting differences in board structures and exogenous variations in board renewal rates, I show that staggered boards—where directors serve overlapping three-year terms—make firms significantly less responsive to voice. The effect is concentrated in years when larger board classes are reelected, further establishing causality. While some tests suggest that exit could also be more effective in such cases, the effect of voice is consistently stronger: while directors might care about their firm's stock price during reelection years, directly threatening their reelection prospects proves to be the more effective strategy.

To further alleviate concerns regarding the exogeneity of redemptions, I exploit a salient natural experiment where the motivation behind large fund redemptions can be identified. In 2018, the French investment bank Natixis reported more than USD 300 million in non-recurring losses due to derivative positions that bet on the rise of South Korea's main stock index. As the index fell from June to December 2018, Natixis cut its US equity fund holdings by almost 50%. I exploit the heterogeneity in funds' exposure to Natixis before the losses as a shock to their influence. Firms with high exposure to Natixis-owned voice funds and a non-staggered

[4]This includes alternative *exit* classifications using ESG scores from three different providers.

board saw a subsequent increase in controversies.

Overall, this paper develops and applies a portable framework to identify funds' preferences and their influence on firm policies. Taken together, my results indicate that executives and directors respond to their shareholders' demand for pro-sociality only when they have personal incentives to do so. This conclusion sheds light on a crucial mechanism leading firms to maximize shareholder welfare, rather than just profits (Hart and Zingales, 2017).

Literature. This paper contributes to the literature on how shareholders influence firms' CSR decisions through managerial pressure and confirms the theoretical predictions of Broccardo *et al.* (2022). While existing research explores investors' motivations for pro-social mandates, I study exit and voice within a unified framework (Kölbel *et al.*, 2020).[5] This approach departs from traditional corporate governance literature by addressing CSR-specific dynamics. For instance, Admati and Pfleiderer (2009) highlight that a blockholder's exit triggers both immediate price impacts and market signaling, but in CSR contexts, indifferent or adverse investors may offset the effect of divestment. Similarly, the cost-bearing nature of pro-social activism raises questions about its viability, where traditional engagement is often motivated by increased firm value (Lewellen and Lewellen, 2022).

This paper examines the mechanisms through which exit and voice shape CSR efforts, building on studies of stock liquidity (Edmans *et al.*, 2013), executive compensation (Edmans, 2009, Bharath *et al.*, 2013), and strategic complementarities or free-riding among shareholders (Edmans and Manso, 2011, Brav *et al.*, 2021, Kakhbod *et al.*, 2023). The voice mechanism aligns with findings on successful ESG activism (Naaraayanan *et al.*, 2021, Hsu *et al.*, 2023) and career concerns in driving corporate change (Dewatripont *et al.*, 1999, Fos and Tsoutsoura, 2014). Unlike reputation-based explanations (Dimson *et al.*, 2015), this work emphasizes managerial incentives as the primary channel for pro-social change.

To classify funds, I adapt the "demand system approach" developed in Koijen and Yogo (2019) and Koijen *et al.* (2023), incorporating ESG scores to capture tilting and divestment behaviors (Edmans *et al.*, 2022, Gibson *et al.*, 2020).[6] For voice, I use publicly available mutual fund votes, confirming prior findings that funds often diverge from proxy advisors (Iliev and Lowry, 2015) and exhibit limited pro-social tendencies (Bolton *et al.*, 2020).

[5] Motivations include image concerns (Fioretti *et al.*, 2023), value alignment (Pástor *et al.*, 2021, Bonnefon *et al.*, 2025), altruism (Barber *et al.*, 2021, Green and Roth, Forthcoming, Fioretti, 2022, Oehmke and Opp, 2024), a mix of social and financial concerns (Dyck *et al.*, 2019), and experience of social irresponsibility (von Beschwitz *et al.*, 2022).

[6] I refrain from using mutual funds' names to identify exit funds, as mutual fund misclassification is not unheard of (Chen *et al.*, 2021). Still, Appendix B explores the relationship between the main measure of exit and a name-based fund classification.

The identification strategy leverages mutual fund redemptions, drawing on foundational work on fire sales (Coval and Stafford, 2007, Edmans *et al.*, 2012). Fire sales have been extensively used to study corporate decisions and activism (Norli *et al.*, 2015).[7] Closest to this study, Heath *et al.* (2023) find no CSR improvement from large inflows to (exit) SRI funds, while Green and Vallee (Forthcoming) examine coal industry lending bans in a shift-share setting.

Outline. This paper proceeds as follows. Section 2 develops the classification of U.S. mutual funds along the exit and voice dimensions. Section 3 describes the identification strategy based on large redemptions. Section 4 evaluates the impact of exit and voice on firms' CSR efforts and explores the conditions under which each strategy is most impactful. Section 5 discusses the robustness of the results, and Section 6 concludes.

2 Sample selection, variables and summary statistics

Starting from the whole universe of listed U.S. firms and mutual funds, this section describes the sample selection procedure, data sources, and the measures of exit and voice at the fund and firm level.

2.1 Data and sample selection

Funds. Data on U.S. mutual funds and their portfolio holdings come from the *Center for Research in Security Prices* (CRSP), at the quarterly frequency. I exclude all funds specialized in one sector (using their Lipper objective code) as large redemptions from these funds could plausibly be related to controversies in a group of firms (for instance, in the textile industry). I keep funds with at least 80% of their Total Net Assets (TNA) invested in U.S. stocks, and that have at least 20 strictly positive holdings. The final sample of 1,995 U.S. mutual funds owns on average 20% of the firms in the sample (Table 1).

Firms. Data on firm characteristics and ESG scores are from Refinitiv and retrieved at the quarterly frequency. I start from the entire universe of US-listed and US-headquartered firms in Refinitiv from 2010 to 2020 and exclude all firms with missing stock prices or number of shares. From that sample of 2,599 firms, I select those with at least 1% of mutual fund ownership in all

[7] Recent studies have questioned the relevance of these shocks to study non-fundamental variations in stock prices, as they are correlated with contemporaneous returns (Wardlaw, 2020), and lead to selection in the fire sales (Berger, 2021). I believe that they are not a threat to my main results as I do not use price or return variables as outcome variables or in the instrument, and I show the robustness of my main result on voice when using only pure index funds, for which there should be no selection bias in the fire sales. I also show that selection bias in the fire sales is unlikely to drive the main result for exit in Appendix B.

quarters, and an average of at least 10% over the period. The final sample comprises 1,910 firms. Yearly accounting data, as well as information on board structure, and CEO compensation, are from Refinitiv. From Audit Analytics I recover the dates of directors' terms as well as the reason for ending their term. CEO wealth-performance sensitivity data comes from Alex Edmans' website (Edmans *et al.*, 2009).

Controversies. My main measure of a firm's CSR efforts is a dummy indicating the occurrence of a social controversy in the media, constructed using RavenPack's news data. That measure is supposed to capture both firms' observable and unobservable CSR efforts and covers all dimensions of CSR. Starting from the entire universe of news about a firm, I select S-related news reporting a recent misbehavior. Examples of such news include racial and gender discrimination, accusations or legal pursuit for fraud, anti-competitive practices, or employee mistreatment. Distinguishing between the date of the article and the date of the controversial behavior is crucial: for instance, a 2013 article reporting that Abercrombie and Fitch was found guilty of discrimination when they fired an employee for wearing a hijab in 2011 does not reflect Abercrombie's CSR efforts in 2013 (EEOC, 2013). To that end, I follow RavenPack's guidelines (Ravenpack, 2022) to identify controversies about an event that is less than 90 days old. That leaves a sample of more than 11,000 controversies reflecting recent misbehavior (406 firms in the sample are concerned). As the probability of facing a controversy in a given quarter for a firm is low (2.5%), I focus on the occurrence of controversies, rather than their count. Three examples of social controversies can be found in Figure 1, regarding Costco, Starbucks, and Google on topics related to human rights, racial discrimination, and unethical lobbying.

There are several advantages to using public controversies as the main dependent variable. First, they are publicly observed, easy to measure, and available at a high frequency. For these reasons, they matter to investors and managers of the firms. Using controversies allows me to closely link a change in the pro-social reputation of a firm and the personal incentives of executives and directors. I find that a firm facing a public controversy suffers from a 1% *negative* abnormal returns over the following 10 days (Figure 2, top panel), and it increases the probability of a director or officer resignation by almost 50% over the following two quarters (Figure 2, bottom panel).[8] Second, controversies are harder to manipulate than ESG scores as they do not rely on self-disclosed data, and also reflect dimensions of CSR that are harder

[8]In addition to a decrease in valuation, (Appendix Figure A1), creditors and consumers also react, as controversies trigger a 2pp increase in average interest rate (Appendix Figure A2) and a 3% decrease in sales in the quarter of the controversy (Appendix Figure A3).

to measure, such as corporate culture (Guiso *et al.*, 2015).[9] ESG scores thus decrease after a controversy by 3pp (11%) over two years (Appendix Figure A4), but hardly predict them.

Other CSR measures. As an alternative measure of controversy, I use data on NGO campaigns. The dataset comes from Sigwatch (Koenig, 2017, Hatte and Koenig, 2020), a European consultancy tracking and analyzing NGO campaigns around the world. A campaign is defined as an event launched by an NGO against one or several companies on a given topic. The available dataset indicates the date on which a campaign has been made public on an NGO's website, the company(ies) targeted, the topic of the campaign (e.g., "GMOs in food"), a measure of the sentiment of the campaign toward the firm(s) from the most negative tone (-2) to the most positive (+2), and the prominence of the firm in the report (whether the firm is mentioned in the headline of the report, elsewhere in the communication, etc). I keep S-related campaigns targeting only one firm listed and headquartered in the U.S., with the most negative tone (*sentiment* = −2) and in which the firm is mentioned in the headline (*prominence* = 4).

I also gather alternative, positive measures of CSR from Refinitiv (formerly Asset4): firms' E, S, and G scores, donations to revenue, and percentage of females sitting on the board. As a measure of board gender diversity, I use a dummy indicating the absence of female directors (which is the case for 14% of the observations in the sample).[10] Finally, I complement the analysis with company reviews from Glassdoor: I collect each review's overall rating of the firm, whether the employee recommends working at the firm, the rating on the firm's *Culture & Values*, and the CEO approval rating.

2.2 Measuring exit

An exit fund is defined as a fund that, all else equal, invests more in companies with high social standards. A company facing exit pressure might be incentivized to have a more socially responsible behavior, as any decrease in ESG score or any controversy may lead to large share sales from them.

Exit classification at the fund level. The classification relies on demand function estimation, extending the approach of Koijen and Yogo (2019) and Koijen *et al.* (2023) to account for ESG

[9] A recent literature investigates how firms manipulate their scoring: Akey *et al.* (2021) show that firms increase their charitable donations following data breach controversies to rebuild their reputation and increase their Social score, and Duchin *et al.* (2024) show that after an environmental controversy, firms sell their polluting plants to other firms in their supply chain, and increase their Environmental score without decreasing overall pollution.

[10] One could expect the threat of exit to be less effective to motivate positive changes, rather than discouraging bad actions (Admati and Pfleiderer, 2009).

considerations. Funds decide their portfolio allocation in a quarter taking as given stocks' characteristics: Log Market Equity, Log Book Equity, Profitability, Investment, Dividends-to-Book Equity, and Market Beta. The investable universe comprises 2,950 North American firms with non-missing stock price and number of shares, regardless of their mutual fund ownership. The choice of characteristics is motivated by the Five-Factor model of Fama and French (2015) and their construction follows Koijen and Yogo (2019). Return variables (momentum, long-term reversal) are not explicitly included as they are already absorbed by these characteristics (Hou *et al.*, 2015). Any stock with missing baseline characteristics in a given quarter or not listed in the U.S. is considered an "outside asset". I include stocks' Environmental, Social, and Governance scores (ranging from 0 to 100) as additional characteristics from Refinitiv.[11] Refinitiv's ESG scores are based on companies' filings and Annual Reports, which give a slowly changing measure of a firm's CSR, as they are typically reviewed once a year. For stocks with missing ESG scores, I attribute them a 0 because of information asymmetry, in the spirit of Noh *et al.* (2022). While ESG scores have recently been criticized on many dimensions (e.g., Berg *et al.*, 2022), what matters here is not that they correctly measure a firm's pro-sociality, but rather that investors use them in their portfolio allocation decisions. I define the investment universe for each investor as the set of stocks currently held or ever held in the previous 11 quarters. The typical fund has 255 stocks in its investment universe, against 147 in its current portfolio. For each fund in each quarter, I construct an instrument for the market capitalization of each stock based on the investment universe and the AUM of other investors. For each investor and each quarter, I estimate the following characteristic-based demand function, using all stocks in the investment universe (including stocks that are not currently held):

$$\frac{w_{i,t}(n)}{w_{i,t}(0)} = \exp\{\alpha_{i,t} + \beta_{1,i,t} \times \hat{\mathrm{m}}_{i,t}(n) + \beta'_{2,i,t} \times \mathrm{x}_t(n) + \beta_{S,i,t} \times \text{ Social score}_t(n)\}\epsilon_{i,t}(n), \tag{1}$$

where $w_{i,t}(n)$ is the weight of asset n in fund i portfolio at time t, and $w_{i,t}(0)$ is the weight of the outside asset, $\hat{m}_{i,t}(n)$ is the instrument for asset n's market capitalization for investor i at time t, and $x_t(n)$ are the other characteristics of the stock. $\beta_{S,i,t}$ is the elasticity of demand to the Social score.

For investors with more than 750 strictly positive holdings in the cross-section, Equation 1 can be estimated directly. For investors with less than 750 holdings, I estimate their demand function using a ridge regression, with the (equal-weighted) average of large investors' coefficients as target coefficients, and a penalty of $\frac{120}{N_{i,t}^{0.7}}$, where $N_{i,t}$ is the number of stocks in the

[11] In Appendix B.1, I also run this estimation using MSCI and Sustainalytics ESG scores.

investment universe of fund i in quarter t. In any case, I make sure that $\beta_{1,i,t}$ is strictly less than 1, in line with the empirical evidence that demand functions are downward sloping (Gabaix and Koijen, 2021).[12] As this estimation also includes zero holdings, it takes into account stocks from which the fund exited in the past 11 quarters.

The coefficient $\beta_{S,i,t}$ is of particular interest for this study. It is interpreted as the change in demand of a specific fund in a given quarter when the Social score of a firm changes by 1, and it shows, all else equal, whether a fund invests more in firms with higher Social scores. It is relatively stable–but increasing on average–over time: the coefficient of correlation between $\beta_{S,i,t}$ and $\beta_{S,i,t-1}$ is 73% (p-value < 1%). I then define as an exit fund in quarter t any non-index fund with:

$$\beta_{S,i,t} > 0.$$

Exit pressure at the firm level. In each quarter, I compute the threat of exit faced by firm n from its mutual fund shareholders as

$$\text{Exit}_{n,t} = \sum_i \text{Ownership}_{i,t,n} \times \mathbf{1} \cdot (\underbrace{\text{Exit Fund}_{i,t}}_{\beta_{S,i,t}>0 \text{ \& No index}})$$

where $\text{Ownership}_{i,t,n}$ is the share of equity of firm n owned by fund i in quarter t.

2.3 Measuring voice

Shareholder ESG activism encompasses observable actions (such as votes or activist campaigns declared through 13D forms) as well as unobservable actions (e.g., calls with managers). In this study, I use observable actions to proxy for both observable and non-observable ones. An activist fund is defined as a fund that tends to vote in favor of ESG-related shareholder proposals at Annual General Meetings when management recommends voting against them. Votes are direct observations and an objective measure of an investor's willingness to implement pro-social measures at firms in its portfolio, and are available at high frequency, at all firms and all mutual funds through the N-PX forms filed at the SEC. Moreover, mutual funds are legally required to vote, which allows me to ignore considerations related to selection into voting (Cvijanovic *et al.*, 2020)

Voting data. I gather all the N-PX forms filed between 2011 and 2020, for all mutual funds. Not all mutual funds use the same reporting format, and some investors even change the

[12] I use the algorithm described in Koijen *et al.* (2023). For small funds, when the algorithm does not converge after 200 iterations, I estimate a linear version of equation 1, excluding the zero holdings.

format of their form from one year to another (differences in format can be due to differences in proxy advisors, see Shu, 2024). I could process the most widely used formats, and I estimate that my sample covers 90% of the votes reported to the SEC during the period. Moreover, I can only observe votes at the CIK level (a typical CIK covers 6 funds in my sample). I then assume that all funds within CIK vote similarly on ESG-related issues.[13] For each CIK each year, I am able to collect: the name of the company at which the vote takes place, its Ticker and CUSIP, the date and type (Annual, Special) of the meeting, the topic of the vote, the recommendation of management (for/against/withhold), the vote of the funds in a given CIK (for/against/withhold) and who sponsored the proposal (management or shareholder). The overall sample of shareholder proposals covers more than 12,000 meetings, held by almost 3,000 firms in 60 countries, from 2009 to 2020.

Keeping shareholder proposals for which management recommends voting "against" ensures that shareholders are pressuring them to adopt pro-social measures.[14] I identify whether each proposal is related to ESG using keywords. Those include, for instance, "gender pay gap", "human rights", and "internet privacy" for the "S" category.[15] I find that 32% of shareholder proposals are ESG related, most of them falling into the "S" category. The share of ESG proposals among shareholder proposals is increasing over time (Appendix Figure A5).

Fund voice. In each quarter, I compute a fund's voice score $V_{i,t}$ as the percentage of times the fund's company has voted in favor of the selected proposals over the past year.[16] Funds vote on average 53% of the time in favor of S-related shareholder proposals opposed by the management, increasing from 45% in 2013 to almost 60% in 2020. However, there exists a great heterogeneity in the measure: most funds vote always "for" or always "against" the proposals, suggesting that funds have a very strong stance about them. A fund's voice score is stable over time: there is a 0.93 coefficient of correlation between a fund's last quarter score and its current score (p-value < 1%). I define as an activist fund in quarter t a fund with a $V_{i,t}$ greater than 85%, which is above the average "for" recommendation from ISS and Glass Lewis on the same set of proposals. Therefore, a voice fund is any fund that votes more than proxy advisors in favor of pro-social resolutions at the AGMs of firms in its portfolio.

[13] I find that when several funds in the same CIK vote on the same proposal, they all vote exactly the same more than 90% of the time.

[14] Keeping proposals not opposed by management does not change the classification materially (Appendix E).

[15] The full list of keywords can be found in Appendix C.

[16] This paper does not consider the outcomes of the votes, as shareholder proposals generally fail (Bach and Metzger, 2019), and only half of passed CSR resolutions are actually implemented afterward (Flammer, 2015). I also do not look at actual directors' elections, as votes against directors are rarely motivated by pro-social considerations (Yi, 2021), and activism may rely on unobserved communications (Levit, 2019) that push directors to resign before the end of their term.

An illustration of the process can be found in Appendix Figure A6.

Voice pressure at the firm level. I measure the voice pressure from mutual fund shareholders at firm n in quarter t as:

$$\text{Voice}_{n,t} = \sum_i \text{Ownership}_{n,i} \times \mathbf{1} \cdot (\underbrace{\text{Voice Fund}_{i,t}}_{\%_{i,t}>85\%}).$$

2.4 Validation

The fund classification exhibits coherent patterns: the share of exit funds is rising over time (Bolton and Kacperczyk, 2021, **?**), there are more exit funds than voice funds, and the share of funds classified as both exit and voice at the same time is low (7%).[17] The last point can be explained by the fact that those two groups target different companies: larger, cheaper, less socially responsible, and less liquid firms tend to face more voice pressure than exit pressure (Appendix Table A1). I interpret these results as a sign that voice funds tend to target firms with greater media attention, that are cheaper to attack, and that have more room for improvement. It also highlights the importance of liquidity for exit funds, in line with previous literature (e.g., Edmans *et al.*, 2013).

Correlation of the exit classification with a name-based fund classification. In Appendix B, I show that funds with an explicit Social focus (with names such as "Social Choice" or "Socially Screened") are significantly more likely to be exit funds. I also show that being an S-labelled fund predicts a significantly higher β_S, but not any other β from regression 1, including β_E and β_G.

Exit classification and divestment behavior. I investigate whether exit funds are more likely to reduce their investment in stocks facing a controversy by conducting an event study on the share of equity owned by exit and non-exit funds surrounding the publication of a controversy. To address potential endogeneity between the exit classification and the controversy, I fix the exit classification at $t-1$ for every controversy faced by a firm n at time t. The ownership level of exit funds in each quarter is thus defined as the share of equity owned in that quarter by funds classified as exit as of $t-1$.

The results of the event study are presented in Figure 3. The top panel illustrates the share of ownership held by exit funds around a controversy. From time t onward, the coefficients are negative, indicating that exit funds sell 0.15% of the firm's equity following a controversy, which

[17] Appendix Figure A7 illustrates these patterns.

corresponds to 7.5% of their position. This divestment trend continues, with the coefficients remaining negative and significant throughout the year after the controversy, ultimately resulting in a cumulative reduction of nearly 20% in the share of equity owned by exit funds.

In contrast, the bottom panel displays the estimated coefficients for the same analysis conducted on non-exit funds. None of these coefficients are statistically significant, underscoring the distinct behavior of exit funds. These findings demonstrate that the exit classification effectively captures the divestment behavior of funds in response to strong negative CSR signals about a firm.

Evidence of voice in funds' communication. I analyze how voice funds communicate compared to others. Using funds' "Risk/Return Summary Prospectus" filed at the SEC, I analyze their "Strategy Narrative" text block, in which funds can describe their overall strategy. I look for voice-related keywords (e.g., "engagement", "shareholder proposal") and ESG-related keywords (e.g., "social", "ESG") and analyze their occurrence and intensity according to the fund's classification. Appendix Table A2 shows that voice funds are 100% more likely to use voice-related or ESG-related words, and 235% times more likely to use *both* types of words at the same time, relative to other funds.[18]

Voice classification and activist behavior. Do firms with higher voice pressure face a greater risk of director resignation upon the occurrence of a controversy? To address this question, I conduct the same event study described in the bottom panel of Figure 2, focusing on two sub-samples: firms with above-median voice pressure in the quarter preceding the controversy and firms with below-median voice pressure.

Panel (a) of Figure 4 presents the results. At firms with high voice pressure, the probability of at least one director resignation during the quarter of the controversy increases by 11pp (an 85% increase). In contrast, firms with below-median voice pressure do not experience a significant change in resignation rates following a controversy.

To ensure this effect is not merely driven by overall mutual fund ownership, I repeat the analysis using the share of equity held by voice mutual funds normalized by total fund ownership (Panel (b) of Figure 4). These findings suggest that the pressure exerted by voice funds significantly influences directors' career outcomes when their firms face controversies.

[18]For instance, Boston Common's voice-classified funds stated in 2020 that they "use [their] voice as a shareowner to raise E, S, and G issues with the management of select portfolio companies through a variety of channels, [including] engaging in dialogue with management, participating in shareholder proposal filings, voting proxies in accordance with [their] proxy voting guidelines, and participating in the annual shareholder meeting process."

3 Empirical strategy

I model the occurrence of controversies about firm n as resulting from its exposure to exit and voice pressures in the past quarter, time-invariant firm-specific characteristics and time-varying common characteristics:

$$\overbrace{\text{Controversy}_{n,t}}^{\text{Proxy for efforts at } t-1} = \text{Exit}_{n,t-1} + \text{Voice}_{n,t-1} + \tilde{\delta}_t + \alpha_n + \tilde{u}_{n,t}.$$

As a firm's CSR efforts and its shareholder composition are endogenous, this section details two specifications based on exogenous changes in exit and voice.

3.1 Exogenous variations in exit and voice pressures

To study the impact of voice and exit on firms' behavior, one needs to find changes in firms' exposure to exit and voice unrelated to the change in their anti-social behavior. To that end, I use large redemptions from mutual funds in the spirit of Edmans *et al.* (2012). Variables construction in this subsection follows Dessaint *et al.* (2019). Using CRSP data, I compute quarterly outflows from funds as

$$\text{Flows}_{i,t} = \frac{\text{TNA}_{i,t} - \text{TNA}_{i,t-1} \times (1 + \text{Return}_{i,t})}{\text{TNA}_{i,t-1}}$$

where $\text{Return}_{i,t}$ is computed as the compounded monthly returns of fund i in quarter t. For all mutual funds for which $\text{Flows}_{i,t} < -0.05$, I compute the *hypothetical* sale of asset n by fund i as

$$MFHS_{n,i,t} = \text{Flows}_{i,t} \times \text{Ownership}_{n,i,t-1}.$$

The idea is that when a fund experiences sudden large outflows, it has to liquidate its assets quickly. As the *actual* sales of the fund might be related to firms' CSR, I rely on its *hypothetical* sales, assuming proportional liquidation. That leads me to compute the *hypothetical* change in exposure to funds' exit and voice due to large redemptions, as

$$\begin{cases} Z^{\text{Exit}}_{n,t} = \sum_i MFHS_{n,i,t} \times \mathbf{1} \cdot (\text{Exit Fund}_{i,t-1}) \\ Z^{\text{Voice}}_{n,t} = \sum_i MFHS_{n,i,t} \times \mathbf{1} \cdot (\text{Voice Fund}_{i,t-1}) \end{cases}$$

Importantly, neither $Z^{\text{Exit}}_{n,t}$ nor $Z^{\text{Voice}}_{n,t}$ can be predicted by contemporaneous or past controversies (Appendix Table A3), confirming their exogeneity from the dependent variable. Additionally,

Appendix Figure A8 shows that large redemptions for exit or voice funds are highly correlated with those of other funds, further confirming their exogeneity.

3.2 IV specification

Starting from Equation 3, I remove the time-invariant characteristics by considering the change in the occurrence of controversies over two periods:

$$\begin{aligned}\text{Controversy}_{n,t+2} - \text{Controversy}_{n,t} = \beta_{\text{Exit}} \overbrace{(\text{Exit}_{n,t+1} - \text{Exit}_{n,t-1})}^{\text{Instrumented by } Z^{\text{Exit}}_{n,t}} \\ + \beta_{\text{Voice}} \underbrace{(\text{Voice}_{n,t+1} - \text{Voice}_{n,t-1})}_{\text{Instrumented by } Z^{\text{Voice}}_{n,t}} + \delta_{t+2} + u_{n,t+2},\end{aligned} \tag{2}$$

where the two-period window is optimally chosen based on funds' behavior following large redemptions (Appendix D). Indeed, funds sell in priority their cash holdings over their stocks (Chernenko and Sunderam, 2016): when facing large redemptions in period t, fire sales typically last up to the beginning of period $t+1$. The change in exit and voice thus materializes at the end of period $t+1$, determining the firm's behavior in that same period, leading to fewer or more controversies in $t+2$. Finally, in the spirit of shift-share instruments (Borusyak *et al.*, 2022), I instrument the change in exit and voice over three periods by $Z^{\text{Exit}}_{n,t}$ and $Z^{\text{Voice}}_{n,t}$.

3.3 Event-study specification

Even though the shocks are on average small, they exhibit large variance (their coefficient of variation is 2.25 and 3.6, respectively). This second specification leverages the most extreme shocks to estimate the effects of exit and voice pressures on firms' pro-social efforts. Additionally, not all CSR measures will react at time $t+1$ to a change in behavior at time t: Refinitiv ESG scores, for instance, are updated yearly. Therefore, the timing of the impact of a change in exit or voice on the measure is not straightforward.

I study separately the influence of exit and voice by considering the most negative $Z^{\text{Exit}}_{n,t}$ and $Z^{\text{Voice}}_{n,t}$ as shocks in an event-study specification. I define as a shock any $Z^{X}_{n,t}$ smaller than $\bar{Z}^{X}_{n,t} - 2\sigma(\bar{Z}^{X}_{n,t})$, where $\bar{Z}^{X}_{n,t}$ is the sample average shock and $\sigma(\bar{Z}^{X}_{n,t})$ the sample standard deviation. That leaves me with 799 unique events for exit and 1,161 for voice (between 2 and 3% of the observations). I consider the occurrence of controversies for the year before and the year after the shock, taking the period -1 as a reference. Such a setup allows me to check for pre-trend and propagation over time of a shock to the shareholding composition. The estimating equation

is:

$$y_{n,t+1} = \sum_{\substack{\tau=-4 \\ \tau \neq -1}}^{\tau=4} \beta_\tau \cdot (\text{Shock}_n^X \times \mathbf{1} \cdot (\text{Distance} = \tau)) + \delta_t + \gamma_n + u_{n,t}, \tag{3}$$

where $y_{n,t+1}$ is an observable CSR outcome (proxy for the actual CSR efforts at time t), Shock_n^X is a dummy equal to 1 if firm n has at least one $Z_{n,t}^X$ smaller than the sample average minus two standard deviations (X being exit or voice), and $\mathbf{1} \cdot (\text{Distance} = \tau)$ equals 1 if period t is τ quarters away from the closest shock.[19]

4 Results

This section reports the main results and provides causal evidence on the mechanisms at play.

4.1 IV results

Main results. Table 2 reports the coefficients from the instrumental variable estimation of the change in controversies on the instrumented changes in exit and voice.[20] The bottom panel of the table provides first-stage statistics, showing that the instruments satisfy the conditions for strong instruments (Stock and Yogo, 2002, Kleibergen and Paap, 2006).[21] [22] Column 1 indicates that a change in exit has no statistically significant impact on the change in the occurrence of controversies, a result robust to the inclusion of control variables (Column 2) or the use of Quarter × Industry fixed effects (Column 3). On the contrary, the estimated coefficient on the change in voice is negative and statistically significant. The effect is economically large: a standard deviation increase in voice decreases the dependent variable by 28% of a standard deviation.

The endogeneity between a firm's voice pressure and controversies is important to deal with: if not instrumented, an increase in voice pressure *correlates* with more controversies in the future, indicating that activist funds tend to target firms with deteriorating behavior (Appendix Table A5).

Alternative exit and voice thresholds. Are the main results robust to changes in the

[19] For the never-treated group, the distance to treatment is set to 0: it allows to keep them in the estimation and the interaction is cancelled by the $\text{Shock}_n^X = 0$ anyway.

[20] The tables do not report the R-squared, as it is not informative in an IV setting (Wooldridge, 2013).

[21] I report the Kleibergen-Paap statistic for regressions with multiple endogenous regressors, and the effective F-statistic (Olea and Pflueger, 2013) in case of one endogenous regressor, as suggested by Andrews *et al.* (2018).

[22] The first-stage coefficients can be found in Table A4.

definitions of exit and voice funds? To address this, I re-estimate model 2 using varying thresholds for exit and voice classification. For exit, I test thresholds ranging from 0 to 0.015 (1.5%), with the results shown in the top panel of Figure 5. The estimated coefficients remain consistent as the threshold increases, indicating that the main findings are not sensitive to the specific definition of exit funds.

For voice, I test thresholds ranging from 50% to 95%, as shown in the bottom panel of Figure 5. At a 50% threshold, the coefficient on the instrumented change in voice is -0.5 with a p-value of 18%. As the threshold increases, the coefficient becomes more negative and statistically significant, reaching significance at the 10% level for a 65% threshold and at the 5% level above 75%. At the 95% threshold, the estimated coefficient falls below -1.5. These findings suggest that the observed improvement in CSR is primarily driven by funds with the highest voice scores, underscoring the importance of intense shareholder activism for driving corporate change.

Section 5 demonstrates the robustness of these results by addressing potential confounding factors, such as media coverage, window-dressing, and fund classification stability, and confirms that the results hold under alternative specifications. It also shows that voice pressure significantly reduces the likelihood of controversies within a year, with the effect dissipating after six quarters, indicating mean reversion. Finally, it argues that the largest voice shocks ($Z_{n,t}^{Voice} < -1\%$) drive the estimated effects.

4.2 Event-study results

The subsection shows that: *i)* the main results hold over a longer horizon and when looking at different CSR measures, and that *ii)* the most extreme shocks to voice pressure drive the estimated effect.

Controversies. Figure 6 plots the estimated coefficients for a shock to exit (solid, red lines) or voice (dashed, blue lines) on the occurrence of controversies one quarter later. Each coefficient can thus be interpreted as the probability of observing a controversial behavior, materializing in a public controversy the following quarter. Again, there seems to be no relationship between shocks to exit pressure and the probability of a controversy. On the other hand, when voice funds are forced to fire-sell their assets, firms in their footprint are more likely to misbehave 1, 2, and 4 quarters after the shock–but not before, confirming the absence of a pre-trend. These coefficients enable the calculation of a the average effect for the year after the shock ($\hat{\beta}_{0\leq t<4}$=0.014, p-value < 0.05): a 1pp exogenous decrease in voice pressure increases

the occurrence of anti-social behavior by 28% over the next year.

I also make sure that the results for voice are robust to explicitly taking into account the staggered treatment (Sun and Abraham, 2021), removing the control variables, and the use of *Quarter* × *Industry* fixed effects. The estimated coefficients are plotted in Appendix Figure A9, and show that none of these alternatives significantly change the main results.

Other visible CSR efforts. Voice funds' influence extends to other measures of CSR efforts: NGO campaigns, Refinitiv's social score, donations to revenue, and board gender diversity, as depicted in Figure 7. Board gender diversity is measured by a dummy equal to one if the board has no women. Following an exogenous decrease in voice pressure, the occurrence of NGO campaigns against a firm increases by 1.1pp over a year (p-value < 0.05), its social score decreases by 1.6% over the same period (p-value < 0.05), donations to revenue decrease by 10% the next quarter, and board diversity deteriorates significantly and permanently. None of these variables are meaningfully impacted by shocks to exit pressure (Appendix Figure A10). Finally, firms' improvement is also captured in their employees' Glassdoor reviews (Appendix Figure A11).

4.3 Exit mechanism

I now dig into the heterogeneity in response to changes in exit pressure.

Cost of capital. Firms' response to the threat of exit could depend on their current level of cost of capital. Appendix F tests that assumption by calculating three different versions of firms' Weighted Average Cost of Capital (WACC) based, alternatively, on the CAPM, the Fama-French 3-factor model, and the Gordon growth model. It also considers firms' Standard & Poor's long-term credit rating. For each (lagged) proxy for the cost of capital, I divide the sample in two (above median or below median cost of capital, or speculative bond rating and investment grade), and run the following specification:

$$\text{Controversy}_{n,t+2} - \text{Controversy}_{n,t} = \beta_{\text{Exit}} \overbrace{(\text{Exit}_{n,t+1} - \text{Exit}_{n,t-1})}^{\text{Instrumented by } Z^{\text{Exit}}_{n,t}} + \delta_{t+2} + u_{n,t+2}. \tag{4}$$

Regardless of the measure of cost of capital used, firms' response to changes in exit pressure seems unrelated to their cost of capital.

The null effect of exit, regardless of the cost of capital, could be explained in two ways. What could matter is the threat of a higher cost of debt: it has been shown, for instance, that more polluting firms generally have more tangible capital–that can be used as collateral–

and rely more on debt financing (Papoutsi *et al.*, 2021). Creditors' exit could thus be a more effective threat (Green and Vallee, Forthcoming). Or it could be the case, as is argued in Berk and van Binsbergen (2024), that a greater share of exit investors is needed to threaten firms' cost of capital in the long run. A similar analysis in countries with greater demand for E&S performance could yield different results (Dyck *et al.*, 2019).

CEO wealth-performance sensitivity. I test whether executives with more personal exposure to their firm's stock price are more likely to comply with their shareholders' pro-social requests. I recover firms' CEO wealth-performance sensitivity from Alex Edmans' website (Edmans *et al.*, 2009). To avoid endogeneity, I compute the average CEO WPS of each firm between 2000 and 2012, and I run, on each WPS quartile sub-sample, equation 4. Table 3 reports the results. The coefficient on the instrumented change in exit is not statistically different from zero for quartiles 1 to 3 (Columns 1 to 3), but the coefficient becomes more negative as we move from the first quartile to the second. Moving to the quartile with the highest WPS (Column 4), the coefficient on the instrumented change in exit is negative and statistically significant: a 1pp increase in the share of equity owned by exit funds significantly decreases the occurrence of controversies two quarters later by 0.9pp. Firms in that quartile do not exhibit major differences with firms in other quartiles in terms of baseline characteristics, as highlighted in the *Comparability* panel of the same table. Therefore, the threat of exit seems to be effective only at firms with high CEO WPS.[23]

Short-term stock price fluctuations matter significantly for CEOs, particularly when their wealth is highly sensitive to stock performance. Graham *et al.* (2005) show that CEOs are willing to sacrifice long-term investments to meet earnings targets and avoid short-term stock price declines, underscoring their focus on immediate market reactions. Similarly, Edmans *et al.* (2017) find that CEOs strategically time decisions around equity vesting to boost stock prices, reflecting the direct impact of short-term fluctuations on their wealth. Stein (1989) further highlights that managerial myopia arises when market pressures incentivize CEOs to prioritize short-term stock performance over long-term firm value, amplifying the significance of short-term price movements for CEOs with high wealth-performance sensitivity. Finally, this result echoes the intuition from Gantchev *et al.* (2022), where high CEO WPS firms invest more in CSR after a controversy.

Board structure. A key feature of U.S. corporate boards is whether they are staggered. In a staggered board structure, directors serve overlapping terms (typically three years), so not all directors face reelection simultaneously. Directors on non-staggered boards may respond

[23] Appendix Table A6 shows the robustness of this result to alternative specifications.

more strongly to the threat of exit, as a stock price decline could signal dissatisfaction to shareholders and jeopardize their reelection prospects. Table 4 presents results that align with this view, with some nuance. The threat of exit is effective only in firms with high CEO WPS and is particularly pronounced in those with non-staggered boards (Column 2). Although the negative coefficient in Column 4 is insignificant, it suggests that the threat of exit may still be effective at firms with staggered boards if CEO WPS is high. In contrast, among firms with average or low CEO WPS, the effect of exit is positive but insignificant for those with non-staggered boards (Column 1). These findings (confirmed by additional tests in Table A7) suggest that while CEO WPS is the primary driver of the effectiveness of exit threats, this effect is amplified when directors face reelection concerns.

4.4 Voice mechanism

I turn to the mechanism through which voice funds can incentivize firms to adopt more pro-social behavior. Consistent with the hypothesis that the leadership's career concerns drive pro-social effort, I show that firms' directors comply with their shareholders' requests to ensure their reelection.

Board structure. Directors serving on staggered boards could be less willing to listen to shareholders, as most of the board does not get reelected in the coming year. I run the following specification on two sub-samples of firms, with and without a staggered board:

$$\text{Controversy}_{n,t+2} - \text{Controversy}_{n,t} = \beta_{\text{Voice}} \overbrace{(\text{Voice}_{n,t+1} - \text{Voice}_{n,t-1})}^{\text{Instrumented by } Z^{\text{Voice}}_{n,t}} + \delta_{t+2} + u_{n,t+2}. \tag{5}$$

Results are reported in Columns 3 and 4 in Table 5. As expected, the effect of voice is strong and statistically significant among firms *without* staggered boards, and indistinguishable from zero among other firms.

Exogenous variations in board renewal rate. I further investigate the role of upcoming elections on the relationship between voice and controversies by exploiting within-firm time variation in board renewal rate. At firms with a staggered board, the percentage of directors seeking reelection can vary from one year to another. For instance, Tesla's board had 10 members in 2020, divided into three classes with overlapping three-year terms (Tesla, 2020): if three of them end their term in 2020 (30%), 4 directors (40%) will have to be reelected in 2021 or 2022. As less than half of the firms in the sample have a staggered board and the BoardEx data covers only 1,335 firms in the sample, further subsetting the sample based on board renewal

leads my instrument to be weak.[24] Thus, I exploit the time-varying nature of the board renewal rate within 507 firms with a staggered structure and non-missing board data by running:

$$\begin{aligned}\text{Controversy}_{n,t+2} - \text{Controversy}_{n,t} = \beta_{\text{Inter}} \cdot Z^{\text{Voice}}_{n,t} \times \mathbf{1} \cdot \left(\text{Board Renewal Rate}_{n,t} > \textit{Reference}_{n,t}\right) \\ + \beta_{\text{Board}} \cdot \mathbf{1} \cdot \left(\text{Board Renewal Rate}_{n,t} > \textit{Reference}_{n,t}\right) \\ + \beta_{\text{Voice}} \cdot Z^{\text{Voice}}_{n,t} + \delta_t + u_{n,t+2},\end{aligned} \tag{6}$$

where the *Reference* is, alternatively, the firm mean, median, and previous year's board renewal rate. Table 6 reports the result. Column 1 indicates that the raw effect of a voice shock on controversies is insignificant, in line with the results above. Interestingly, the coefficient on the dummy indicating a greater than usual board renewal rate is negative and statistically significant, showing that firms behave better when more board directors seek reelection, regardless of their shareholder composition. The coefficient on the interaction term between the (standardized) shock to voice and the dummy indicating a greater than usual board renewal rate is negative and statistically significant at the 5% level. I interpret this result as evidence that when larger director classes face reelection, firms are more prone to be disciplined by voice funds: a one percentage point increase in voice pressure in years with higher board renewal rate decreases the probability of a controversy by 18%.

Voice *threat*. Finally, I show that an activist campaign against a director at a firm spillovers to other firms. To that end, I exploit an episode of a successful campaign against the reelection of a director and show that firms in the same industry and with a high level of common ownership experienced fewer controversies in the following quarters. In June 2017, SeaWorld Chairman since 2010 David D'Alessandro failed to be reelected to the board, collecting only 47% of the cast votes, falling short of the required 50%. Years of tense public relations and degraded reputation since the documentary *Blackfish*, which highlighted the firm's bad treatment of whales and orcas, culminated in 2017 with the death of *Blackfish*'s flagship orca, Tilikum, excessive executive pay, and the opening of two federal investigations over disclosures and trading around the documentary's release (Morgenson, 2017). Voice funds voted massively against the reelection of the director (99% of the voice shares voted against), in an episode labeled as a "shareholder revolt" by the Financial Times (Kwan Yuk, 2019). I investigate how this episode propagated across SeaWorld's activist funds' footprint. I measure firms' exposure

[24] Running model 5 on that sub-sample leads to an F-statistic of 3.

to SeaWorld as:

$$\text{Exposure to Seaworld}_n = \sum_i \text{Ownership}_{i,n} \times \mathbf{1} \cdot (\text{Own Seaworld}_i) \times \mathbf{1} \cdot (\text{Voice Fund}_i),$$

meaning, the share of firm n's equity owned by voice funds also shareholders of SeaWorld. As SeaWorld's episode happened at the end of the second quarter of 2017, and as the outcome of the vote was –arguably– unpredictable, one can expect firms to adapt their behavior in the third quarter, resulting in fewer controversies in the fourth quarter. One can also expect that the effect is stronger at firms in the same industry. In order to test these assumptions, I run the following regression:

$$\begin{aligned} \text{Controversy}_{n,17:Q4} - \text{Controversy}_{n,17:Q2} = {} & \beta_{\text{SeaWorld}} \cdot \text{Exposure to Seaworld}_{n,17:Q1} \\ & + \beta_{\text{Inter}} \cdot \text{Exposure to Seaworld}_{n,17:Q1} \times \mathbf{1} \cdot (\text{Same Industry}_n) \\ & + (\text{Industry} \times \text{State})_n + u_{n,17:Q4}, \end{aligned} \tag{7}$$

where *Same Industry* is defined as having the same Global Industry Classification Standards (GICS) 6-digit Industry classification as SeaWorld. 83 firms are classified as such (mainly hotels, restaurants, and leisure). The results (Appendix Table Table A8) indicate that firms connected to SeaWorld through common ownership improved their behavior compared to other firms (β_{SeaWorld}=-0.4). When interacting the exposure to SeaWorld with a dummy equal to one if the two firms are in the same industry, the effect is driven by firms in the same industry: the coefficient on the interaction term is negative and statistically significant at the 1% level, tripling the baseline effect (β_{Inter}=-0.96). These results indicate that activist investors do not need to launch a campaign at a firm to improve its behavior: their actions at other firms spillover across their portfolio.

It is important to emphasize that this paper does not claim that activist investors improve firms' pro-sociality only through their voting preferences, even though they play a role in shaping firms' behavior (Cuñat *et al.*, 2016, Couvert, 2021). I consider funds' votes as a signal to firms in their portfolio that they are ready to confront the board on social topics publicly. Such threats push unfavored directors to resign and not face a reelection vote. Most of the effect captured could be due to behind-the-doors pressures that are rarely observed by the researcher and signaled through the votes. Overall, the results could imply that managers react more to threats to their careers rather than to their compensation, in line with recent survey evidence (Edmans *et al.*, 2023).

5 Robustness

This section addresses potential concerns regarding the main results of the paper and shows their robustness over different time horizons and econometric specifications.

5.1 The motives behind large fund redemptions

The empirical strategy in this paper relies on large investor redemptions from US mutual funds, but what drives such redemptions? I exploit as a natural experiment the large trading losses from a French investment bank on its derivatives business in Korea, which forced it to liquidate a sizeable share of its US ETF holdings.

Background. On December 18, 2018, the French investment bank Natixis reported "non-recurring losses" of more than USD 300 million on its Asian equity derivatives business.[25] The derivatives in question were mostly Korean autocallables that underperform when the underlying index does badly, and the Kospi, the country's main stock market index, lost almost 18% between the end of March 2018 and January 2019 (the S&P500 lost 4% during the same period). Over the next three quarters, the bank's US ETF holdings–as reported in the 13F forms–almost halved, while those of other French institutions remained stable.

Empirical setting. I measure the exposure of each fund to Natixis by the percentage of fund shares held by Natixis, as reported in the 13F data at the end of Q2 2018: $\text{NatExpo}_{i,18:Q1}$. Then, I compute the predicted change in a firm's exposure to funds' voice due to Natixis trading losses in Q2 (assuming proportional liquidation):[26]

$$Z^{\text{Voice}}_{n,18:Q2} = \sum_i \text{NatExpo}_{i,18:Q1} \times \text{Ownership}_{i,n,18:Q1} \times \mathbf{1}(\text{Voice Fund}_{i,18:Q1}).$$

I then estimate the impact of $Z^{\text{Voice}}_{n,18:Q2}$ on a dummy indicating the occurrence of at least one controversy over the next year (and over the past year to confirm the exogeneity), depending on the firm's board structure.

Panel A in Table A10 reports the result. Columns 1 to 3 confirm the absence of anticipation: the exposure to Natixis-owned voice funds is not predicted by past controversies. Column 4 indicates that firms with higher exposure to Natixis-owned voice funds saw a significant increase in the probability of having a controversy the year after Natixis' trading losses. In line

[25] Natixis' February 12, 2019 Press Release: *4Q18 and 2018 results, Confirmation of New Dimension 2020 targets*

[26] I do not consider the change in exit pressure because most ETFs owned by Natixis before the losses are index funds.

with previous results, the coefficient remains similar in sign and magnitude when focusing on firms with non-staggered boards (Column 5), and becomes statistically insignificant when focusing on firms with staggered boards (Column 6).

However, the effect could very well be driven by the firm's exposure to Natixis, regardless of the composition of funds (for instance, through a decrease in stock price). I create a variable, *High Voice Share*, equal to 1 if:

$$\frac{\sum_i \text{NatExpo}_{i,18:Q1} \times \text{Ownership}_{i,n,18:Q1} \times \mathbf{1}(\text{Voice Fund}_{i,18:Q1})}{\sum_i \text{NatExpo}_{i,18:Q1} \times \text{Ownership}_{i,n,18:Q1}}$$

is in the top quartile of the distribution. It indicates that most of a firm's indirect exposure to Natixis is via voice funds. Panel B in Table A10 shows that the interaction of *High Voice Share* with the firm's indirect exposure to Natixis yields a positive and significant coefficient, especially among firms with non-staggered boards. That indicates that the indirect exposure to voice funds via Natixis drives the effect, and not the exposure to Natixis itself.

In unreported results, I find similar effects on the firms' ESG scores, and find that the exposure to Natixis predicts a decrease in valuation, but not *High Voice Share*.

5.2 Confounding factors

Media coverage. The results are not driven by a change in media attention around firms, as their non-ESG news are not impacted by changes in exit or voice pressures (Columns 1 and 2 in Table A9). I also show that changes in exit and voice pressures do not impact of occurrence of *stale* controversies, defined as controversies for which the underlying event is more than 90 days old (Column 3 of the same Table).

Advertising expenses. Large exogenous shocks to exit and voice pressures do not impact firms' advertising expenses (scaled by sales), as shown in Appendix Figure A12.

Voice without exit. I run the same analysis using pure index funds, that, by definition, cannot use the threat of exit. I restrict the sample of firms in either the S&P500 or the S&P400. As in the main specification, an increase in voice pressure decreases significantly the occurrence of social controversies (Table A11).

Accounting performance measures. Appendix Figure A13 reports the estimated coefficients from similar event studies using accounting performance measures (alternatively, the profit margin, return on equity, and return on assets) as dependent variables. None of these measures seems to be affected by changes in exit and voice pressures.

Magnitude of the shocks to exit and voice pressures. I investigate whether: *i)* the exogenous changes in exit and voice pressures used in the event study are large enough to impact stock prices, and *ii)* whether these exogenous changes have differential effects on stock prices, potentially explaining the observed outcomes. To do so, I calculate each stock's daily *Abnormal Returns* using the Fama and French (2015) 5-factor model during quarters with negative exit and voice shocks. Subsequently, I compute their *Cumulative Abnormal Returns* (CARs) starting one month before the shock (Appendix Figure A14). The estimated CARs reveal that redemptions by both exit and voice funds exert a significant price impact: an extreme exogenous decrease in exit or voice pressure leads to a negative CAR of 1% over a quarter.[27] However, the difference in price impact between exit and voice funds is statistically insignificant, thereby ruling out Hypothesis *ii.*

Additionally, I demonstrate that the estimated effect of voice is driven by the most economically sizable shocks to voice pressure. Focusing on firms with less than 10% voice pressure, I regress the likelihood of a controversy at time $t + 2$ on a set of dummies representing shocks to voice pressure of varying magnitudes. These magnitudes range from shocks between 0.1% and 0.5% of a firm's equity to shocks greater than 1% of a firm's equity.[28] The results indicate that only those largest–economically sizable–shocks have a significant impact and drive the estimated effect (Appendix Table A12). In contrast, a similar analysis using exit shocks produces no significant coefficients.

5.3 Measurement of exit

This subsection discusses potential challenges in the identification of exit funds that could lead to underestimating their influence on firm policies.

Alternative ESG scores. In Appendix B.1, I demonstrate that the paper's main findings—the unconditional null effect of exit and its effectiveness at firms with high CEO WPS—remain robust when MSCI or Sustainalytics ESG scores are used for the exit classification (in the estimation of model 1). Additionally, I show that Refinitiv's ESG scores are the most effective in identifying funds that divest from firms following a controversy, and are thus the best suited in this specific context.

Window-dressing. Parise and Rubin (2023) document that ESG funds tend to strategically hold more responsible portfolios just before mandated disclosures. Such behavior could lead

[27] This price impact is substantially lower than the 10% quarterly price impact reported in Dessaint *et al.* (2019), as their study considers all mutual funds, whereas this paper focuses on a subset.

[28] The reference category is $Z_{n,t}^{\text{Voice}} > -0.1\%$.

me to underestimate the effect of the threat of exit, as some funds classified as exit funds would hold a pro-social portfolio only before the disclosures. While I cannot completely rule out this concern, I find consistent results by focusing on the sample of funds that voluntarily report their holdings at the monthly frequency (as opposed to quarterly), as there should be less suspicion of window-dressing for those funds (Appendix Table A13).

"Stable" exit funds. To avoid any concern regarding the noisiness of the exit classification, I focus on stable exit funds–funds that are classified as exit since the first quarter of 2013 and remain so until the end of the sample (116 funds) or that when they become exit, remain exit until the end of the sample period (423 funds). Focusing on that sample of funds does not change the results (Appendix Table A14).

5.4 Estimated effects over different horizons

I define $\text{Controversy}_{n,[t+\tau:t+\tau+3]}$ as a dummy indicating the occurrence of at least one controversy about firm n over a four-quarter period, with τ equal to, alternatively, -2, 2, and 6. I run:

$$\text{Controversy}_{n,[t+\tau:t+\tau+3]} = \beta_{\text{Exit}} \cdot Z_{n,t}^{\text{Exit}} + \beta_{\text{Voice}} \cdot Z_{n,t}^{\text{Voice}} + \delta_t + \gamma_i + u_{n,t}. \tag{8}$$

Running that model with $\tau = -2$ allows to check for pre-trend, while running it with $\tau = 2$ allows to estimate the impact of changes in exit and voice pressures on the occurrence of controversies over a one-year horizon. Finally, setting $\tau = 6$ allows to estimate their impact on the longer term.

Appendix Table A15 reports the results, with the dependent variable and the set of control variables varying by column. The results show that there is no correlation between current and past controversies and current shocks to exit and voice pressures, providing additional evidence of their exogeneity. They also confirm the estimated effect of an exogenous shock to voice pressure on the occurrence of controversies: a 1pp increase in voice pressure reduces the likelihood of controversial behavior by 30% over the subsequent year. This result remains robust to the inclusion of additional control variables, such as lagged mutual fund ownership and prior controversies. However, when examining the occurrence of controversies from six to nine quarters following the shock, there appears to be no significant impact of the exogenous shock to voice pressure. I interpret this finding as evidence of mean reversion in voice pressure, whereby exogenous dips are neutralized within a year.

6 Conclusion

How can shareholders effectively drive pro-social change in the firms they invest in? This paper demonstrates that *voice* (activism) consistently outperforms *exit* (divestment), especially when aligned with strong managerial incentives. Supporting the theoretical predictions of Broccardo *et al.* (2022), I show that voice succeeds where exit often falls short, offering actionable insights into the conditions under which these strategies work.

Using data from nearly 2,000 U.S. mutual funds, I classify exit funds based on their pro-social stock preferences using the "demand system approach to asset pricing" and identify voice funds through their voting behavior on S-related shareholder proposals opposed by management. Activist voice funds effectively pressure directors, pushing them to resign when misbehavior arises. To disentangle causal effects, I exploit exogenous shocks from large fund redemptions, revealing clear differences in how these strategies influence corporate behavior.

The key finding is that voice funds drive change, with a 1% reduction in their ownership increasing the probability of a social controversy by 30% in the following year. Exit, by contrast, proves effective only in firms where CEOs have high wealth-performance sensitivity. Voice also amplifies its impact when directors face reelection, highlighting the importance of career concerns in shaping managerial responses.

Beyond CSR, the portable framework developed in this paper can help researchers analyze mutual funds' influence in other critical domains.

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Tables

Table 1: **Summary Statistics**

Variable	Mean	Median	Q1	Q3	SD
i. Fund-level statistics					
Exit score (β_S, ×100)	-0.29	-0.16	-0.94	0.46	1.25
Voice score (%)	53.09	57.34	16.79	83.24	35.46
Exit fund (0/1, × 100)	28.94	0	0	100	45.35
- 2013	*26.29*	*0*	*0*	*100*	*44.03*
- 2016	*30.87*	*0*	*0*	*100*	*46.20*
- 2020	*28.63*	*0*	*0*	*100*	*45.21*
Voice fund (0/1, ×100)	23.80	0	0	0	42.58
- 2013	*24.19*	*0*	*0*	*0*	*42.83*
- 2016	*26.41*	*0*	*0*	*100*	*44.09*
- 2020	*19.18*	*0*	*0*	*0*	*39.38*
Both exit and voice (0/1, × 100)	7.58	0	0	0	26.47
Market value of US stocks held (USD B)	3.04	0.40	0.10	1.41	20.01
- Exit funds	*1.78*	*0.41*	*0.10*	*1.36*	*4.88*
- Voice funds	*4.74*	*0.36*	*0.10*	*1.42*	*30.83*
Number of stocks currently held	149.96	65	40	148	229.41
- Exit funds	*117.70*	*59*	*38*	*106*	*176.97*
- Voice funds	*129.40*	*57*	*38*	*101*	*221.92*
ii. Firm-level statistics					
Quarter with at least one controversy (0/1,×100)	2.37	0	0	0	15.21
Quarter with at least one NGO campaign (0/1,×100)	0.96	0	0	0	9.75
Social score	42.48	39.66	26.63	55.91	20.16
Donations per million $ of revenue ($)	3,577	962	382	2,043	13,902
% of female directors	17.02	16.67	11.11	25.00	10.79
- Absence of female director (0/1)	*13.94*	*0*	*0*	*0*	*34.63*
Overall fund ownership (%)	19.84	18.81	14.14	24.06	8.32
Exit fund ownership (%)	3.04	2.28	1.11	4.15	2.77
Voice fund ownership (%)	5.93	5.45	1.87	8.85	4.91
Exit shock (%)	-0.04	-0.01	-0.05	0	0.09
Voice shock (%)	-0.05	-0.01	-0.03	0	0.18

Note: This table displays summary statistics for firms and funds in the sample. The exit score is estimated through model 1 using the funds' portfolio, and a non-index fund is defined as an exit fund if $\beta_{S,i,t} > 0$. The voice score is the percentage of votes in favor of S-related shareholder proposals opposed by management over the past four quarters. A fund is defined as a voice fund if that score is greater than 85%. Mutual fund data from CRSP. Firm data from Refinitiv. Controversies are based on RavenPack data. NGO campaign data from Sigwatch Koenig (2017).

Table 2: **The Impact of Changes in Exit and Voice Pressures on Controversies – IV Estimation**

Dependent Variable:	$\text{Controversy}_{n,t+2}$ - $\text{Controversy}_{n,t}$		
Model:	(1)	(2)	(3)
Variables			
Instrumented Change in Exit	0.237	0.220	0.168
	(0.186)	(0.186)	(0.204)
Instrumented Change in Voice	-1.32**	-1.32**	-1.42**
	(0.612)	(0.610)	(0.622)
Controls		✓	✓
Fixed-effects			
Quarter	✓	✓	
Quarter × Industry			✓
Fit statistics			
Observations	37,480	37,480	35,732
Kleibergen-Paap Statistic	21.442	21.332	14.519

Note: This table reports estimated coefficients from model 2:

$$\text{Controversy}_{n,t+2} - \text{Controversy}_{n,t} = \beta_{\text{Exit}} \overbrace{(\text{Exit}_{n,t+1} - \text{Exit}_{n,t-1})}^{\text{Instrumented by } Z^{\text{Exit}}_{n,t}} + \beta_{\text{Voice}} \overbrace{(\text{Voice}_{n,t+1} - \text{Voice}_{n,t-1})}^{\text{Instrumented by } Z^{\text{Voice}}_{n,t}} + \delta_{t+2} + u_{n,t+2},$$

with the addition of control variables (changes in logged Total Assets, Investment, and Social Score) in Columns 2 and 3, and of *Quarter×Industry* fixed effects in Column 3. $Z^{\text{Exit}}_{n,t}$ and $Z^{\text{Voice}}_{n,t}$ refer to the hypothetical liquidation of firm n's equity by exit and voice funds, respectively, following large redemptions and assuming proportional liquidation. Details on the construction of the variables can be found in the main text. Controversies are defined based on Ravenpack data. The sample covers 1,910 U.S. firms from 2013 to 2020. Stock characteristics from Refinitiv. Clustered (firm) standard-errors in parentheses. Signif. Codes: ***: 0.01, **: 0.05, *: 0.1

Table 3: **Heterogeneity in Response to Changes in Exit Pressure by Level of CEO Wealth-Performance Sensitivity – IV Estimation**

Dependent Variable:	$\text{Controversy}_{n,t+2}$ - $\text{Controversy}_{n,t}$			
Lagged *WPS* quartile:	Q1	Q2	Q3	Q4
Model:	(1)	(2)	(3)	(4)
Variables				
Instrumented Change in Exit	0.446*	-0.186	0.992	-0.891**
	(0.255)	(0.454)	(0.924)	(0.405)
Controls	✓	✓	✓	✓
Fixed-effects				
Quarter	✓	✓	✓	✓
Comparability				
Firms	301	301	300	300
Average log Total Assets	21.76	21.97	22.00	21.54
Average Investment (×100)	7.81	6.50	7.61	8.57
Average Social Score	28.22	35.84	36.26	31.80
Fit statistics				
Observations	6,888	6,639	7,225	7,040
Effective F-statistic	34.086	40.041	13.616	46.813

Note: This table reports the estimated coefficients from model 4:

$$\text{Controversy}_{n,t+2} - \text{Controversy}_{n,t} = \beta_{Exit} \overbrace{(\text{Exit}_{n,t+1} - \text{Exit}_{n,t-1})}^{\text{Instrumented by } Z^{Exit}_{n,t}} + \delta_{t+2} + u_{n,t+2},$$

on four sub-samples defined by their past (from 2010 to 2012) average scaled CEO wealth-performance sensitivity (*WPS*, from Edmans *et al.*, 2009), and controls. Controls include firms' changes in Total Assets, Investment, and Social Score. All regressions include quarter fixed effects. $Z^{\text{Exit}}_{n,t}$ refers to the hypothetical liquidation of firm n's equity by exit funds following large redemptions and assuming proportional liquidation. Details on the construction of the variables can be found in the main text. Controversies are defined based on Ravenpack data. Stock characteristics from Refinitiv. The sample covers 1,110 U.S. firms from 2013 to 2020. Clustered (firm) standard-errors in parentheses. The *Effective F-statistic* is the Olea and Pflueger (2013) first-stage F-statistic. Signif. Codes: ***: 0.01, **: 0.05, *: 0.1

Table 4: **Heterogeneity in Response to Changes in Exit Pressure by Board Structure and Level of CEO WPS – IV Estimation**

Dependent Variable:	Controversy$_{n,t+2}$ - Controversy$_{n,t}$			
Board structure	Non-staggered board		Staggered board	
Lagged *WPS* quartile:	Q1-3	Q4	Q1-3	Q4
Model:	(1)	(2)	(3)	(4)
Variables				
Instrumented Change in Exit	0.125	-2.34**	0.694	-0.192
	(0.407)	(1.17)	(1.36)	(0.484)
Controls	✓	✓	✓	✓
Fixed-effects				
Quarter	✓	✓	✓	✓
Comparability				
Firms	596	189	375	136
Average log Total Assets	22.65	22.42	21.81	21.57
Average Investment (×100)	6.28	8.11	7.62	9.31
Average Social Score	47.42	44.94	39.17	38.52
Fit statistics				
Observations	9,662	3,201	5,383	1,833
Effective F-statistic	125.29	54.025	53.517	36.485

Note: This table reports the estimated coefficients from model 4:

$$\text{Controversy}_{n,t+2} - \text{Controversy}_{n,t} = \beta_{Exit} \overbrace{(\text{Exit}_{n,t+1} - \text{Exit}_{n,t-1})}^{\text{Instrumented by } Z^{Exit}_{n,t}} + \delta_{t+2} + u_{n,t+2},$$

on four sub-samples defined by their past (from 2010 to 2012) average scaled CEO wealth-performance sensitivity (*WPS*, from Edmans *et al.*, 2009) and board structure. Controls include firms' changes in Total Assets, Investment, and Social Score. All regressions include quarter fixed effects. $Z^{\text{Exit}}_{n,t}$ refers to the hypothetical liquidation of firm n's equity by exit funds following large redemptions and assuming proportional liquidation. Details on the construction of the variables can be found in the main text. Controversies are defined based on Ravenpack data. Stock characteristics from Refinitiv. The sample covers 1,110 U.S. firms from 2013 to 2020. Clustered (firm) standard-errors in parentheses. The *Effective F-statistic* is the Olea and Pflueger (2013) first-stage F-statistic. Signif. Codes: ***: 0.01, **: 0.05, *: 0.1

Table 5: **Heterogeneity in Response to Changes in Voice Pressure by Board Structure – IV Estimation**

Dependent Variable:	$\text{Controversy}_{n,t+2}$ - $\text{Controversy}_{n,t}$	
Board structure	Non-staggered board	Staggered board
Model:	(1)	(2)
Variables		
Instrumented Change in Voice	-3.37***	-0.470
	(1.25)	(1.27)
Controls	✓	✓
Fixed-effects		
Quarter	✓	✓
Comparability		
Average # of firms in a quarter	577	407
Average log Total Assets	22.44	21.54
Average Investment (×100)	7.27	10.59
Average Social Score	44.77	36.80
Fit statistics		
Observations	15,058	10,442
Effective F-statistic	13.697	37.239

Note: This table reports the estimated coefficients from model 5:

$$\text{Controversy}_{n,t+2} - \text{Controversy}_{n,t} = \beta_{Voice} \overbrace{(\text{Voice}_{n,t+1} - \text{Voice}_{n,t-1})}^{\text{Instrumented by } Z_{n,t}^{Voice}} + \delta_{t+2} + u_{n,t+2},$$

for different sub-samples. Column 1 focuses on firms with a non-staggered board, and Column 2 focuses on firms with staggered board. All regressions include quarter fixed effects. $Z_{n,t}^{\text{Voice}}$ refers to the hypothetical liquidation of firm n's equity by voice funds following large redemptions and assuming proportional liquidation. Details on the construction of the variables can be found in the main text. Controls include firms' changes in Total Assets, Investment, and Social Score. Controversies are defined based on Ravenpack data. Stock and board characteristics from Refinitiv. The original sample covers 1,910 U.S. firms from 2013 to 2020. Clustered (firm) standard-errors in parentheses. The *Effective F-statistic* is the Olea and Pflueger (2013) first-stage F-statistic. Signif. Codes: ***: 0.01, **: 0.05, *: 0.1

Table 6: **Heterogeneity in Response to Changes in Voice Pressure by Election Cycle**

Dependent Variable:	$\text{Controversy}_{n,t+2}$ - $\text{Controversy}_{n,t}$		
Reference is firm's:	Median	Mean	Previous Year
Model:	(1)	(2)	(3)
Variables			
Shock to Voice	0.031	0.046	0.027
	(0.029)	(0.037)	(0.040)
1·(% of Directors Seeking Reelection > *Reference*)	-0.011**	-0.007*	-0.014**
	(0.004)	(0.004)	(0.005)
Shock to Voice × **1**·(% of Directors Seeking Reelection > *Reference*)	-0.120**	-0.113**	-0.127**
	(0.051)	(0.049)	(0.062)
Controls	✓	✓	✓
Fixed-effects			
Quarter	✓	✓	✓
Fit statistics			
Observations	6,047	6,047	4,191
R^2	0.00748	0.00727	0.00889

Note: This table reports estimated coefficients from model 6:

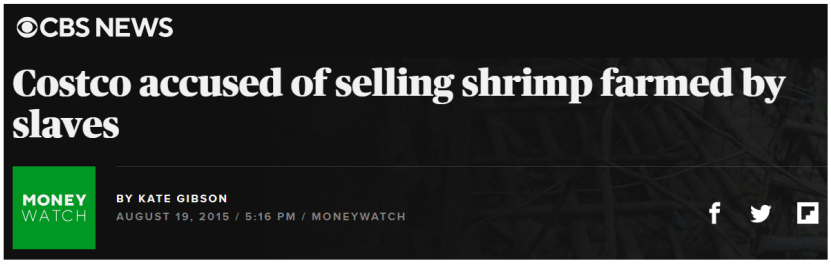
$$\text{Controversy}_{n,t+2} - \text{Controversy}_{n,t} = Z_{n,t}^{\text{Voice}} \times \mathbf{1} \cdot \left(\text{Board Renewal Rate} > \textit{Reference}_{n,t}\right) + Z_{n,t}^{\text{Voice}} + \mathbf{1} \cdot \left(\text{Board Renewal Rate} > \textit{Reference}_{n,t}\right) + \delta_t + u_{n,t+2},$$

where $\textit{Reference}_{n,t}$ is either a dummy equal to one if the board renewal rate in that year is above the firm's average (Column 2), median (Column 2), or that in the previous year (Column 3). $Z_{n,t}^{\text{Voice}}$ refers to the hypothetical liquidation of firm n's equity by voice funds following large redemptions and assuming proportional liquidation. All regressions include quarter fixed effects. Controls include firms' changes in Total Assets, Investment, and Social Score. Details on the construction of the variables can be found in the main text. Controversies are defined based on Ravenpack data. The sample covers 526 US firms from 2013 to 2020. Stock characteristics from Refinitiv. Clustered (firm) standard-errors in parentheses. Signif. Codes: ***: 0.01, **: 0.05, *: 0.1

Figures

Figure 1: **Examples of Social Controversies**

(a) Example 1: Costco



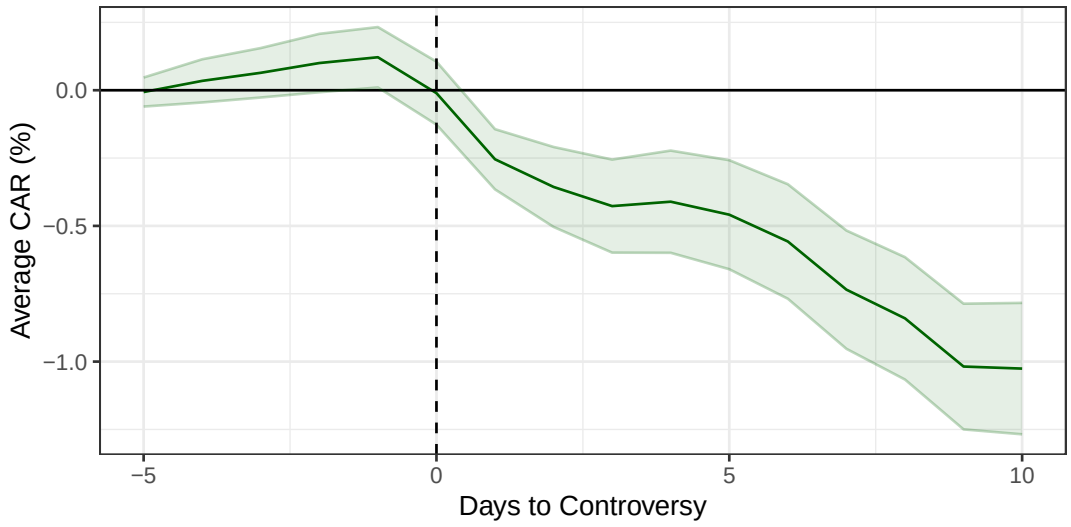
(b) Example 2: Starbucks

(c) Example 3: Google

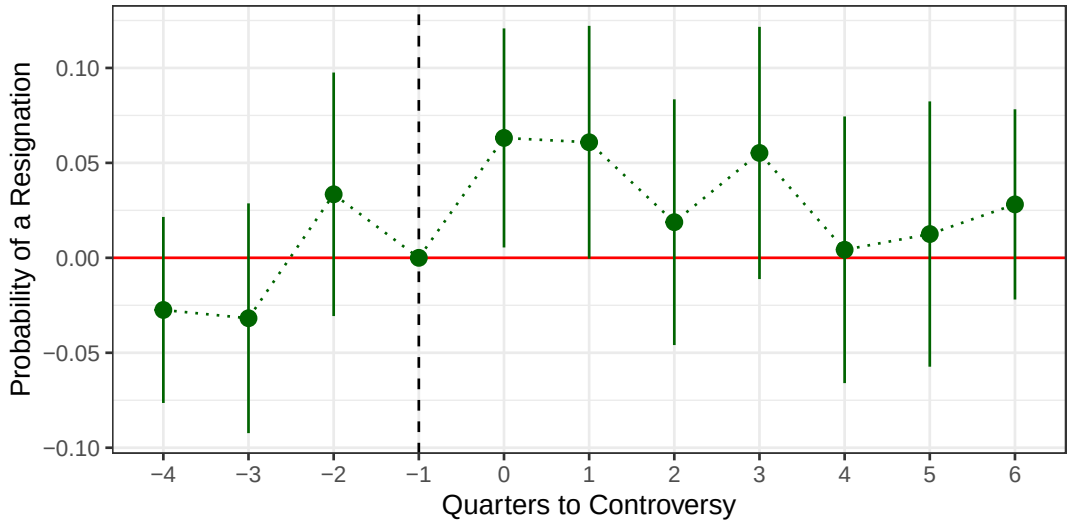
Notes: This figure displays three examples of social controversies. The top panel is a screenshot from a CBS news article published on August 19, 2015. The middle panel is a screenshot from a New York Times' article published on April 15, 2018. The bottom panel is a screenshot from a Financial Times' article published on October 28, 2020.

Figure 2: **Shareholders' Reactions to a Controversy**

(a) Average Cumulative Abnormal Returns around a controversy



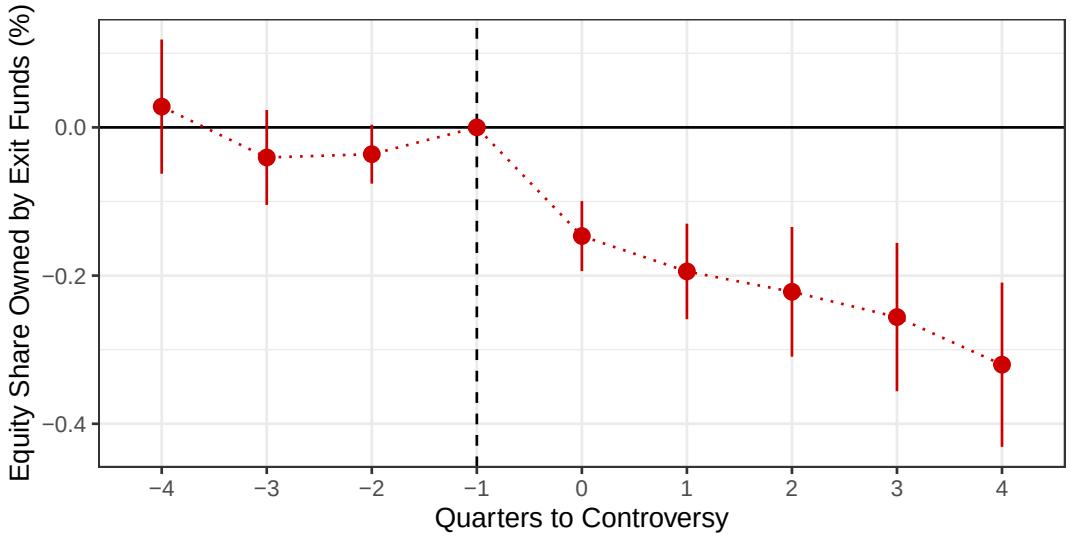
(b) Occurrence of a director or officer resignation around a controversy



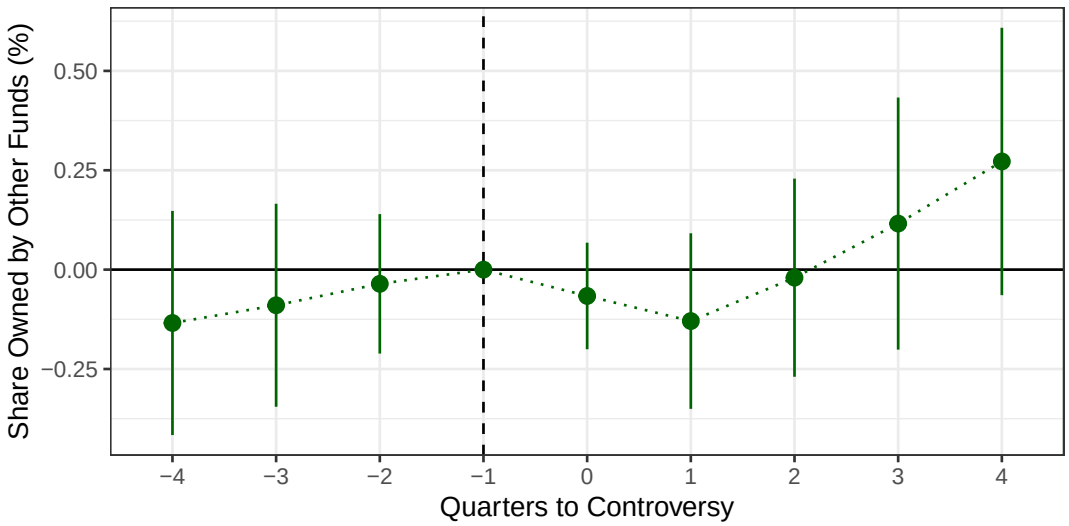
Notes: The top panel displays the Cumulative Average Abnormal Returns around the outbreak of a social controversy, from 5 days before to 10 days after its publication. The abnormal returns are computed using a Fama and French (2015) 5-factor model. The solid line represents the estimated coefficient, and the shaded area represents the 95% confidence interval. Stock returns and betas are from CRSP. Portfolio returns and the risk-free rate are from Kenneth French's website. The sample covers 1,910 U.S. firms from 2013 to 2020. The bottom panel displays the estimated coefficients from an event study using a logistic regression, with the occurrence of a director or officer resignation as the dependent variable. The coefficients of interest are the time dummies that indicate the number of quarters to the closest social controversy. The time dummy -1 is used as a reference. The regression also includes firm and quarter fixed effects. The 95% confidence interval is constructed using standard errors clustered at the firm level. Director resignation data is from Audit Analytics. The sample covers 643 U.S. firms from 2013 to 2020.

Figure 3: **Fund Divestment After a Controversy by Exit Status**

(a) Exit funds' ownership around a controversy



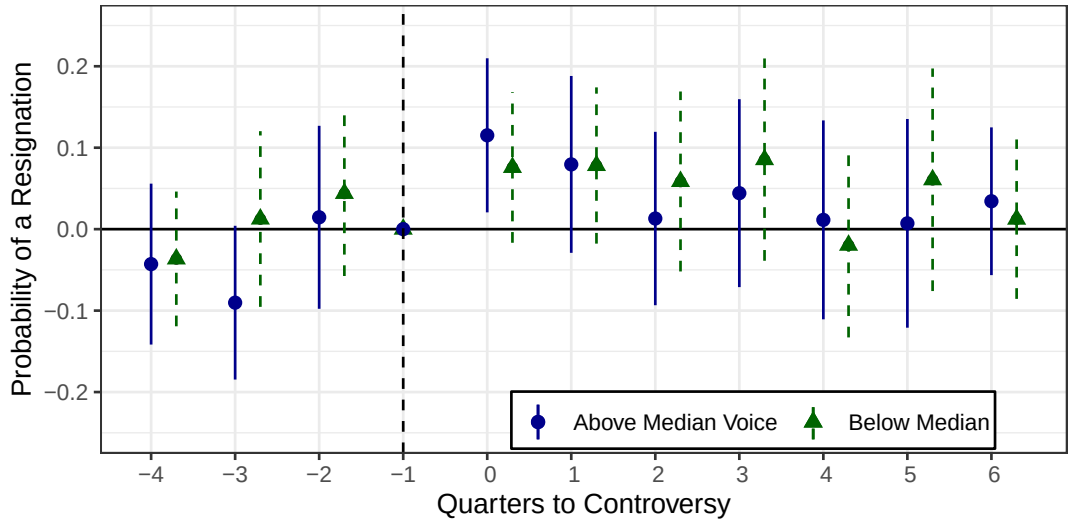
(b) Non-exit funds' ownership around a controversy



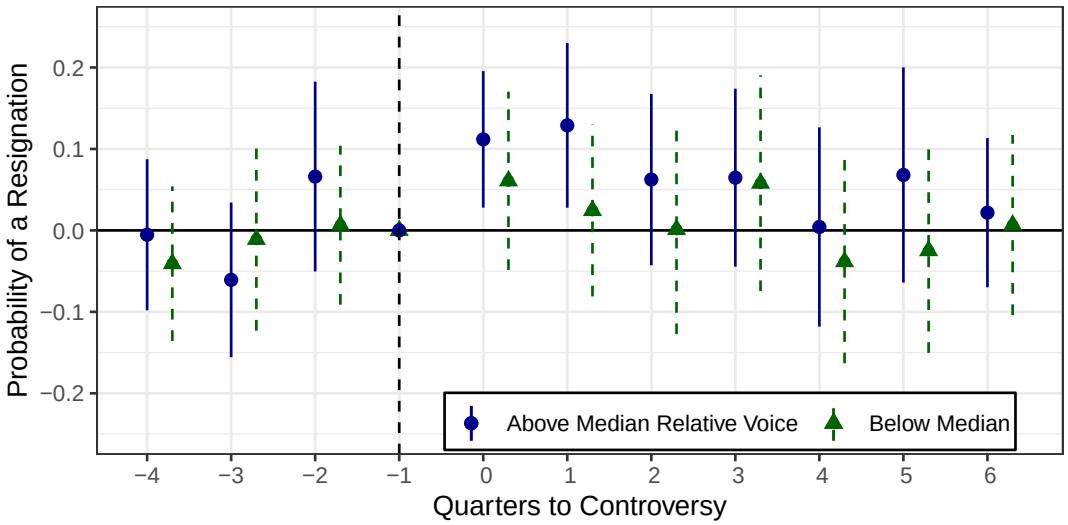
Notes: This figure reports the estimated coefficients of an event study of the share of equity owned by exit funds (as of period $t-1$, top panel) or non-equity funds (as of period $t-1$, bottom panel) around a controversy. The regressions also include time and firm fixed effects. The 95% confidence intervals are constructed using standard errors clustered at the firm level. Controversies are constructed from RavenPack data. Portfolio holding data from CRSP. The sample covers 1,950 U.S. firms from 2013 to 2020.

Figure 4: **Heterogeneity in Directors and Officers Resignations After a Controversy by Level of Voice Pressure – Event Studies**

(a) Voice pressure defined as percentage of total ownership



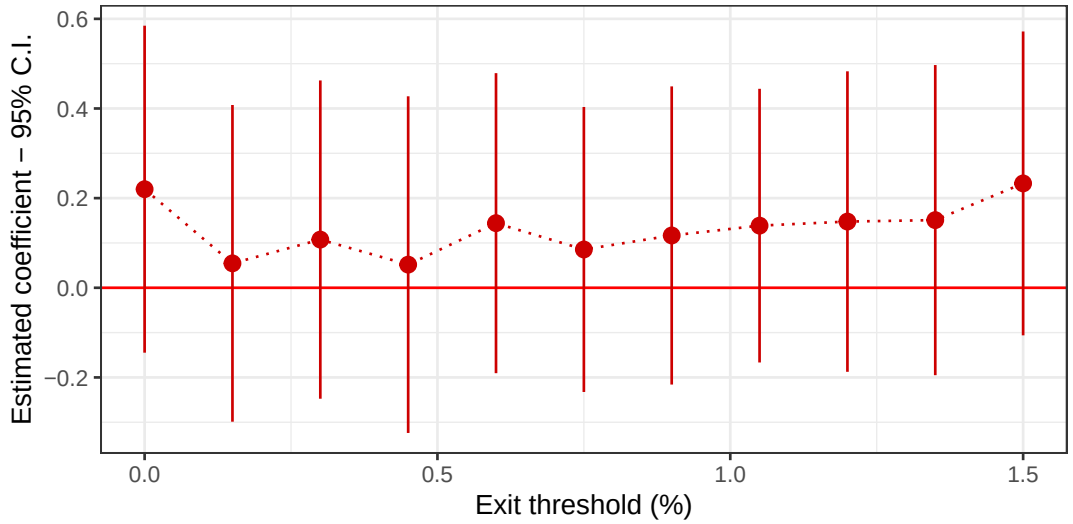
(b) Voice pressure normalized by fund ownership



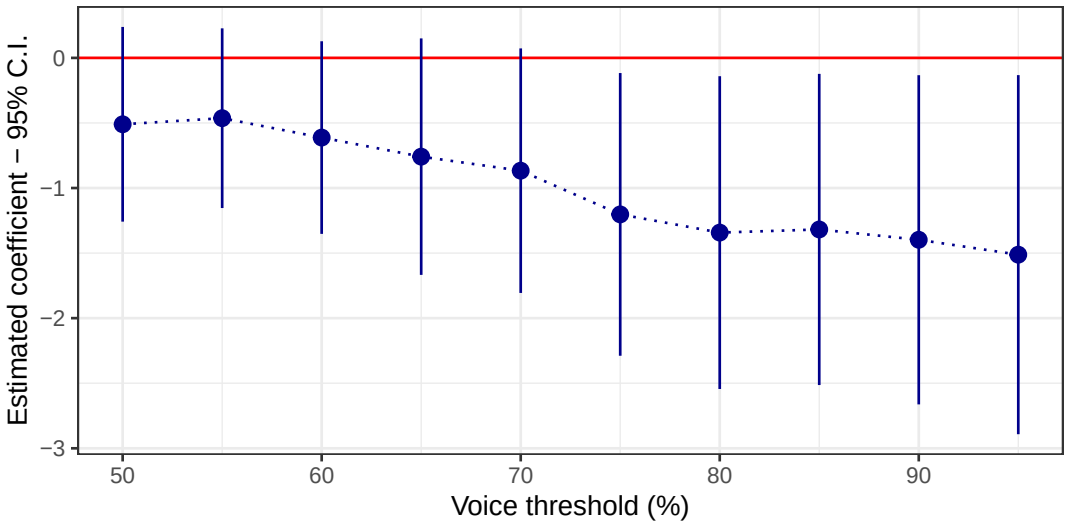
Notes: This figure plots the equivalent regression of the bottom panel of Figure 2 on two sub-samples: firms with voice pressure above median (blue dots), and firms with voice pressure below median (green triangles). Voice pressure is defined as the percentage of a firm's equity owned by voice funds in panel (a), and the same percentage normalized by total fund ownership in panel (b). The regressions also include firm and quarter fixed effects. The 95% confidence intervals are constructed using standard errors clustered at the firm level. Director resignation data is from Audit Analytics. Social controversies are constructed from RavenPack data. The sample covers 643 U.S. firms from 2013 to 2020.

Figure 5: **Estimated Effects of Exit and Voice Pressures on Controversies, for Different Exit and Voice Thresholds**

(a) Estimated β_{Exit} for different exit thresholds



(b) Estimated β_{Voice} for different voice thresholds

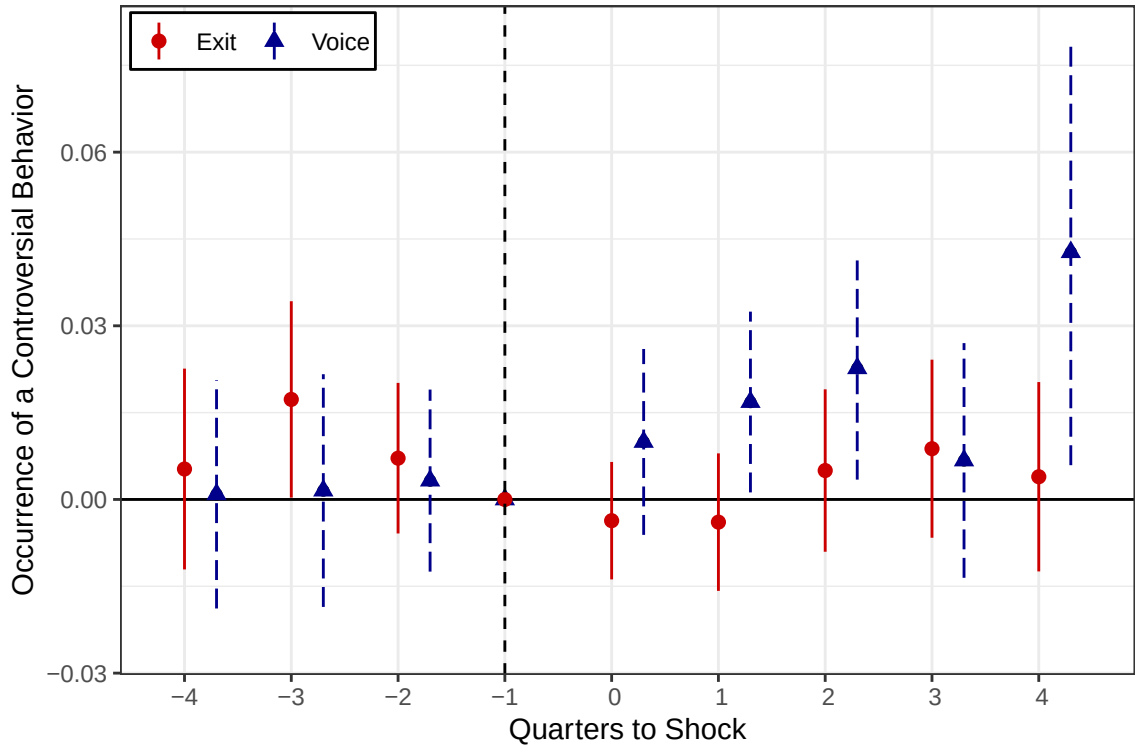


Notes:This figure plots the estimated coefficients on the β_{Exit} (top) or β_{Voice} (bottom) estimated in model 2:

$$\text{Controversy}_{n,t+2} - \text{Controversy}_{n,t} = \beta_{\text{Exit}} \overbrace{(\text{Exit}_{n,t+1} - \text{Exit}_{n,t-1})}^{\text{Instrumented by } Z_{n,t}^{Exit}} + \beta_{\text{Voice}} \overbrace{(\text{Voice}_{n,t+1} - \text{Voice}_{n,t-1})}^{\text{Instrumented by } Z_{n,t}^{Voice}} + \delta_{t+2} + u_{n,t+2},$$

using different exit score and voice score thresholds for being an exit fund (top panel), or voice fund (bottom panel). $Z_{n,t}^{\text{Exit}}$ and $Z_{n,t}^{\text{Voice}}$ refer to the hypothetical liquidation of firm n's equity by exit and voice funds, respectively, following large redemptions and assuming proportional liquidation. The 95% confidence intervals are constructed from standard errors clustered at the firm level. The regressions also include: the change in total assets, the change in investment, the change in social score, as well as quarter fixed effects. Each regression has 37,580 observations. In all cases, the instruments pass the test for strong instruments. The standard errors are clustered at the firm level.

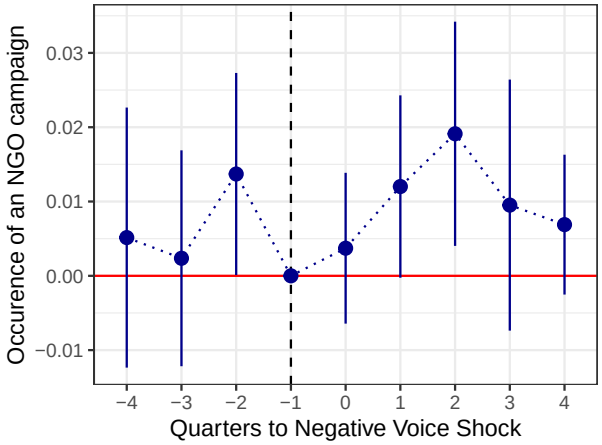
Figure 6: **The Impact of Negative Shocks to Exit and Voice Pressures on the Occurrence of Controversies – Event studies**



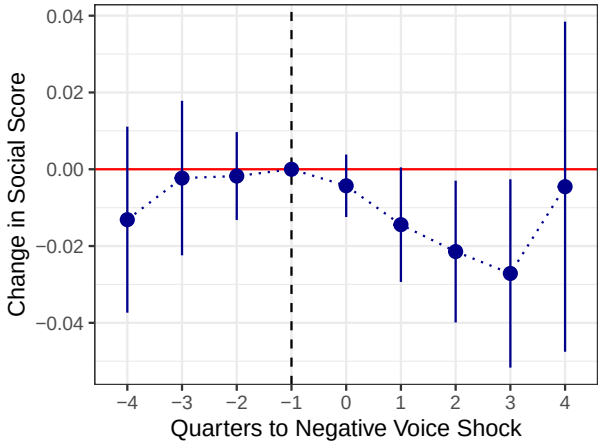
Notes: This figure displays the estimated coefficients from an event study of the occurrence of a controversy in the next period on a time dummy interacted with the occurrence of a large negative exit shock (solid, red line), and negative voice shock (dashed, blue line). The regressions also control of the log of total assets, investment, profitability, dividends to book equity, beta, a dummy indicating an ESG compensation policy, and firm and quarter fixed effects. The 95% confidence interval is constructed from standard errors clustered at the firm level. Accounting data from Refinitiv. Controversies are constructed from RavenPack data. The sample covers 1,950 U.S. firms from 2013 to 2020.

Figure 7: **The Impact of Negative Shocks to Voice Pressure on Different CSR Measures – Event studies**

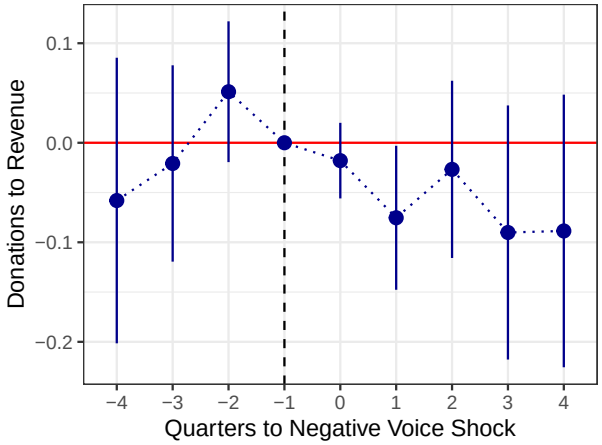
(a) Occurrence of an NGO campaign



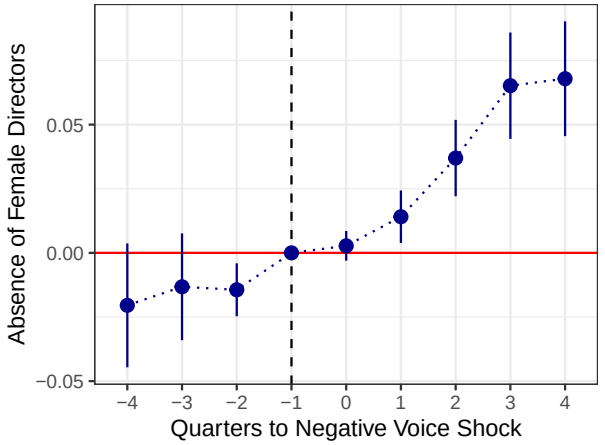
(b) Log Social score



(c) Log Donations to revenue



(d) Absence of female director



Notes: This figure displays the estimated coefficients from four event studies. The dependent variable is, alternatively, the occurrence of a negative NGO campaign next period (panel a), the log of the Social score in the next period (panel b), the log of donations to revenue (panel c), and a dummy indicating that there are no women on the board (panel d). Data on NGO campaigns from Koenig (2017). Data for the other dependent variables from Refinitiv. The regressions include time and firm fixed effects. The standard errors used to compute the 95% confidence interval are clustered at the firm level. A voice shock is defined as the expected change in voice due to funds' large redemptions two standard deviations away from the sample mean. The sample covers 1,910 U.S. firms from 2013 to 2020.

Exit or Voice? Divestment, Activism, and Corporate Social Responsibility

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Internet Appendix

A Omitted Tables and Figures

Table A1: **Firm Characteristics and Exposure to Exit and Voice Pressures**

Dependent Variable:	$100 \times \frac{\text{Exit}}{\text{Exit+Voice}}$
Variables	
Size *(log MC)*	-2.08**
	(0.881)
Cheapness *(BTM)*	-3.04***
	(0.829)
Social Score	1.51**
	(0.743)
Liquidity *(−1 ×Spread)*	2.10**
	(0.833)
Fixed-effects	
Industry	✓
Fit statistics	
Observations	1,858
R^2	0.05991

Note: This table reports estimated coefficients from the regression of the share of exit funds ownership scaled by the share of exit and voice funds ownership, on its average log market capitalization, book-to-market ratio, social score, and (minus one times) average bid/ask spread. The regression includes industry fixed effects. The dependent variable is multiplied by 100 for readability, and independent variables are standardized for comparability. Details on the construction of the variables can be found in the main text. The sample covers 1,858 U.S. firms from 2013 to 2020. Stock characteristics from Refinitiv. Robust standard-errors in parentheses. Signif. Codes: ***: 0.01, **: 0.05, *: 0.1

Table A2: **Voice Classification and Funds' Communication**

Estimation:	Logit			OLS		
Dependent Variables:	Use of a Term Related to Voice	Use of a Term Related to ESG	Use of Terms Related to Both	Intensity of Voice Terms	Intensity of ESG Terms	Intensity of Both
Model:	(1)	(2)	(3)	(4)	(5)	(6)
Variables						
Voice (0/1)	0.838***	0.979***	1.21***	0.223**	0.162***	0.225***
	(0.319)	(0.232)	(0.356)	(0.103)	(0.058)	(0.054)
Text Length (logged)	1.49***	0.423***	0.666***			
	(0.248)	(0.118)	(0.233)			
Fixed-effects						
Quarter	✓	✓	✓	✓	✓	✓
Fit statistics						
Observations	85,708	85,708	83,651	85,708	85,708	85,708
R^2	–	–	–	0.02594	0.01337	0.01747
Pseudo R^2	0.13209	0.07492	0.06643	–	–	–

Note: This table reports estimated coefficients from the regression of the use of Voice-related terms (Columns 1 and 4), ESG-related terms (Columns 2 and 5), or both types at the same time (Columns 3 and 6) in mutual funds' communication, on a dummy indicating the fund is a voice fund. All regressions also include quarter fixed effects. The Voice-related words are "engagement", "activism", "proxy", "voice", "vote", "shareholder proposal(s)", "board", "election", and "annual shareholder meeting". ESG-related words are "environmental", "social", and "ESG". Terms' *intensity* refers to the number of words in a certain category divided by the length of the text, and is standardized. Clustered (fund company) standard errors are reported in parenthese. Signif. Codes: ***: 0.01, **: 0.05, *: 0.1

Table A3: **The Impact of Controversies on Exogenous Shocks to Exit and Voice pressures**

Dependent Variables:	$Z^{Exit}_{n,t}$		$Z^{Voice}_{n,t}$	
Model:	(1)	(2)	(3)	(4)
Variables				
$Controversy_{n,t}$	0.180	0.149	0.118	0.066
	(0.160)	(0.167)	(0.133)	(0.141)
$Controversy_{n,t-1}$		0.039		-0.039
		(0.170)		(0.149)
$Controversy_{n,t-2}$		-0.098		-0.200
		(0.188)		(0.161)
Fixed-effects				
Quarter	✓	✓	✓	✓
Firm	✓	✓	✓	✓
Fit statistics				
Observations	52,863	48,555	52,772	48,477
Adjusted R^2	0.62579	0.63878	0.63443	0.63973

Note: This table reports estimated coefficients from the regression of shocks to exit (Columns 1 and 2) and voice (Columns 3 and 4), on the occurrence of controversies. All regressions include quarter and firm fixed effects. Details on the construction of the variables can be found in the main text. Controversies are defined based on Ravenpack data. The sample covers 1,910 U.S. firms from 2013 to 2020. Clustered (firm) standard-errors in parentheses. Signif. Codes: ***: 0.01, **: 0.05, *: 0.1

Table A4: **IV First stage: the Impact of Shocks to Exit and Voice on Changes in Exit and Voice Pressures**

Dependent Variables:	$\text{Exit}_{n,t+1}$ - $\text{Exit}_{n,t-1}$		$\text{Voice}_{n,t+1}$ - $\text{Voice}_{n,t-1}$	
Model:	(1)	(2)	(3)	(4)
Variables				
$Z^{\text{Exit}}_{n,t}$	4.78***	4.74***		
	(0.265)	(0.263)		
$Z^{\text{Voice}}_{n,t}$			1.32***	1.31***
			(0.195)	(0.196)
Controls		✓		✓
Fixed-effects				
Quarter	✓	✓	✓	✓
Fit statistics				
Observations	39,419	39,419	39,419	39,419
R^2	0.05813	0.06114	0.63781	0.63925

Note: This table reports estimated coefficients from the first stage of model 2, the regression of *Change in Exit* (Columns 1 and 2) and *Change in Voice* (Columns 3 and 4), respectively the change in the share of equity owned by divestor and activist funds, on the hypothetical change in those shares due to large redemptions (Z^{Exit} and Z^{Voice}), and controls. Controls include firms' changes in Total Assets, Investment, and Social Score. All regressions include quarter fixed effects. Details on the construction of the variables can be found in the main text. Stock characteristics data from Refinitiv. The sample covers 1,910 US firms from 2013 to 2020. Clustered (firm) standard-errors in parentheses. *Change in Investment* and *Change in Social Score* are divided by 100 for readability. Signif. Codes: ***: 0.01, **: 0.05, *: 0.1

Table A5: **Bias When the Change in Voice is Not Instrumented**

Dependent Variable:	$\text{Controversy}_{n,t+2}$ - $\text{Controversy}_{n,t}$	
Change in Voice is:	Not Instrumented	Instrumented
Model:	(1)	(2)
Variables		
Change in Voice	0.052	-1.28**
	(0.037)	(0.609)
Controls	✓	✓
Fixed-effects		
Quarter	✓	✓
Fit statistics		
Observations	37,480	37,480
Effective F-statistic	–	43.299

Note: This table reports estimated coefficients from the regression of a change in the occurrence of controversies, on *Change in Voice*, the change in the share of equity owned by activist funds (Column 1), and the same variable instrumented by the hypothetical change in that share due to large redemptions (Column 2). Controls include firms' changes in Total Assets, Investment, and Social Score. Both regressions include quarter fixed effects. Details on the construction of the variables can be found in the main text. Controversies are defined based on Ravenpack data. The sample covers 1,910 U.S. firms from 2013 to 2020. Stock characteristics from Refinitiv. Clustered (firm) standard-errors in parentheses. *Change in Social Score* is divided by 100 for readability. The *Effective F-statistic* is the Olea and Pflueger (2013) first-stage F-statistic. Signif. Codes: ***: 0.01, **: 0.05, *: 0.1

Table A6: **Heterogeneity in Response to Changes in Exit Pressure, by Level of CEO Wealth-Performance Sensitivity – Robustness**

Dependent Variable:	$\text{Controversy}_{n,t+2}$ - $\text{Controversy}_{n,t}$	
Model:	(1)	(2)
Variables		
Shock to Exit	0.230	1.62
	(1.19)	(1.13)
Shock to Exit×WPS	-0.975**	
	(0.388)	
Shock to Exit×WPS:Q2		-1.66
		(2.10)
Shock to Exit×WPS:Q3		0.724
		(3.27)
Shock to Exit×WPS:Q4		-4.36**
		(1.83)
Change in Total Assets	-0.001	-0.001
	(0.013)	(0.013)
Change in Investment	-0.006	-0.006
	(0.012)	(0.012)
Change in Social Score	0.016	0.016
	(0.015)	(0.015)
Fixed-effects		
Quarter	✓	✓
Fit statistics		
Observations	27,792	27,792
Adjusted R^2	0.00017	0.00017

Note: This table reports estimated coefficients from:

$$\text{Controversy}_{n,t+2} - \text{Controversy}_{n,t} = \beta_{\text{Exit}} \times Z_{n,t}^{\text{Exit}} + \beta_{\text{WPS}} \left(Z_{n,t}^{\text{Exit}} \times \text{WPS}_n \right) + \delta_{t+2} + u_{n,t+2},$$

where WPS is the past (from 2010 to 2012) average scaled CEO Wealth-Performance-Sensitivity (from Edmans *et al.*, 2009, , standardized for readability in Column 1), or a dummy for each quartile of the same variable (Column 2), and controls. Controls include changes in the firm's logged Total Assets, Investment, and Social Score. Details on the construction of the variables can be found in the main text. Controversies are defined based on Ravenpack data. Stock characteristics from Refinitiv. The sample covers 1,110 U.S. firms from 2013 to 2020. Clustered (firm) standard-errors in parentheses. Signif. Codes: ***: 0.01, **: 0.05, *: 0.1

Table A7: **Heterogeneity in Response to Changes in Exit Pressure, by Level of CEO WPS and Board Structure – Robustness**

Dependent Variable:	$\text{Controversy}_{n,t+2}$ - $\text{Controversy}_{n,t}$	
Lagged *WPS* Quartile:	Q1-3	Q4
Model:	(1)	(2)
Variables		
Shock to Exit	0.559	-10.5**
	(1.66)	(5.14)
Staggered Board	0.0008	0.005
	(0.003)	(0.004)
Shock to Exit × Staggered Board	2.16	9.87*
	(5.61)	(5.32)
Controls	✓	✓
Fixed-effects		
Quarter	✓	✓
Fit statistics		
Observations	15,045	5,034
Adjusted R^2	0.00026	-0.00323

Note: This table reports estimated coefficients from:

$$\begin{aligned}\text{Controversy}_{n,t+2} - \text{Controversy}_{n,t} = \beta_{\text{Exit}} \cdot Z^{\text{Exit}}_{n,t} + \beta_{\text{Staggered}} \cdot \text{Staggered Board}_{n,t} \\ + \beta_{\text{Inter}} \left(Z^{\text{Exit}}_{n,t} \times \text{Staggered Board}_{n,t} \right) + \delta_{t+2} + u_{n,t+2},\end{aligned}$$

on different sub-samples, depending on the firm's past (from 2010 to 2012) average scaled CEO Wealth-Performance-Sensitivity (*WPS*, from Edmans *et al.*, 2009). Controls include changes in the firm's logged Total Assets, Investment, and Social Score. Details on the construction of the variables can be found in the main text. Controversies are defined based on Ravenpack data. Stock characteristics from Refinitiv. The sample covers 1,110 U.S. firms from 2013 to 2020. Clustered (firm) standard-errors in parentheses. Signif. Codes: ***: 0.01, **: 0.05, *: 0.1

Table A8: **The Impact of Activist Cross-Ownership with Seaworld on the Occurrence of Controversies, Following the Activist Shareholders' Revolt**

Dependent Variable:	$\text{Controversy}_{n,2017Q4}$ - $\text{Controversy}_{n,2017Q2}$	
Model:	(1)	(2)
Variables		
Exposure to Seaworld	-0.427**	-0.401**
	(0.164)	(0.149)
Exposure to Seaworld × Same Industry		-0.957***
		(0.149)
Fixed-effects		
Industry × State	✓	✓
Fit statistics		
Observations	1,823	1,823
R^2	0.45048	0.45086

Note: This table estimates the impact of a shareholders' revolt at Seaworld in Jun 2017 on the behavior of firms in the same sector and with shared activist ownership. This table reports estimated coefficients from model 7, the regression of a change in the occurrence of controversies, on a measure of the common ownership between the given firm and Seaworld (*Exposure to Seaworld*), a dummy equal to one if a firm is in the same (GICS) industry as Seaworld (*Same Industry*, Column 2), the interaction between the two terms, and controls. The regression includes industry-by-state fixed effects. Details on the construction of the variables can be found in the main text. Controversies are defined based on Ravenpack data. The sample covers 1,823 US firms. Mutual fund data from CRSP. Stock characteristics from Refinitiv. Clustered (Industry) standard-errors in parentheses. Signif. Codes: ***: 0.01, **: 0.05, *: 0.1

Table A9: **The Impact of Changes in Exit and Voice Pressures on Media Coverage and Placebo Controversies – IV estimation**

Dependent Variable:	Change in:		
	Non-ESG News	Non-ESG News to Assets	Placebo Controversies
Model:	(4)	(5)	(6)
Variables			
Instrumented Change in Exit	-0.043	-0.064	0.021
	(0.545)	(0.103)	(0.105)
Instrumented Change in Voice	-0.663	0.076	-0.270
	(0.824)	(0.062)	(0.426)
Controls	✓	✓	✓
Fixed-effects			
Quarter	✓	✓	✓
Fit statistics			
Observations	36,992	37,043	37,480
Kleibergen-Paap Statistic	20.039	20.078	21.332

Note: This table reports the estimated coefficients from model 2:

$$y_{n,t+2} - y_{n,t} = \beta_{\text{Exit}} \overbrace{(\text{Exit}_{n,t+1} - \text{Exit}_{n,t-1})}^{\text{Instrumented by } Z^{\text{Exit}}_{n,t}} + \beta_{\text{Voice}} \overbrace{(\text{Voice}_{n,t+1} - \text{Voice}_{n,t-1})}^{\text{Instrumented by } Z^{\text{Voice}}_{n,t}} + \delta_{t+2} + u_{n,t+2},$$

where $y_{n,\cdot}$ varies by column. Details on the construction of the variables can be found in the main text. Controversies and Non-ESG News are defined based on Ravenpack data. *Placebo* controversies are defined as controversies about an event that happened more than 90 days before their publication. The sample covers 1,910 U.S. firms from 2013 to 2020. Controls include the changes in Total Assets, Investment, and Social Score. Clustered (firm) standard-errors in parentheses. Signif. Codes: ***: 0.01, **: 0.05, *: 0.1

Table A10: **The Impact of Voice on Controversies, using Funds Owned by Natixis, Following Natixis' Trading Losses**

Dependent Variables:	Controversy over the past year (0/1)			Controversy over the next year (0/1)		
Board:		Non-staggered	Staggered		Non-staggered	Staggered
Model:	(1)	(2)	(3)	(4)	(5)	(6)
			Panel A			
Predicted Change in Voice	-0.042	-0.030	-0.002	-0.188**	-0.201*	0.122
	(0.078)	(0.103)	(0.151)	(0.080)	(0.116)	(0.140)
Controls	✓	✓	✓	✓	✓	✓
Industry FE	✓	✓	✓	✓	✓	✓
Observations	1,335	735	518	1,306	722	507
R^2	0.15960	0.24089	0.12185	0.12588	0.18790	0.10369
			Panel B			
High Voice Share × Exposure to Natixis	0.039	0.025	-0.457	0.203***	0.175*	-0.016
	(0.068)	(0.081)	(0.776)	(0.074)	(0.101)	(0.185)
High Voice Share	0.023	0.032	0.182	-0.050	-0.052	0.056
	(0.035)	(0.047)	(0.300)	(0.036)	(0.052)	(0.083)
Exposure to Natixis	0.009	0.014	-0.0005	0.029***	0.020**	0.035**
	(0.007)	(0.010)	(0.013)	(0.007)	(0.009)	(0.015)
Controls	✓	✓	✓	✓	✓	✓
Industry FE	✓	✓	✓	✓	✓	✓
Observations	1,335	735	518	1,306	722	507
R^2	0.16222	0.24399	0.12369	0.13691	0.19172	0.11668

Note: Panel A reports the estimated coefficients from the regression of a dummy indicating the occurrence of a controversy on the hypothetical change in voice pressure due to large redemptions from funds in Natixis' portfolio (*Predicted Change in Voice*), and controls. Panel B reports the estimated coefficients from the regression of a dummy indicating the occurrence of a controversy on indirect exposure to Natixis (*Exposure to Natixis*), a dummy indicating that most of a firm's indirect exposure to Natixis is via voice funds (*High Voice Share*), their interaction, and controls. Controls include firms' Total Assets, Investment, Social score, lagged mutual fund ownership and lagged voice pressure. All regressions include industry fixed effects. Details on the construction of the variables can be found in the main text. Controversies are defined based on Ravenpack data. The sample covers 1,335 U.S. firms. Stock characteristics from Refinitiv. Clustered (Industry and State) standard-errors in parentheses. Signif. Codes: ***: 0.01, **: 0.05, *: 0.1

Table A11: **Voice Without Exit: the Impact of Index Funds' Voice on Controversies on Firms in the S&P 400 or 500 – IV Estimation**

Dependent Variable:	Controversy$_{t+2}$ - Controversy$_t$	
Model:	(1)	(2)
Variables		
Change in Voice	-2.27**	-2.26**
	(1.09)	(1.05)
Controls		✓
Fixed-effects		
Quarter	✓	✓
Fit statistics		
Observations	11,364	11,364
Effective F-statistic	9.2238	9.4169

Note: This table reports estimated coefficients from model 5:

$$\text{Controversy}_{n,t+2} - \text{Controversy}_{n,t} = \beta_{Voice} \overbrace{(\text{Voice}_{n,t+1} - \text{Voice}_{n,t-1})}^{\text{Instrumented by } Z^{Voice}_{n,t}} + \delta_{t+2} + u_{n,t+2},$$

using only index funds in the construction of voice pressure. All regressions include quarter fixed effects. Controls include firms' changes in Total Assets, Investment, and Social Score. Details on the construction of the variables can be found in the main text. Controversies are defined based on Ravenpack data. The sample covers the US firms in either the S&P400 or the S&P500, from 2013 to 2020. Stock characteristics from Refinitiv. Clustered (firm) standard-errors in parentheses. The *Effective F-statistic* is the Olea and Pflueger (2013) first-stage F-statistic. Signif. Codes: ***: 0.01, **: 0.05, *: 0.1

Table A12: **Magnitude of the Shocks to Exit and Voice and Estimated Impact on Controversies– OLS**

Dependent Variable:	$\text{Controversy}_{n,t+2}$ (× 100)	
Subsample:	$\text{Exit}_{n,t-1} < 10\%$	$\text{Voice}_{n,t-1} < 10\%$
Model:	(1)	(2)
Variables		
$\mathbf{1} \cdot (Z^{\text{Exit}}_{n,t} \leq -1\%)$	-1.68	
	(1.49)	
$\mathbf{1} \cdot (Z^{\text{Exit}}_{n,t} > -1\% \text{ and } \leq -0.75\%)$	-1.95	
	(1.43)	
$\mathbf{1} \cdot (Z^{\text{Exit}}_{n,t} > -0.75\% \text{ and } \leq -0.5\%)$	1.18	
	(1.45)	
$\mathbf{1} \cdot (Z^{\text{Exit}}_{n,t} > -0.5\% \text{ and } \leq -0.1\%)$	-0.220	
	(0.193)	
$\mathbf{1} \cdot (Z^{\text{Voice}}_{n,t} \leq -1\%)$		3.29**
		(1.40)
$\mathbf{1} \cdot (Z^{\text{Voice}}_{n,t} > -1\% \text{ and } \leq -0.75\%)$		5.00
		(3.26)
$\mathbf{1} \cdot (Z^{\text{Voice}}_{n,t} > -0.75\% \text{ and } \leq -0.5\%)$		-0.683
		(0.799)
$\mathbf{1} \cdot (Z^{\text{Voice}}_{n,t} > -0.5\% \text{ and } \leq -0.1\%)$		0.210
		(0.309)
Controls	✓	✓
Fixed-effects		
Quarter	✓	✓
Firm	✓	✓
Fit statistics		
Observations	36,459	30,273
R^2	0.25851	0.28486

Note: This table reports the estimated coefficients from the regression of the occurence of a controversy on dummies indicating the occurrence of shocks to exit (Column 1) or voice (Column 2) pressures of different magnitudes. Controls include firms' logged Total Assets, Investment, Social Score, and lagged Mutual Fund Ownership. Details on the construction of the variables can be found in the main text. Controversies are defined based on Ravenpack data. Stock characteristics from Refinitiv. The sample covers US firms from 2013 to 2020 with less than 10% exit pressure (Column 1) or 10% voice pressure (Column 2). Clustered (firm) standard-errors in parentheses. Signif. Codes: ***: 0.01, **: 0.05, *: 0.1

Table A13: **The Impact of Changes in Exit and Voice Pressures on the Occurrence of Controversies, Using Funds Less Likely to be "Green Window-Dressers"– IV Estimation**

Dependent Variable:	$\text{Controversy}_{n,t+2}$ -$\text{Controversy}_{n,t}$	
Model:	(1)	(2)
Variables		
Instrumented Change in Exit	0.209	0.195
	(0.177)	(0.176)
Instrumented Change in Voice	-1.92**	-1.92**
	(0.841)	(0.840)
Controls		✓
Fixed-effects		
Quarter	✓	✓
Fit statistics		
Observations	30,506	30,506
Kleibergen-Paap Statistic	21.442	21.332

Note: This table reports estimated coefficients from model 2:

$$\text{Controversy}_{n,t+2} - \text{Controversy}_{n,t} = \beta_{Exit} \overbrace{(\text{Exit}_{n,t+1} - \text{Exit}_{n,t-1})}^{\text{Instrumented by } Z^{Exit}_{n,t}} + \beta_{Voice} \overbrace{(\text{Voice}_{n,t+1} - \text{Voice}_{n,t-1})}^{\text{Instrumented by } Z^{Voice}_{n,t}} + \delta_{t+2} + u_{n,t+2}.$$

The regressions only use funds that report their holdings monthly to the SEC, as those funds are less likely to be "window-dressers". All regressions include quarter fixed effects. Controls include firms' changes in Total Assets, Investment, and Social Score. Details on the construction of the variables can be found in the main text. News data from Ravenpack. The sample covers 1,910 US firms from 2013 to 2020. Stock characteristics from Refinitiv. Clustered (firm) standard-errors in parentheses. *Change in Social Score* is divided by 100 for readability. Signif. Codes: ***: 0.01, **: 0.05, *: 0.1

Table A14: **Stability of the Exit Fund Classification, and the Impact of Changes in Exit Pressure on Controversies – IV Estimation**

Dependent Variable:	$\text{Controversy}_{n,t+2}$-$\text{Controversy}_{n,t}$	
Exit pressure measured using	Stable exit funds	
Model:	(1)	(2)
Variables		
Instrumented Change in Exit	0.083	0.087
	(0.188)	(0.189)
Controls		✓
Fixed-effects		
Quarter	✓	✓
Fit statistics		
Observations	41,105	41,105
Effective F-statistic	39.096	39.562

Note: This table reports estimated coefficients from model 4:

$$\text{Controversy}_{n,t+2} - \text{Controversy}_{n,t} = \beta_{\text{Exit}} \overbrace{(\text{Exit}_{n,t+1} - \text{Exit}_{n,t-1})}^{\text{Instrumented by } Z^{\text{Exit}}_{n,t}} + \delta_{t+2} + u_{n,t+2},$$

where $Exit_{n,t}$ is measured as the share of firm n's equity owned by stable exit funds, defined as funds that remain classified as exit after their first exit classification (539 funds). All regressions include quarter fixed effects. Controls include firms' changes in Total Assets, Investment, and Social Score. Details on the construction of the variables can be found in the main text. Controversies are defined based on Ravenpack data. The sample covers 1,910 US firms from 2013 to 2020. Stock characteristics from Refinitiv. Clustered (Firm) standard-errors in parentheses. The *Effective F-statistic* is the Olea and Pflueger (2013) first-stage F-statistic. Signif. Codes: ***: 0.01, **: 0.05, *: 0.1

Table A15: **The Impact of Shocks to Exit and Voice Pressures on the Occurrence of Controversies Over Different Horizons**

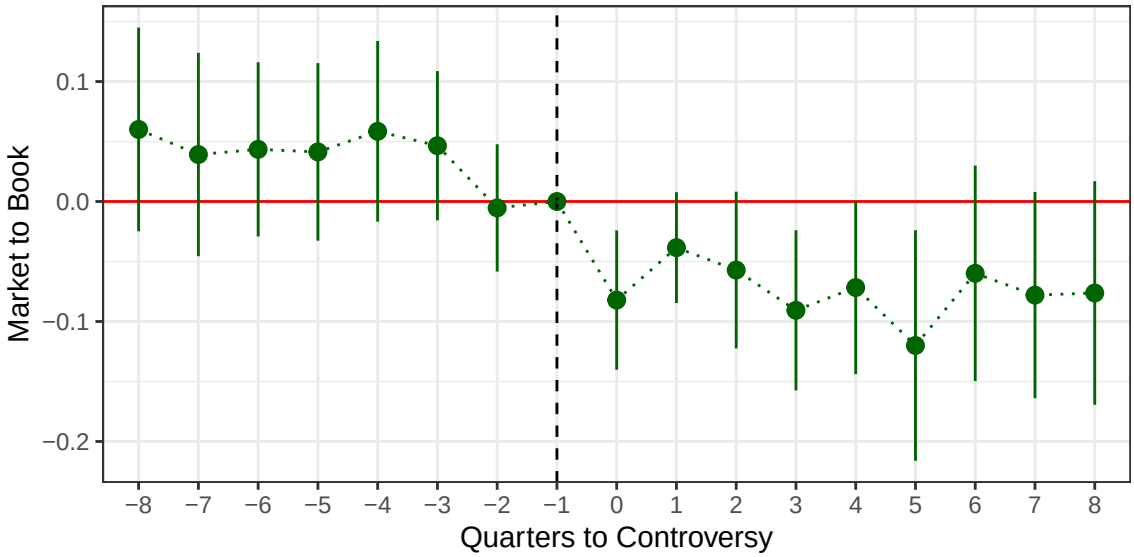
Dependent Variables:	$\text{Controversy}_{n,[t-2:t+1]}$			$\text{Controversy}_{n,[t+2:t+5]}$			$\text{Controversy}_{n,[t+6:t+9]}$		
Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Variables									
Exogenous Shock to Exit	0.060	0.069	0.910	-1.37	-1.13	-0.941	0.359	0.314	0.089
	(1.49)	(1.45)	(1.47)	(1.60)	(1.56)	(1.60)	(1.63)	(1.63)	(1.70)
Exogenous Shock to Voice	-0.419	-0.418	-0.252	-2.05**	-2.00**	-2.22**	0.305	0.275	0.275
	(0.705)	(0.707)	(0.813)	(0.909)	(0.925)	(0.902)	(0.972)	(1.00)	(1.01)
Lagged Fund Ownership		0.001	0.032		0.037	0.046		-0.008	-0.005
		(0.045)	(0.055)		(0.045)	(0.049)		(0.046)	(0.046)
Lagged Controversy			-0.096***			-0.117***			-0.111***
			(0.017)			(0.017)			(0.018)
Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fixed-effects									
Quarter	✓	✓	✓	✓	✓	✓	✓	✓	✓
Firm	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fit statistics									
Observations	37,482	37,482	37,482	31,900	31,900	30,766	25,259	25,259	24,389
R^2	0.25765	0.25769	0.25782	0.41873	0.41876	0.42730	0.44489	0.44489	0.45464

Note: This table reports the estimated coefficients from model 8:

$$\text{Controversy}_{n,[t+\tau:t+\tau+3]} = \beta_{\text{Exit}} \cdot Z^{\text{Exit}}_{n,t} + \beta_{\text{Voice}} \cdot Z^{\text{Voice}}_{n,t} + \delta_t + \gamma_i + u_{n,t+\cdot}.$$

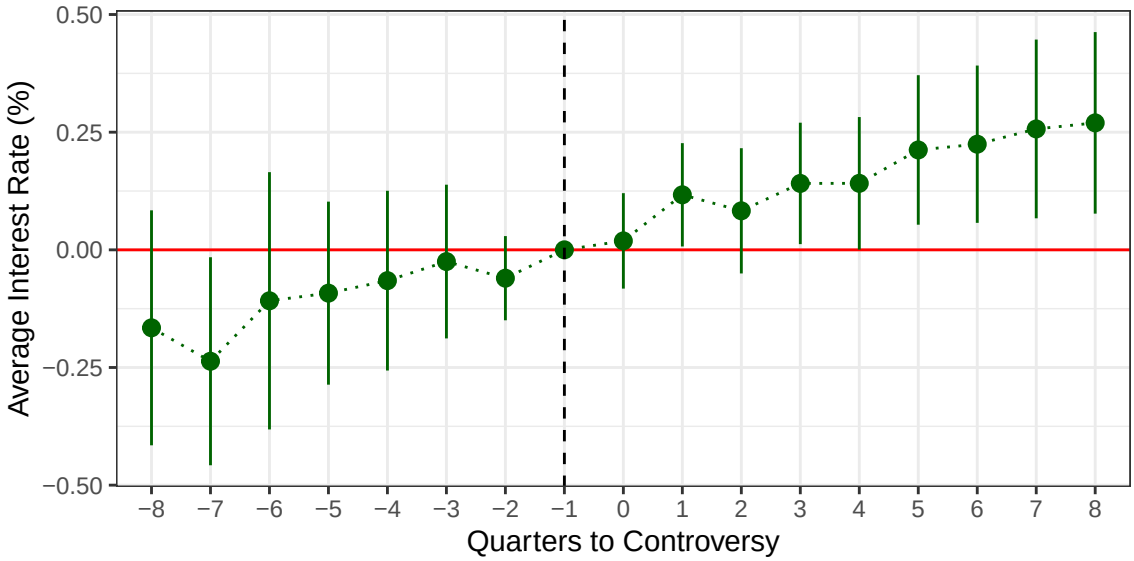
where τ varies by column. Details on the construction of the variables can be found in the main text. All regressions also include quarter and firm fixed effects. Controls include firms' Total Assets, Investment, and Social Score. *Lagged Controversy* is defined as $\text{Controversy}_{n,[t+\tau-4:t+\tau-1]}$. Controversies are defined based on Ravenpack data. Stock characteristics from Refinitiv. The sample covers 1,910 US firms from 2013 to 2020. Clustered (firm) standard-errors in parentheses. Signif. Codes: ***: 0.01, **: 0.05, *: 0.1

Figure A1: **Market to Book Ratio Around a Controversy – Event Study**



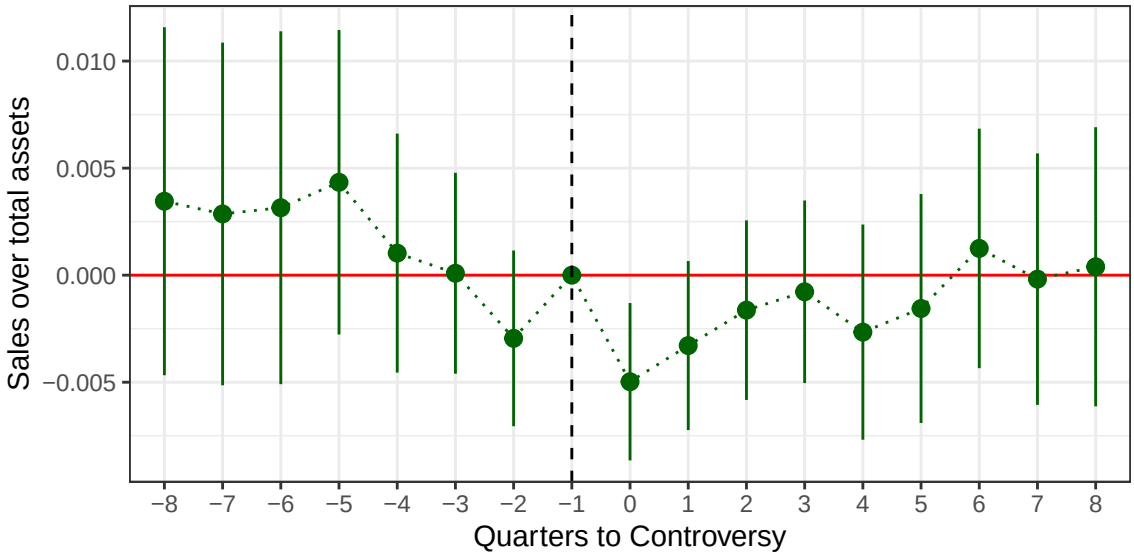
Notes: This figure displays the Market to Book ratio around the outbreak of a social controversy, from 2 years before to 2 years after its publication. The solid line represents the estimated coefficient, and the shaded area represents the 95% confidence interval, constructed using standard errors clustered at the firm level. Accounting data from Compustat. The regression also includes firm and quarter-by-industry fixed effects. Social controversies are constructed from Ravenpack data. The sample covers 1,910 U.S. firms from 2013 to 2020.

Figure A2: **Average Interest Rate Around a Controversy – Event Study**



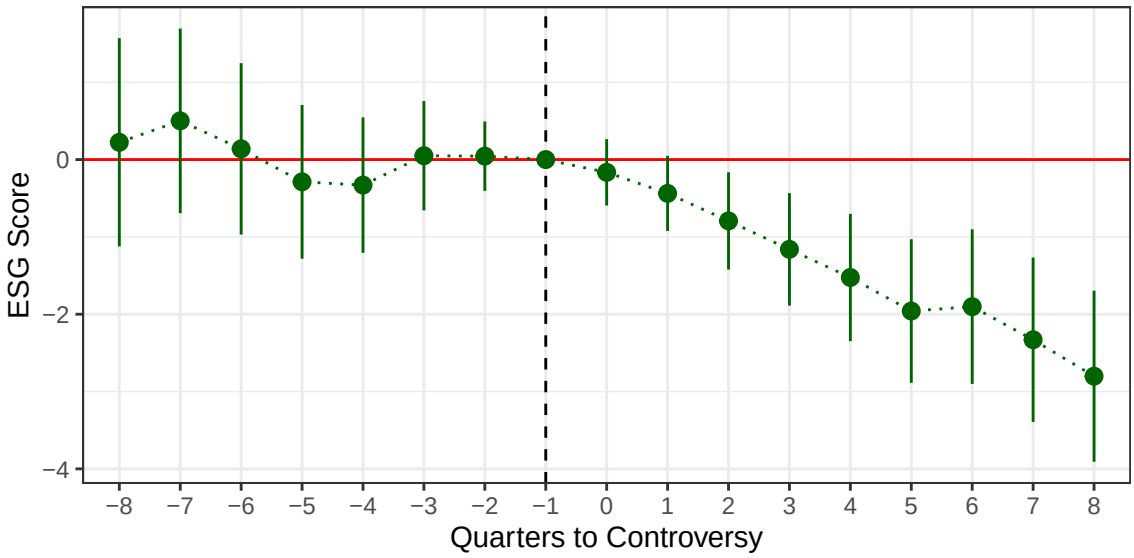
Notes: This figure displays the average interest rate around the outbreak of a Social public controversy, from 2 years before to 2 years after its publication. The average interest rate is defined as interest expenses over total debt. The 95% confidence intervals are constructed using standard errors clustered at the firm level. The regression also includes firm and quarter-by-industry fixed effects. Social controversies are constructed from Ravenpack data. Accounting data from Compustat. The sample covers 1,910 US firms from 2013 to 2020.

Figure A3: **Sales Over Total Assets Around a Controversy – Event Study**



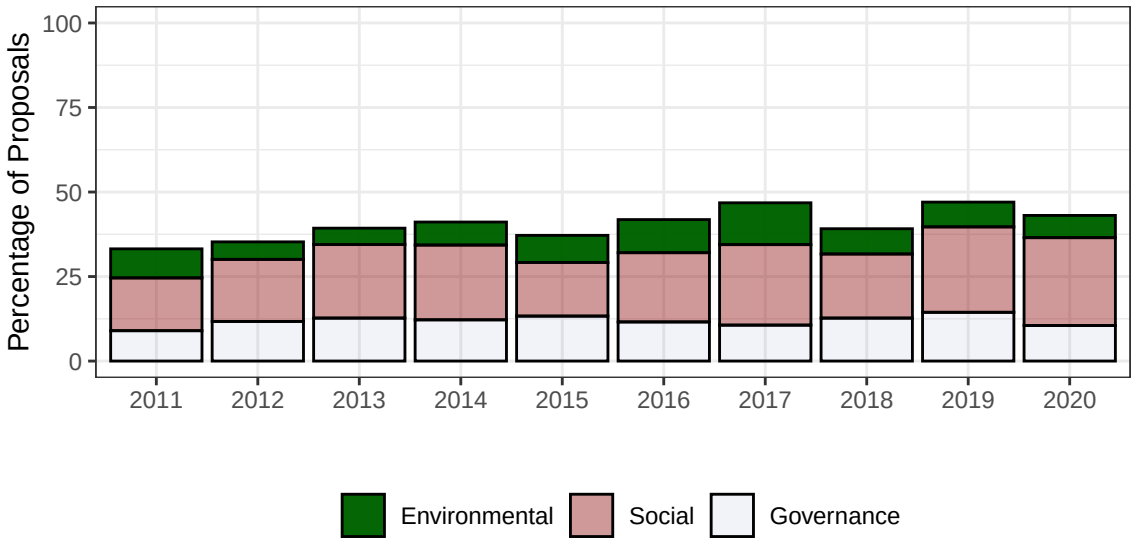
Notes: This figure displays sales over assets around the outbreak of a Social public controversy, from 2 years before to 2 years after its publication.The 95% confidence intervals are constructed using standard errors clustered at the firm level. The regression also includes firm and quarter-by-industry fixed effects. Social controversies are constructed from Ravenpack data. Accounting data from Compustat. The sample covers 1,910 US firms from 2013 to 2020.

Figure A4: **ESG Score Around a Controversy – Event Study**



Notes: This figure displays the ESG score around a Social public controversy, from 2 years before to 2 years after its publication. The 95% confidence intervals are constructed using standard errors clustered at the firm level. The regression also includes firm and quarter-by-industry fixed effects. Social controversies are constructed from Ravenpack data. ESG score data from Refinitiv. The sample covers 1,910 U.S. firms from 2013 to 2020.

Figure A5: **Proportion of ESG-related Shareholder Proposals Over Time**



Notes: This figure displays the proportion of ESG-related shareholder proposals among all shareholder proposals from 2011 to 2020. Data from the N-PX forms filed by mutual funds at the Securities and Exchange Commission. The classification of topics as Environmental, Social, or Governance is based on textual analysis of the reported topic of the vote. More details on the classification can be found in Appendix C.

Figure A6: **Examples of Two N-PX Reports**

(a) MassMutual Diversified Value Fund

FACEBOOK, INC. Agenda Number: 935178221

Security: 30303M102
Meeting Type: Annual
Meeting Date: 27-May-2020
Ticker: FB
ISIN: US30303M1027

Prop.#	Proposal	Proposal Type	Proposal Vote	For/Against Management
1.	DIRECTOR			
	Peggy Alford	Mgmt	Withheld	Against
	Marc L. Andreessen	Mgmt	Withheld	Against
	Andrew W. Houston	Mgmt	Withheld	Against
	Nancy Killefer	Mgmt	Withheld	Against
	Robert M. Kimmitt	Mgmt	Withheld	Against
	Sheryl K. Sandberg	Mgmt	Withheld	Against
	Peter A. Thiel	Mgmt	Withheld	Against
	Tracey T. Travis	Mgmt	Withheld	Against
	Mark Zuckerberg	Mgmt	Withheld	Against
2.	To ratify the appointment of Ernst & Young LLP as Facebook, Inc.'s independent registered public accounting firm for the fiscal year ending December 31, 2020.	Mgmt	Against	Against
3.	To approve the director compensation policy.	Mgmt	Against	Against
4.	A stockholder proposal regarding change in stockholder voting.	Shr	For	Against
5.	A stockholder proposal regarding an independent chair.	Shr	For	Against
6.	A stockholder proposal regarding majority voting for directors.	Shr	For	Against
7.	A stockholder proposal regarding political advertising.	Shr	For	Against
8.	A stockholder proposal regarding human/civil rights expert on board.	Shr	For	Against
9.	A stockholder proposal regarding report on civil and human rights risks.	Shr	For	Against
10.	A stockholder proposal regarding child exploitation.	Shr	For	Against
11.	A stockholder proposal regarding median gender/racial pay gap.	Shr	For	Against

(b) Green Century Balanced Fund

FACEBOOK, INC.

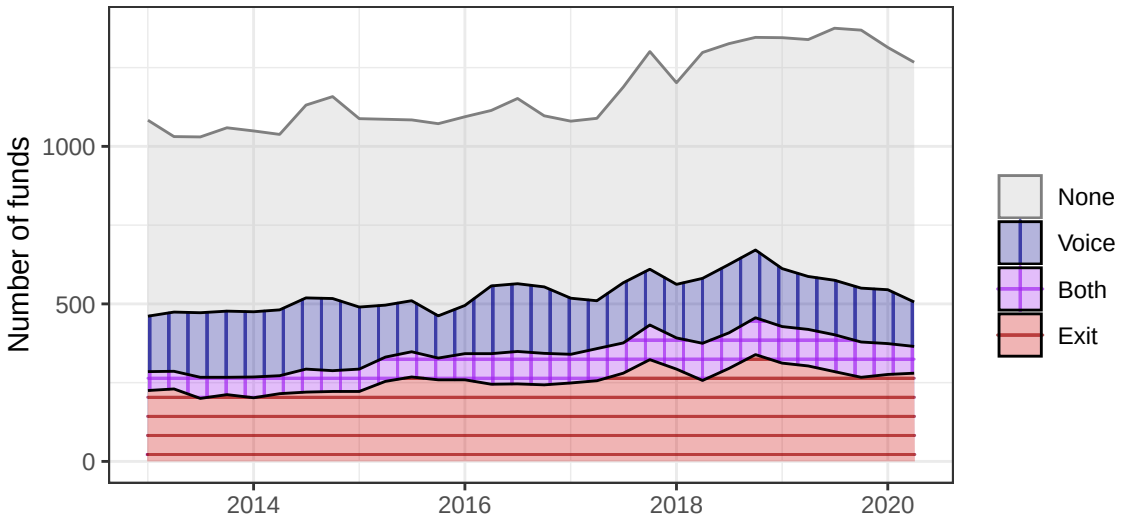
Ticker: FB Security ID: 30303M102
Meeting Date: MAY 27, 2020 Meeting Type: Annual
Record Date: APR 03, 2020

#	Proposal	Mgt Rec	Vote Cast	Sponsor
1.1	Elect Director Peggy Alford	For	For	Management
1.2	Elect Director Marc L. Andreessen	For	Withhold	Management
1.3	Elect Director Andrew W. Houston	For	For	Management
1.4	Elect Director Nancy Killefer	For	For	Management
1.5	Elect Director Robert M. Kimmitt	For	For	Management
1.6	Elect Director Sheryl K. Sandberg	For	For	Management
1.7	Elect Director Peter A. Thiel	For	For	Management
1.8	Elect Director Tracey T. Travis	For	For	Management
1.9	Elect Director Mark Zuckerberg	For	For	Management
2	Ratify Ernst & Young LLP as Auditors	For	For	Management
3	Approve Non-Employee Director Compensation Policy	For	For	Management
4	Approve Recapitalization Plan for all Stock to Have One-vote per Share	Against	For	Shareholder
5	Require Independent Board Chair	Against	Against	Shareholder
6	Require a Majority Vote for the Election of Directors	Against	Against	Shareholder
7	Report on Political Advertising	Against	Against	Shareholder
8	Require Independent Director Nominee with Human and/or Civil Rights Experience	Against	Against	Shareholder
9	Report on Civil and Human Rights Risk Assessment	Against	Against	Shareholder
10	Report on Online Child Sexual Exploitation	Against	Against	Shareholder
11	Report on Median Gender/Racial Pay Gap	Against	Against	Shareholder

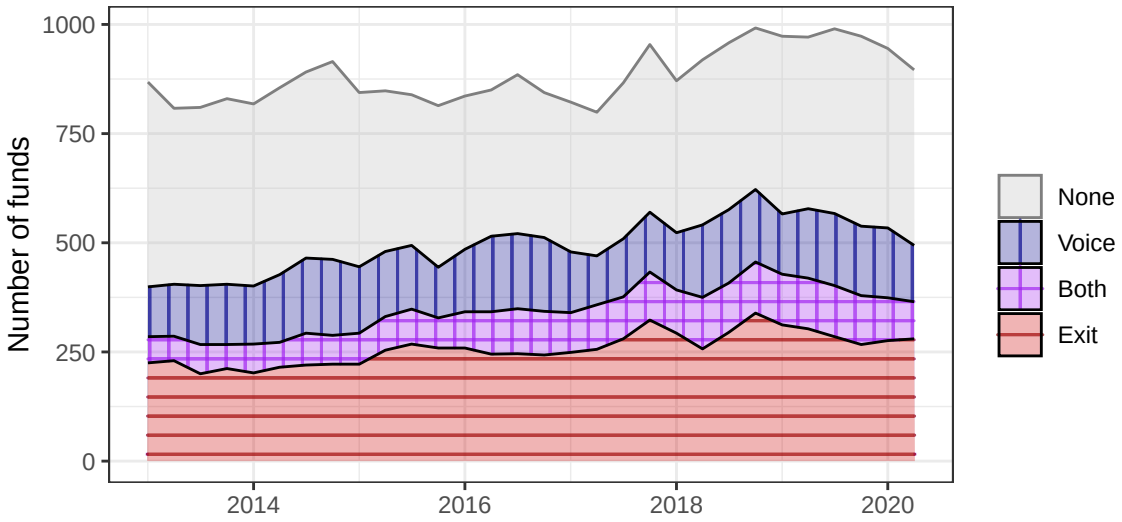
Notes: The two panels show examples of N-PX reports filed at the Securities and Exchange Commission. Panel (a) is a screenshot from MassMutual Diversified Value Fund's 2020 N-PX report, with its votes at Facebook's AGM. Panel (b) is a screenshot of Green Century Balanced Fund's votes at the same AGM. Items 9 to 11 are classified as "Social" proposals due to the presence of keywords such as "human rights", "child exploitation", and "gender pay gap". By voting against the three items, MassMutual score 0/3 on this AGM, and Green Century score 3/3.

Figure A7: **Distribution of Fund Types Over Time**

(a) *Sample*: all funds



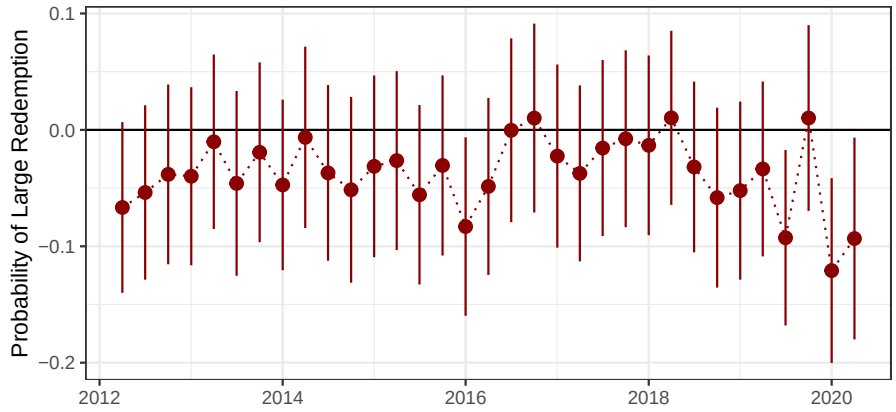
(b) *Sample*: excluding pure index funds



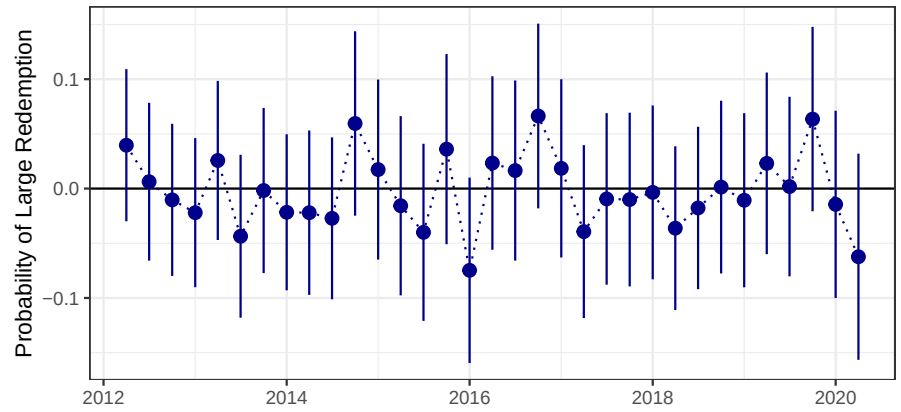
Notes: This figure displays the number of funds in each group over time, focusing on all funds in the top panel and only funds that are not identified as index funds in the bottom panel. The exit classification is based on portfolio holdings data from CRSP. The voice classification is based on voting data from the N-PX files gathered from the SEC website. Details on the construction of the exit and voice scores can be found in the main text. Based on a sample of 1,995 funds between 2013 and 2020.

Figure A8: **Probability of a Large Redemption of Exit and Voice Funds, Compared to Other Funds**

(a) Exit funds vs other funds



(b) Voice funds vs other funds



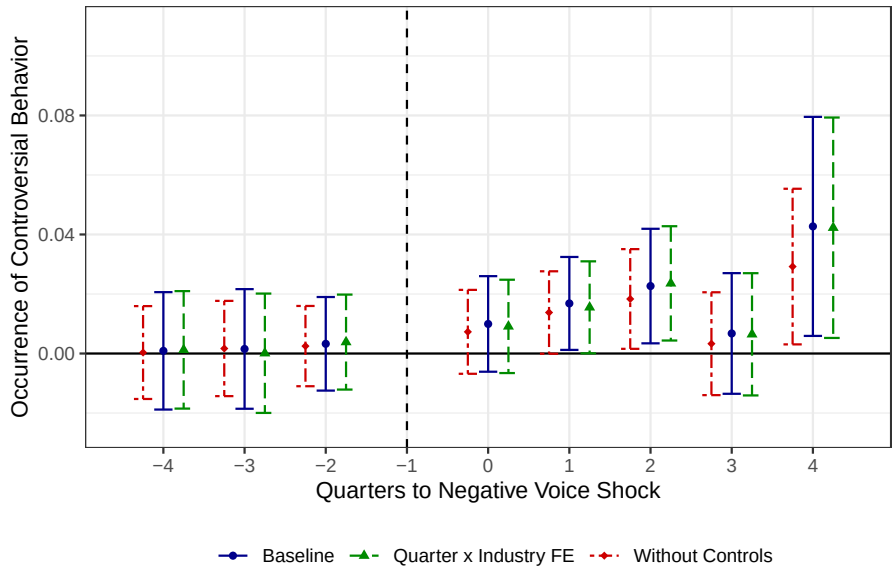
Notes: The figure reports the β_t from the following regression:

$$\mathbf{1}(\text{Flow}_{i,t} < -5\%) = \sum_t \beta_t \cdot \text{Quarter}_t \times \text{Fund Type}_{i,t} + \delta \cdot \text{Quarter}_t + \gamma \cdot \text{Fund Type}_{i,t} + \epsilon_{i,t},$$

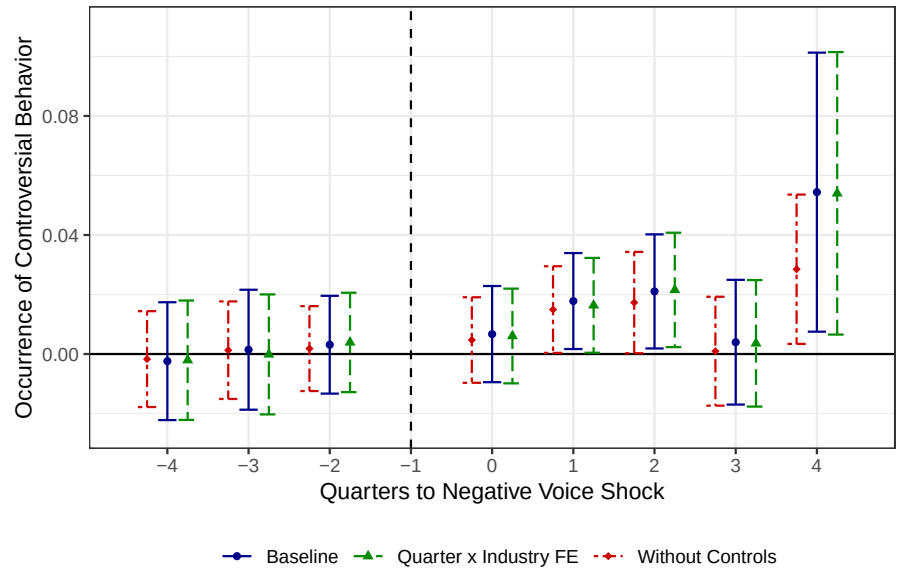
where *Fund Type* is either exit (Panel A) or voice (Panel B). Fund data from CRSP. The sample covers 1,995 U.S. funds from 2012 to 2020. Standard errors are clustered at the fund level.

Figure A9: **The Impact of Negative Shocks to Voice Pressure on the Occurrence of Controversies – Event Study (Robustness)**

(a) Main specification



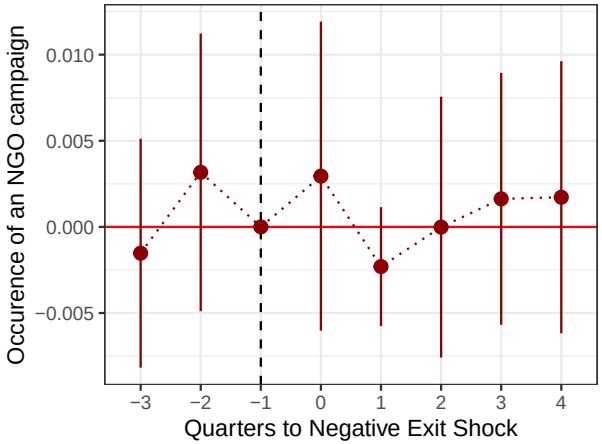
(b) Sun and Abraham (2021) specification



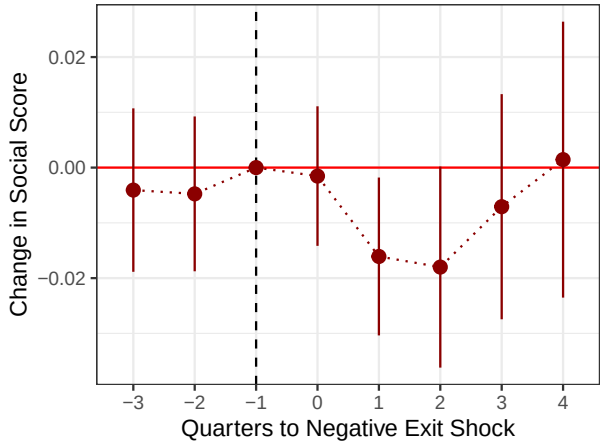
Notes: This figure displays the estimated coefficients from six event studies. The dependent variable is a dummy indicating the occurrence of a controversy the following quarter (based on Ravenpack data). Regressions in panel a) are estimated as detailed in the main text, while regressions in panel b) are estimated using the Sun and Abraham (2021) specification. The regressions include either time and firm fixed effects (baseline and without controls specifications) or firm and Quarter × Industry fixed effects. The standard errors used to compute the 95% confidence interval are clustered at the firm level. A voice shock is defined as an expected change in voice pressure due to voice funds' large redemptions two standard deviations away from the sample mean. The sample covers 1,910 US firms from 2013 to 2020.

Figure A10: **The impact of a negative shock to exit pressure on alternative CSR measures – Event studies**

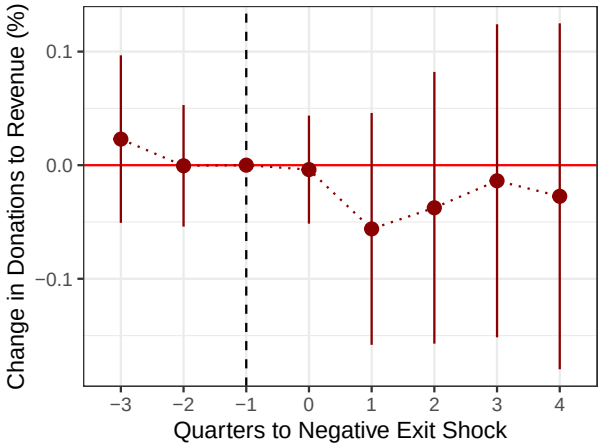
(a) Occurrence of an NGO campaign



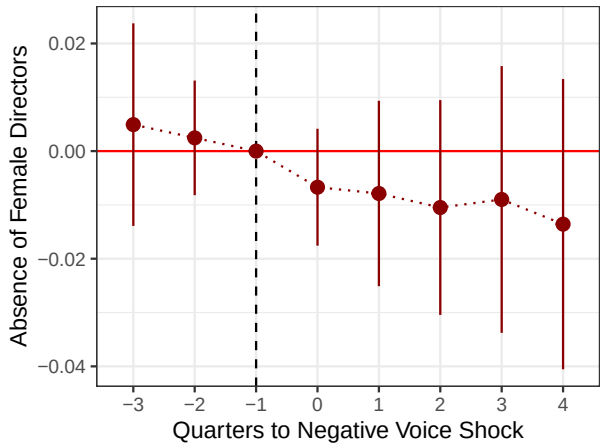
(b) Log Social score



(c) Log Donations to revenue



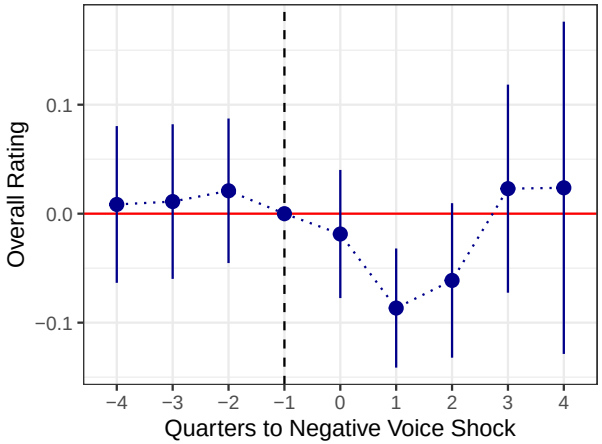
(d) Absence of female director



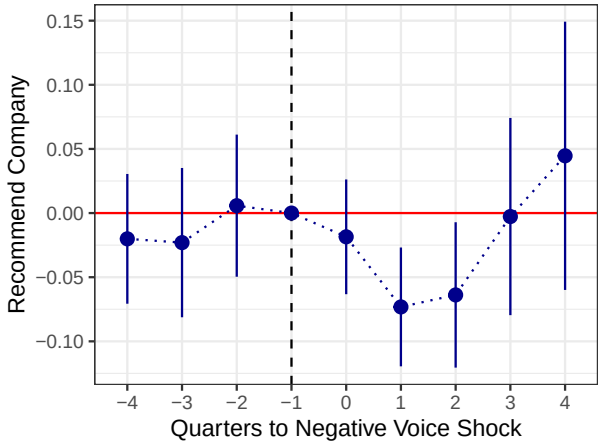
Notes: This figure displays the estimated coefficients from four event studies. The dependent variable is, alternatively, the occurrence of an NGO campaign next period (panel a), the log of the Social score in the next period (panel b), the log of donations to revenue (panel c), and a dummy indicating that there are no women on the board (panel d). Data on NGO campaigns from Koenig (2017). Data for the other dependent variables from Refinitiv. The regressions include time and firm fixed effects. The standard errors used to compute the 95% confidence interval are clustered at the firm level. An exit shock is defined as an expected change in exit due to funds' large redemptions two standard deviations away from the sample mean. The sample covers 1,910 US firms from 2013 to 2020.

Figure A11: **The Impact of Negative shocks to Voice Pressure on Glassdoor's Reviews – Event Studies**

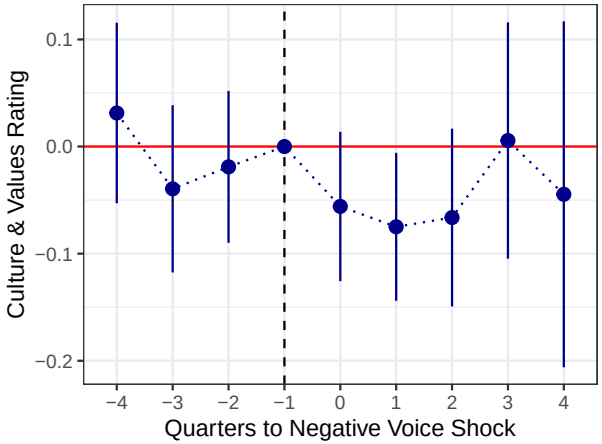
(a) Overall Glassdoor rating



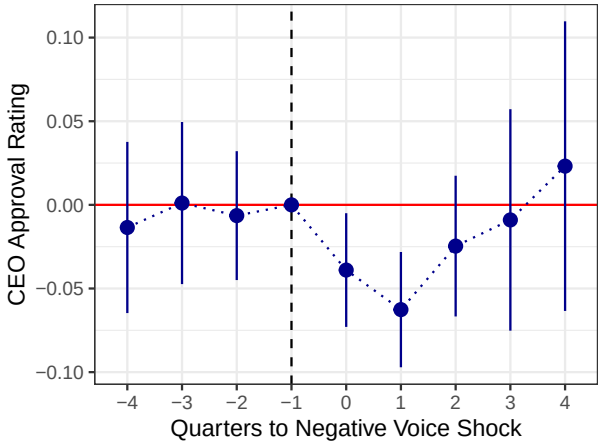
(b) Whether the employee recommends the firm



(c) Culture and Values rating



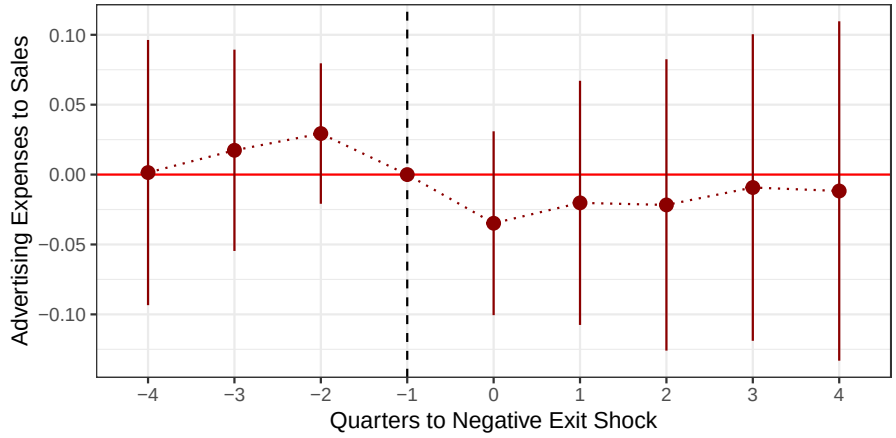
(d) CEO approval rating



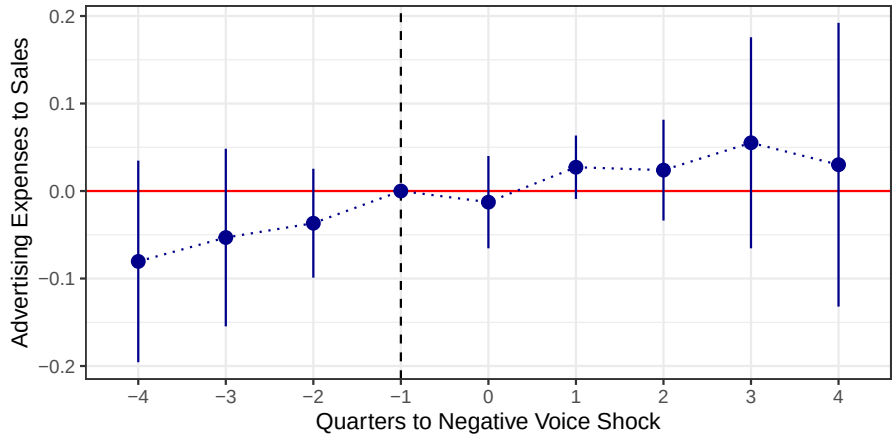
Notes: This figure displays the estimated coefficients from four event studies. The dependent variable is, alternatively, the overall Glassdoor rating, the average recommendation, the "Culture & Values" rating, and the CEO approval rating, all in the next period. Data for the other dependent variables from Refinitiv. The regressions include industry ×time and firm fixed effects. The standard errors used to compute the 95% confidence interval are clustered at the firm level. A voice shock is defined as the expected change in voice due to funds' large redemptions two standard deviations away from the sample mean. The sample covers 347 US firms with at least 5 reviews in each quarter from 2013 to 2020.

Figure A12: **The Impact of Negative Shocks to Exit and Voice Pressures on Advertising Expenses**

(a) Negative Shocks to Exit Pressure

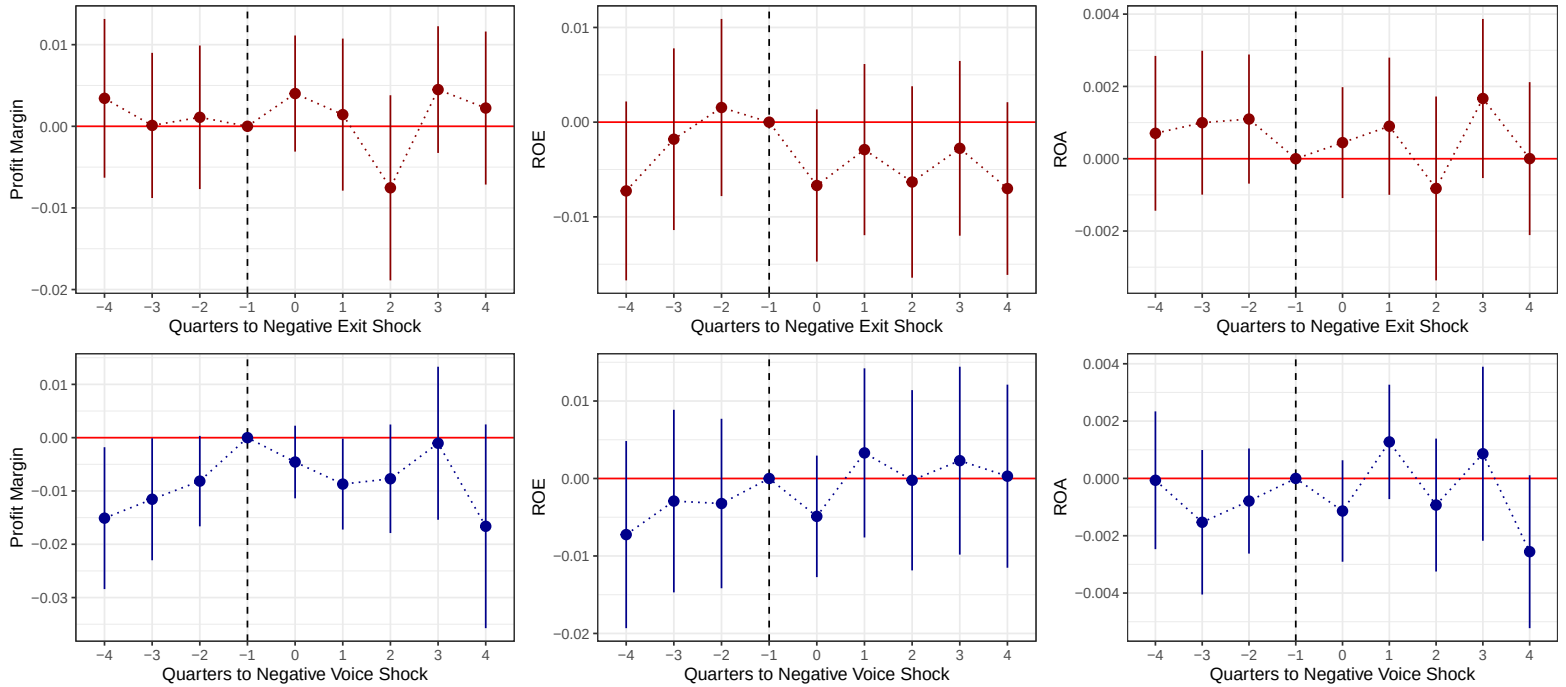


(b) Negative Shocks to Voice Pressure



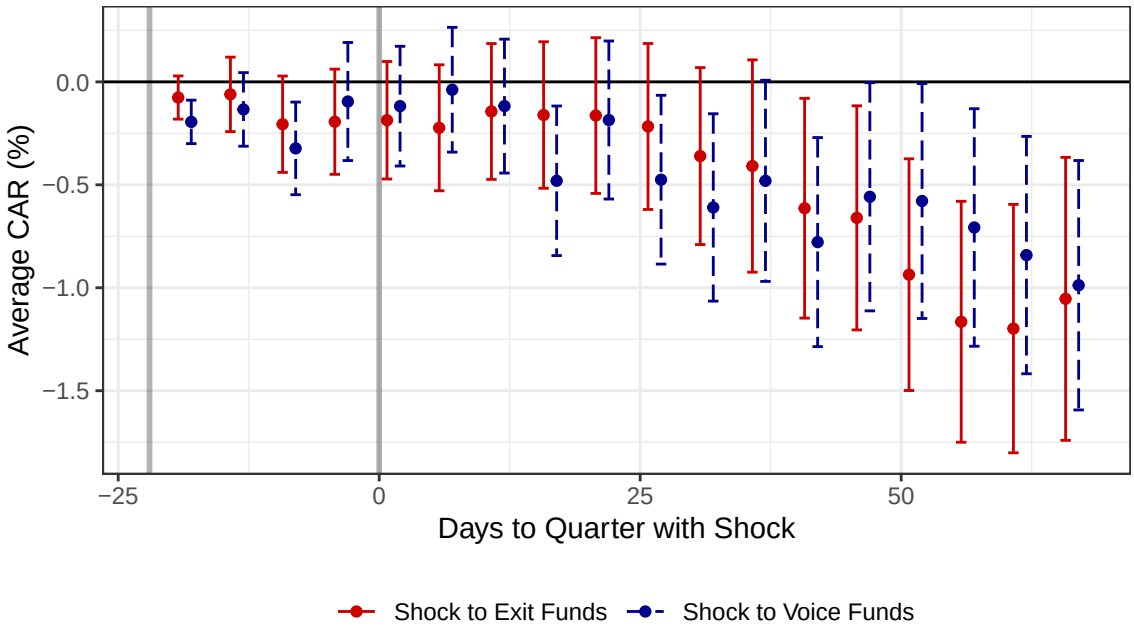
Notes: This figure displays the estimated coefficients from two event studies. The dependent variable is the advertising expenses normalized by sales (winsorized at the at the 2.5 and 97.5 percentiles). The standard errors used to compute the 95% confidence interval are clustered at the firm level. An exit (voice) shock is defined as an expected change in exit (voice) pressure due to exit (voice) funds' large redemptions two standard deviations away from the sample mean. The regressions also include firm and quarter fixed effects. The sample covers 787 US firms from 2013 to 2020.

Figure A13: **The Impact of Negative Shocks to Exit and Voice Pressures on Accounting Performance – Event Studies**



Notes: This figure displays the estimated coefficients from six event studies. The dependent variable is, alternatively, profit margin (defined as operating income over sales, first column), return on equity (income before extraordinary items over lagged book equity, second column), and return on assets (income before extraordinary items over lagged total assets, third column). All dependent variables are constructed using Compustat data and are winsorized at the 2.5 and 97.5 percentiles. The standard errors used to compute the 95% confidence interval are clustered at the firm level. An exit (voice) shock is defined as an expected change in exit (voice) pressure due to exit (voice) funds' large redemptions two standard deviations away from the sample mean. The regressions also include firm and quarter×industry fixed effects. The sample covers 1,910 US firms from 2013 to 2020.

Figure A14: **The Impact of Negative Shocks to Exit and Voice Pressures on Stock Returns – Event Studies**



Notes: This figure displays the estimated *Cumulative Abnormal Returns* (CAR, in %), with their 95% confidence interval, of stocks hit by an exogenous decrease in exit pressure (red, solid line) or in voice pressure (blue, dashed line). The CARs are computed using a Fama and French (2015) 5-factor model, starting 22 days (a month) before a quarter with a shock to either exit or voice pressure. An exit (voice) shock is defined as an expected change in exit (voice) pressure due to exit (voice) funds' large redemptions two standard deviations away from the sample mean. Stock return data from CRSP.

B Alternative exit measures

This section explores the correlation between the fund-level exit measure developed in this paper and other potential, exit measures.

B.1 Main results with alternative ESG scores

This subsection shows that the main results laid out in the paper are not dependent on the source of ESG scores used in the estimation of Equation 1, by using Sustainalytics and MSCI ESG scores.[29] It also compares the exit behavior of exit funds as identified using different ESG score providers.

I re-estimate Equation 1 using ESG scores from Sustainalytics and MSCI, and then classify as an exit fund in quarter t any non-index fund with a positive $\beta_{S,i,t}$. Table B1 shows that the main results on the threat of exit hold when using these classifications. Panel A of the Table reports the coefficients estimated using the main exit fund classification based on Refinitiv scores. It shows that the threat of exit is in general ineffective at curtailing firms' anti-social behavior (Column 1), except at firms with high lagged CEO wealth-performance sensitivity (Column 5). Panels B and C show that those conclusions also hold when estimating those equations using exit fund classifications based on Sustainalytics and MSCI scores, respectively. The main coefficients of interest (in Column 1 and 5) are similar in sign and magnitude across the different panels. However, the statistical significance of the coefficient in Column 5 decreases from 3% in Panel A to 6% in Panel B, and 9% in Panel C.

B.2 Correlation with a name-based fund classification

Alternatively, I identify "S" funds based on their names. Starting from the 25,000 unique CRSP fund names, I classify as "S-labelled fund" any fund with an explicit mention of being S-oriented in its name. Those funds include KLD Social Index tracking funds, as well as funds oriented towards Womens' inclusion. I identify 62 of these funds to be explicitly S-oriented.

Those funds indeed have a much higher $\beta_{S,i,t}$ than the other funds. Their average $\beta_{S,i,t}$ is 0.2%, against an average of -0.3% for the non "S-labelled" funds. The difference between the two means is statistically significant at the 1% level. Figure B1 plots the distribution of $\beta_{S,i,t}$ by group. It shows that S-labelled funds have a $\beta_{S,i,t}$ distribution shifted to the right compared to other funds.

I also check whether being an S-labelled fund predicts the preference for other financial or ESG characteristics. To that end, I run the following regressions:

$$\beta_{X,i,t} = \mathbf{1} \cdot (\text{S-labelled fund}) + \delta_t + u_{i,t} \tag{B1}$$

[29] Sustainalytics changed their methodology in October 2019 and inverted the scale of their ratings (Rzeźnik *et al.*, 2022). For consistency across time and with the Refinitiv scores, I substract the scores given after October 2019 from 100.

for the different β estimated by equation 1, normalized for comparability across columns. Table B2 reports the results. Columns 1 to 6 show that there is no correlation between being an S-labelled fund and preferences for any financial characteristic. Columns 7 to 9 focus on the preference for stocks with high E, S, and G scores: only the coefficient on β_S is statistically significant.

B.3 Alternative exit measures and exit behavior

For firms facing a controversy, I compute the share of equity owned by exit funds (fixed at the quarter before the controversy) every quarter in the year before and the year after the controversy, using different ESG score providers. I run:

$$\log(\text{Ownership}_{n,t}) = \beta_{\text{Post}} \cdot \text{Post Controversy}_{n,t} + \delta_t + \gamma_n + u_{n,t}. \tag{B2}$$

The coefficient on $\text{Post Controversy}_{n,t}$ provides an estimate of the percentage of exit funds' ownership that is sold the year after the controversy, compared to the year before.

Table B3 reports the coefficients. It shows that the classification based on Refinitiv ESG scores predicts a 12% decrease in exit ownership at firms facing a controversy. The classification based on Sustainalytics is lower but of the same magnitude, with a 10% decrease in ownership. The classification based on MSCI scores is the smallest in magnitude (6%).

Alternative continuous measures. I consider three alternative measures of exit. First, I consider the "linear" exit, β^l_S, estimated from the linear version of equation 1 and excluding the zero holdings:

$$\ln\left(\frac{w_{i,t}(n)}{w_{i,t}(0)}\right) = \alpha^l_{i,t} + \beta^l_{1,i,t} \times \hat{\text{m}}_{i,t}(n) + \beta^{\prime,l}_{2,i,t} \times \text{x}_t(n) + \beta^l_{S,i,t} \times \text{ Social Score}_t(n) + \ln(\epsilon_{i,t}(n)). \tag{B3}$$

The other continuous measure is the weighted average social score of stocks currently held by a fund:

$$SS^w_{i,t} = w_{i,t}(n) \times \sum_n \text{Social Score}_t(n).$$

I estimate Equation 1 for index funds as well, using, for small funds, target coefficients of 1 for the β on market cap, and 0 on all other β. I then consider four different definitions of an exit fund: a positive $\beta_{S,i,t}$ and not being an index fund, a positive $\beta_{S,i,t}$ regardless of the index status (referred to as $\beta^{\text{Index}}_{S,i,t}$, a positive $\beta^l_{S,i,t}$ and not being an index fund with $SS^w_{i,t-1} > 55$.[30]

I then re-estimate Equation B2 by using these alternative classifications. Table B4 reports the results. For the four different measures of exit, the coefficient is negative and statistically significant at least at the 5% level. The coefficient varies from 5% to 17%. The coefficient in Column 1, where the exit status is

[30]The choice of the 55 threshold is such that 20% of funds in the sample are exit funds, which is around the same distribution as for the other two exit measures excluding index funds.

defined as a positive $\beta_{S,i,t-1}$ and not being an index fund, is consistent with Figure 3. Also including index funds with a positive coefficient significantly reduces the estimate (Column 2), by one-third. Using $\beta^{l}_{S,i,t-1}$ as a reference yields a much smaller coefficient (Column 3). Finally, the coefficient estimated using exit funds defined by their weighted average social score (Column 4) yields an estimate close to the one in Column 1. For consistency, I check whether non-exit funds – as defined by the same criteria – own a smaller share of equity after a controversy (Column 5 to 8). All four coefficients are indistinguishable from zero.

B.4 Selection bias in exit funds' fire sales

Finally, I investigate whether the null effect of the threat of exit can be explained by a selection bias in mutual funds' fire sales. There could be a systematic discrepancy between the actual change in exit pressure for a firm and its predicted value using mutual fund redemptions, in such a way that the instrument would always be greater for certain firms, possibly more likely to face a controversy in the future. For instance, consider the case where exit funds, when facing large redemptions, sell more stocks that will face a controversy in the future: the instrument would always predict a greater (i.e., less negative) change in exit pressure than the actual change for firms with $Controversy_{n,t=2}$ =1.[31]

I test this hypothesis by regressing a dummy indicating the occurrence of a controversy in the next 2, 3, and 4 quarters on the first-stage residuals for the change in exit pressure. Results are reported in Table B5, first without controls and without firm fixed effects (Columns 1 to 3, to capture the cross-sectional variation), then with firm fixed effects (Columns 4 to 6, to capture the within-firm variation), and finally with controls (Columns 7 to 10, to investigate the drivers of controversies). In all cases, the coefficient on the first-stage residuals is economically and statistically insignificant, indicating that exit funds do not sell more firms that are more likely to have a controversy in the near future. One explanation relies on the fact that a firm's Social score is a bad predictor of future controversies (Columns 7 to 10), showing that controversies are generally hard to predict.

[31]Note that by the same reasoning, selling more of stocks currently facing a controversy would bias the main estimate (for $Controversy_{n,t=2}$ - $Controversy_{n,t}$) *downwards*.

Table B1: **Exit Regressions Based on Classifications Using Different ESG Scores**

Dependent Variable:	Controversy$_{t+2}$ - Controversy$_t$				
		Lagged *WPS* quartile:			
		Q1	Q2	Q3	Q4
Model:	(1)	(2)	(3)	(4)	(5)
Panel A: Classification using Refinitiv ESG Ratings					
Instrumented Change in Exit	0.105	0.446*	-0.186	0.992	-0.891**
	(0.172)	(0.255)	(0.454)	(0.924)	(0.405)
Controls	✓	✓	✓	✓	✓
Quarter FE	✓	✓	✓	✓	✓
Observations	37,480	6,888	6,639	7,225	7,040
Effective F-statistic	1,189	34.086	40.041	13.616	46.813
Panel B: Classification using Sustainalytics ESG Ratings					
Instrumented Change in Exit	0.123	0.337	-0.017	0.077	-0.485*
	(0.139)	(0.330)	(0.464)	(0.268)	(0.260)
Controls	✓	✓	✓	✓	✓
Quarter FE	✓	✓	✓	✓	✓
Observations	36,940	6,765	6,529	7,130	6,964
Effective F-statistic	737.23	177.01	197.40	69.269	80.467
Panel C: Classification using MSCI ESG Ratings					
Instrumented Change in Exit	0.053	-0.118	0.492	0.674	-0.665*
	(0.158)	(0.447)	(0.381)	(0.547)	(0.393)
Controls	✓	✓	✓	✓	✓
Quarter FE	✓	✓	✓	✓	✓
Observations	36,884	6,737	6,504	7,150	6,941
Effective F-statistic	272.79	117.53	133.71	38.101	29.564

Note: This table reports the estimated coefficients from model 4:

$$\text{Controversy}_{n,t+2} - \text{Controversy}_{n,t} = \beta_{Exit} \overbrace{(\text{Exit}_{n,t+1} - \text{Exit}_{n,t-1})}^{\text{Instrumented by } Z^{Exit}_{n,t}} + \delta_{t+2} + u_{n,t+2},$$

on the whole sample (Column 1), and on four sub-samples defined by their past (from 2000 to 2012) average Scaled CEO wealth-performance sensitivity (*WPS*, from Edmans *et al.*, 2009), and controls. In each Panel, the provider of the ESG scores used in the exit fund classification varies. All regressions include Quarter FE fixed effects. Details on the construction of the variables can be found in the main text. Controversies are defined based on Ravenpack data. Stock characteristics from Refinitiv. The sample covers 1,110 US firms from 2013 to 2020. Clustered (cusip) standard-errors in parentheses. The *Effective F-statistic* is the Olea and Pflueger (2013) first-stage F-statistic. Signif. Codes: ***: 0.01, **: 0.05, *: 0.1

Table B2: **S-Labelled Funds and the Estimated Demand for Characteristics**

Preference for:	Financial characteristics						ESG scores		
Dependent Variables:	$\beta_{\text{Market Cap}}$	$\beta_{\text{Book Eqy}}$	$\beta_{\text{Profitability}}$	$\beta_{\text{Div to Book}}$	$\beta_{\text{Investment}}$	β_{Beta}	β_{E}	β_{S}	β_{G}
Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Variables									
S-labelled fund (0/1)	-0.220	0.155	-0.029	0.130	0.568	0.077	-0.032	0.650***	-0.082
	(0.372)	(0.437)	(0.210)	(0.181)	(0.360)	(0.407)	(0.267)	(0.153)	(0.181)
Fixed-effects									
Quarter	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fit statistics									
Observations	69,745	69,745	69,745	69,745	69,745	69,745	69,745	69,745	69,745
R^2	0.00530	0.00471	0.00372	0.22104	0.03600	0.02619	0.00321	0.00741	0.00638

Note: This table reports estimated coefficients from model B1, the regressions of funds' preference for stocks with higher market capitalization (Column 1), book equity (Column 2), profitability (Column 3), dividends to book equity (Column 4), investment (Column 5), beta (Column 6), E, S, and G scores (Columns 7 to 9), on a dummy equal to one if the fund has an explicit S-mandate in its name, and quarter fixed effects. Funds' preferences for these characteristics are estimated by Equation 1. All dependent variables are standardized for comparability. The sample covers 1,995 funds from 2013 to 2020. Standard errors clustered at the portfolio level are reported between parentheses. Signif. Codes: ***: 0.01, **: 0.05, *: 0.1

Table B3: **Exit Classifications Using Different ESG Score Providers and Divestment After a Controversy**

Dependent Variable:	Log Ownership					
Sub-sample:	Exit funds			Non-exit funds		
Exit/Non-exit classification uses ESG Scores from:	Refinitiv	Sustainalytics	MSCI	Refinitiv	Sustainalytics	MSCI
Model:	(1)	(2)	(3)	(4)	(5)	(6)
Variables						
Post Controversy	-0.117***	-0.096***	-0.060***	-0.031	-0.029	-0.035
	(0.021)	(0.023)	(0.019)	(0.025)	(0.025)	(0.025)
Fixed-effects						
Quarter	✓	✓	✓	✓	✓	✓
Firm	✓	✓	✓	✓	✓	✓
Fit statistics						
Observations	10,920	10,927	10,927	11,123	11,122	11,123
R^2	0.67896	0.72597	0.72667	0.76242	0.76304	0.76062

Note: This table reports estimated coefficients from model B2, the regressions of the log ownership of exit funds (Columns 1 to 4) or non exit funds (Columns 5 to 8), for different definitions of an exit fund, from one year before to year after a controversy, on a dummy equal to one if period t is on or after a quarter with a controversy. The exit/non exit status is defined the quarter before the controversy, by a positive coefficient on the Social Score when estimating Equation 1. The columns vary the source of ESG scores used in the estimation. The sample covers 1,995 funds from 2013 to 2020. Standard errors clustered at the firm level are reported between parentheses. Signif. Codes: ***: 0.01, **: 0.05, *: 0.1

Table B4: **Different Exit Measures and Divestment After a Controversy**

Dependent Variable:	Log Ownership							
Sub-sample:	Exit funds				Non-exit funds			
Exit/Non-exit status defined by:	$\beta_{S,i,t-1}$	$\beta^{\text{Index}}_{S,i,t-1}$	$\beta^{l}_{S,i,t-1}$	$SS^{w}_{i,t-1}$	$\beta_{S,i,t-1}$	$\beta^{\text{Index}}_{S,i,t-1}$	$\beta^{l}_{S,i,t-1}$	$SS^{w}_{i,t,-1}$
Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Variables								
Post Controversy	-0.122***	-0.088***	-0.054**	-0.168***	-0.023	0.005	-0.031	-0.008
	(0.022)	(0.014)	(0.023)	(0.034)	(0.023)	(0.022)	(0.023)	(0.023)
Fixed-effects								
Quarter	✓	✓	✓	✓	✓	✓	✓	✓
Firm	✓	✓	✓	✓	✓	✓	✓	✓
Fit statistics								
Observations	11,903	12,014	11,865	11,630	13,715	13,711	13,715	13,714
R^2	0.67869	0.80733	0.65011	0.78903	0.78082	0.77605	0.78203	0.78468

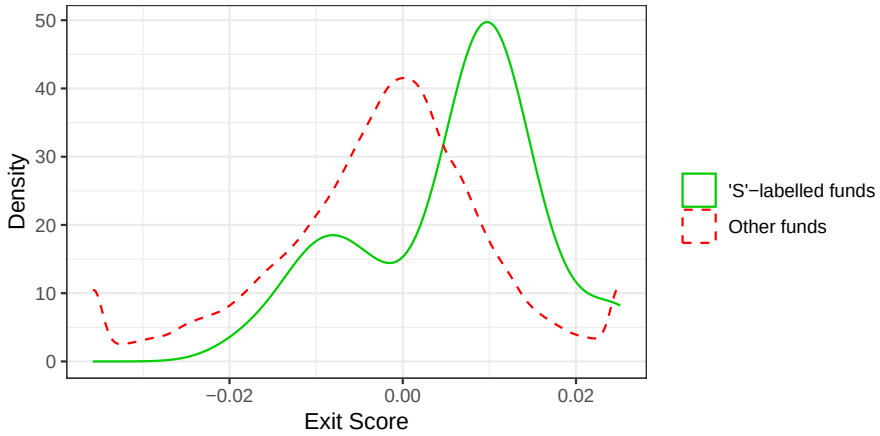
Note: This table reports estimated coefficients from model B2, the regressions of the log ownership of exit funds (Columns 1 to 4) or non exit funds (Columns 5 to 8), for different definitions of an exit fund, from one year before to year after a controversy, on a dummy equal to one if period t is on or after a quarter with a controversy. The exit/non exit status is defined the quarter before the controversy, and by, alternatively: $\beta_{S,i,t} > 0$ and not being an index fund (estimated from model 1, Columns 1 and 5), a positive $\beta_{S,i,t}$ regardless of the index status (referred to as $\beta^{\text{Index}}_{S,i,t}$, Columns 2 and 6), a positive $\beta^{l}_{S,i,t}$ and not being an index fund (estimated from model B3, Columns 3 and 7), and $SS^{w}_{i,t-1} > 55$ (the average social score of stocks in the portfolio, weighted by their portfolio weight, Columns 4 and 8). The sample covers 1,995 funds from 2013 to 2020. Standard errors clustered at the firm level are reported between parentheses. Signif. Codes: ***: 0.01, **: 0.05, *: 0.1

Table B5: **Selection in Exit Fund Fire Sales, and the Occurrence of Controversies**

Dependent Variables:	Controversy$_{n,\tau}$								
τ=	*t+2*	*t+3*	*t+4*	*t+2*	*t+3*	*t+4*	*t+2*	*t+3*	*t+4*
Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Variables									
First-stage residual	-0.030	-0.054	-0.057	0.024	-0.009	-0.029	0.003	-0.041	-0.059
	(0.039)	(0.044)	(0.046)	(0.039)	(0.043)	(0.049)	(0.039)	(0.044)	(0.046)
Controls							✓	✓	✓
Fixed-effects									
Quarter	✓	✓	✓	✓	✓	✓	✓	✓	✓
Firm				✓	✓	✓			
Fit statistics									
Observations	25,752	23,970	22,245	25,752	23,970	22,245	25,752	23,970	22,245
R^2	0.00139	0.00169	0.00175	0.27565	0.28357	0.28592	0.03939	0.04147	0.04199

Note: This table reports estimated coefficients from the regressions of a dummy indicating the occurrence of a controversy over different horizons, on *First-stage residual*, the difference between the actual change in exit pressure and the predicted change in exit pressure due to large redemptions, controls (in models 7 to 9), quarter fixed effects, and firm fixed effects (in models 4 to 6). Controversies are constructed using Ravenpack data. Accounting data from Refinitiv. Standard errors clustered at the firm level are reported between parentheses. Signif. Codes: ***: 0.01, **: 0.05, *: 0.1

Figure B1: **Distribution of Exit Score by Fund Label**



Notes: This figure displays the distribution of exit score ($\beta_{S,i,t}$ estimated in Model 1) for funds with an explicit pro-Social bias in their name (dark red, solid line) and other funds (black, dashed line). Fund data from CRSP.

C Resolutions classification

I classify the topics of the votes reported in the form N-PX as being related to the Environment (E), Social (S), or Governance (G), based on a list of keywords. The breakdown of each category is as follows:

- The “E” category includes the following keywords: ”GHG emissions”, “GHG reduction”, “water use”, “pollution”, “climate”, “fossil fuels”, “CA100”, ”packaging”, “food waste”, “natural gas”, “environmental”, “oil”, “gas”, “Paris agreement”, “two degree scenario”, “carbon”, “pesticide”, “flaring”, “coal”, “deforestation”, “renewable”, “clean energy”, “stranded asset”, “transition risk”, “physical risk”, “nuclear”, “methane”, “protein diversification”, “energy risk”, “water stewardship”, “Bhopal”, ”green energy”,“green house”, “degree scenario”;
- The “S” category covers: : “lobbying”, “indigenous”, “pay disparity”, “political spending”, “pharmaceutical pricing”, “arbitration”, “whistle blower”, “health risk”, “discrimination”, “promotion velocity”, “human rights”, “hate speech”, “privacy risk”, “EEO”, “equal employment”, “public policy advocacy”, “sugar”, “animal test”, “child exploitation”, “fake news”, “diversity”, “inclusion”, “biased news”, “human capital”, “affirmative action”, “opioid crisis”, “animal welfare”, “animal fur”, “conflict zone”, “”female”, “decent work”, “privacy protection”, “incentive compensation”, “sexual harassment”, “internet privacy”, “content management”, “warning labels”, “data security”, “lgbt”, “prison labor”, “election spending”, “child labor”, “gay”, “animal feed”, “community”, “communities”, “political contribution”, “gender”, “charitable”, “racial”;
- The “G” category covers: “ESG”, “sustainability”, “benefit corporation”, “separate chair”, “board diversity”.

D Funds' portfolio rebalancing following large redemptions

This section investigates mutual funds' behavior following large investor redemptions. Its objective is to determine how long it takes for a fund to fully rebalance its portfolio following an episode of large redemptions, and so for the instrument developed in Section 3 to materialize in a change in exit and voice pressures. I compute quarterly net flows into funds as a percentage of their Total Net Assets (TNA). I define as a large redemption any quarterly outflow of more than 5% of a fund's TNA. Using an event-study methodology, I explore the change in some key variables following large redemptions, and the timing of the portfolio rebalancing.

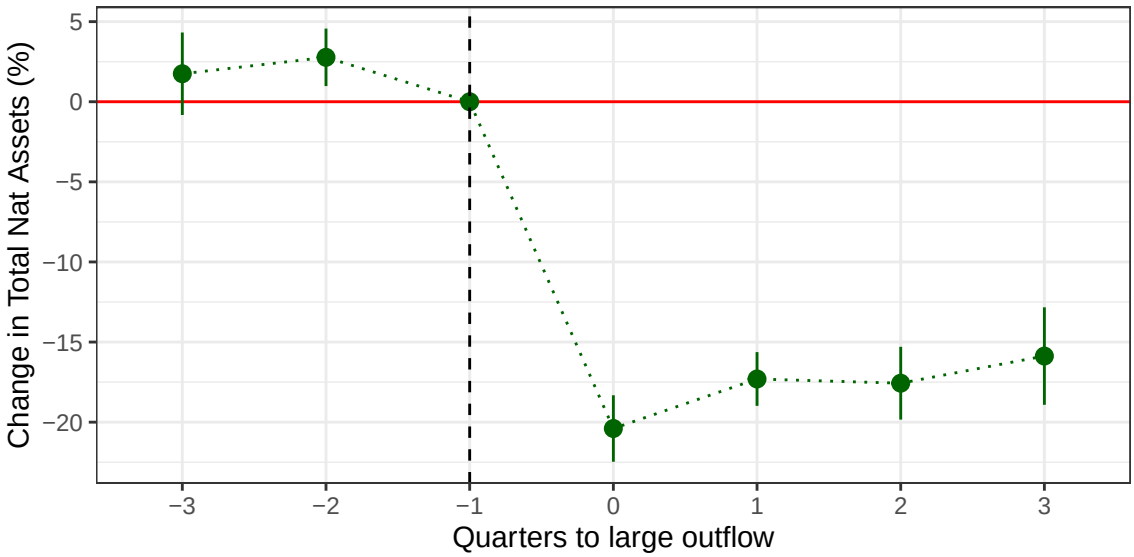
Total Net Assets. I first check that episodes of large redemptions are long-lasting and not preceded by other events of the same type. I run an event study with the log of TNA as a dependent variable, with fund and time fixed effects. The estimated coefficients are reported in Figure D1. The estimated coefficients for periods -3 and -2 are indistinguishable from that on the reference period, indicating the absence of pre-trend. Then, the TNA drop in the quarter of the shock, and slowly increase in the following three quarters but remain well below their pre-shock value. We can thus conclude that large redemptions are not predicted by former large redemptions, and they do not revert quickly.

Share of equity in portfolio. Following redemptions, funds use cash in priority to minimize their price impact (Chernenko and Sunderam, 2016). Thus, changes in exit and voice due to large redemptions might not materialize in the same quarter as the shock. To empirically test that, I run an event study with the share of equity in a fund's portfolio around an episode of large redemptions. Coefficients are plotted in Figure D2. Again, the estimated coefficients for the periods -3 and -2 show no pre-trend. In the quarter of the shock, the share of stocks in the fund's portfolio increases by 1.5pp, before going back to its original level the following quarter. Therefore, when facing large redemptions, funds sell relatively more non-equity assets (typically, cash or treasuries), and relatively more stocks the following quarter. In conclusion, when facing a shock at time t, funds finish their rebalancing at the end of period $t + 1$.

Number of holdings. Finally, I investigate whether funds rebalance their portfolio on the extensive or the intensive margin when they have to fire sell some of their assets. I run an event study with the number of different stocks held around a shock. The results are plotted in Figure D3: none of the coefficients is statistically distinguishable from zero.[32] That result indicates that funds prioritize an intensive margin readjustment.

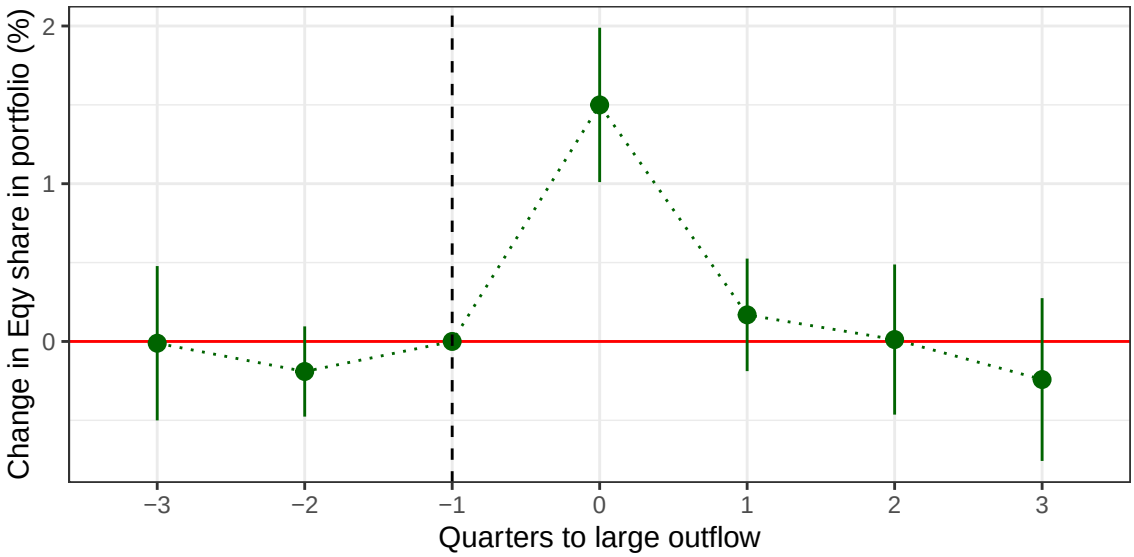
[32] Using the log of the number of different stocks held as the dependent variable does not change the result.

Figure D1: **Total Net Assets Around Large Redemptions – Event Study**



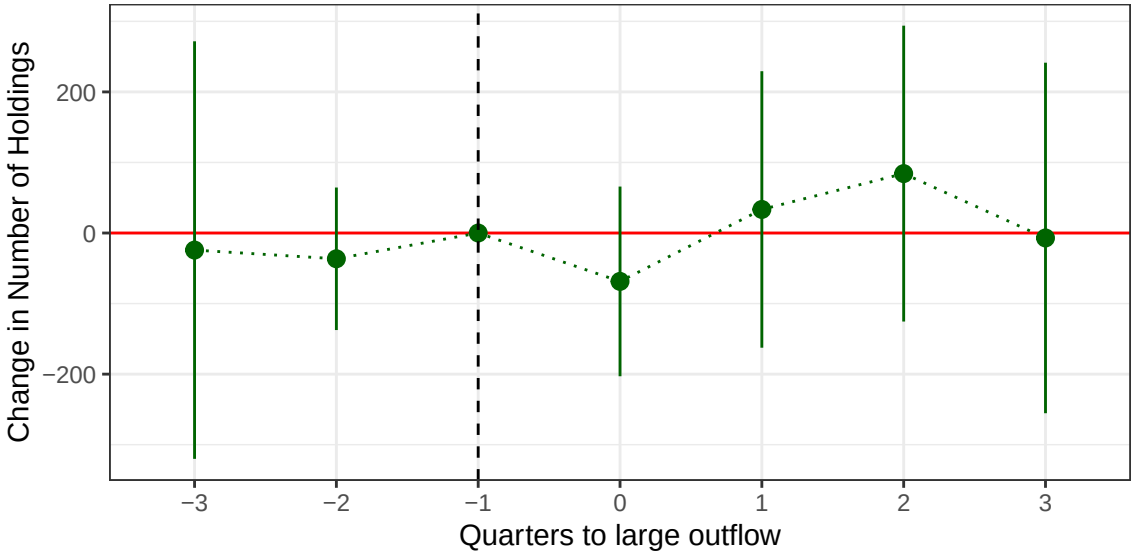
Notes: This figure reports the estimated coefficients and their 95% confidence interval from an event study with a fund's Total Net Assets (logged) as the dependent variable around a quarter of large redemptions. A quarter of large redemptions is defined as any quarter during which a fund experiences an outflow of more than 5% of its TNA. The regression also includes fund and time fixed effects. Standard errors are clustered at the fund level. Data from CRSP.

Figure D2: **Equity Share in Portfolio Around Large Redemptions – Event Study**



Notes: This figure reports the estimated coefficients and their 95% confidence interval from an event study with a fund's portfolio share of equity as the dependent variable around a quarter of large redemptions. A quarter of large redemptions is defined as any quarter during which a fund experiences an outflow of more than 5% of its TNA. The regression also includes fund and time fixed effects. Standard errors are clustered at the fund level. Data from CRSP.

Figure D3: **Number of Stocks Held Around Large Redemptions – Event Study**



Notes: This figure reports the estimated coefficients and their 95% confidence interval from an event study with a fund's number of different stocks held as the dependent variable around a quarter of large redemptions. A quarter of large redemptions is defined as any quarter during which a fund experiences an outflow of more than 5% of its TNA. The regression also includes fund and time fixed effects. Standard errors are clustered at the fund level. Data from CRSP.

E Alternative voice measures

This section explores alternative classification for voice funds, and evaluates the robustness of the main results to these alternatives.

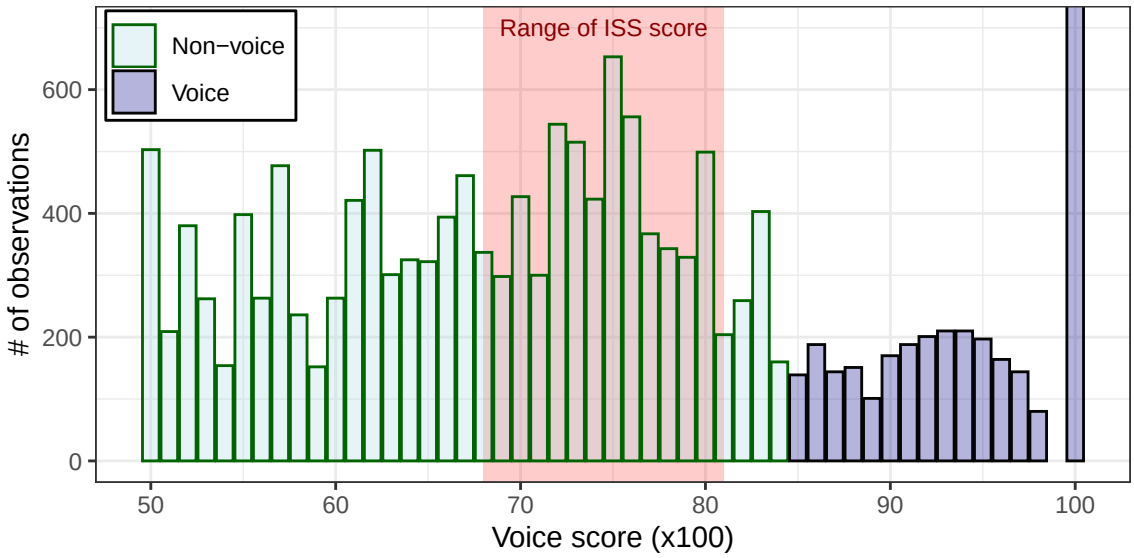
E.1 Including shareholder proposals not opposed by management

In the main analysis, I identify voice funds based on S-related shareholder proposals opposed by the management. This sub-section builds an alternative voice score based on all S-related shareholder proposals, regardless of the management recommendation. The main takeaway is that including these proposals changes only marginally the fund classification, as more than 83% of S-related shareholder proposals are opposed by the management. For each fund in each quarter, I compute $V_{i,t}^{\text{Against}} - V_{i,t}^{\text{All}}$, the difference between the baseline voice score and its alternative using all proposals. The difference is equal to 0 for more than 80% of the fund-quarter observations. When the difference is not equal to 0, it is positive 99% of the time, indicating that the baseline voice score overestimates the voice dimension of funds. The results are thus to be regarded as a lower bound of the effect of voice on CSR efforts.

E.2 Choice of the baseline Voice threshold

The voice fund classification aims to capture funds that: 1) vote generally in favor of S-related shareholder proposals for which the management recommends voting against (voice score > 50%, and 2) are active voters. Being an active voter means that the classification should exclude funds that "blindly" follow proxy advisors' recommendations. Using ISS data, I estimate that ISS recommends voting in favor of such proposals between 68 and 81% of the time, depending on the quarter and the set of firms chosen (only US firms, or not). Glass-Lewis is meant to be "less pro-social" than ISS (Bolton *et al.*, 2020). As the two combined covers more than 90% of the proxy advisory market, I expect a large number of voice scores to cluster around the proxy advisors' score. Figure E1 shows the number of funds-by-quarter observations for each voice score value, from 50% to 99%. As expected, the distribution peaks at ISS' average "for" recommendation, around 72%. One can also detect a drop in the distribution around a voice score of 83%. The 85% voice score threshold is thus chosen to select funds that seem to be above the cluster of funds that follow proxy advisors most of the time.

Figure E1: **Distribution of Fund-by-Quarter Observations by Voice Score**



Notes: This figure shows the number of funds-by-quarter observations by voice score in the dataset. The lightblue bars show the distribution of funds that are not classified as voice funds, and the dark blue bars show the distribution of funds that are classified as voice funds. The red shaded area shows the range of ISS' "for" recommendations between 2013 and 2020. ISS recommendations data are from ISS. Funds' voice score are calculated from their votes on S-related shareholder proposals for which the management recommends voting "against", gathered from the N-PX forms filed at the SEC. The sample covers 1,995 funds from 2013 to 2020.

F Cost of capital and threat of exit

This section investigates whether firms with a higher cost of capital respond more to the threat of exit.

F.1 Cost of capital calculations

Starting from the Weighted Average Cost of Capital (WACC) formula:

$$\text{WACC}_{n,t} = C_{E,n,t} \times (1 - \text{Leverage}_{n,t}) + C_{D,n,t} \times (1 - \tau_{n,t}) \times \text{Leverage}_{n,t}, \tag{F1}$$

where $C_{E,n,t}$ is a firm's cost of equity, $\text{Leverage}_{n,t}$ is total debt over total debt and total equity, $C_{D,n,t}$ is the cost of debt, and $\tau_{n,t}$ is the tax rate. I compute the cost of debt as interest expenses over debt. I consider three models of the cost of equity: one CAPM-based, one based on the Fama-French 3-factor model, and one based on a one-period Gordon growth model. Alternatively, I consider firms' S&P long-term rating.

F.2 Results

I run the main specification on sub-samples of the dataset based on previous period's measure of cost of capital. For the three WACC measures, I divide the sample between above and below median WACC. For the S&P long-term rating, I divide the sample between firms with a speculative grade rating, and firms with an investment-grade rating. Results are reported in Table F1. In Columns 1, 3, 5, and 7, focusing on firms with a plausibly higher cost of capital, the coefficient on the instrumented change in exit is negative only once, but not statistically significant. It is even positive and weakly significant when considering firms with low credit rating. On the contrary, the coefficients in Columns 2, 4, 6, and 8 are positive 3 times out of four, and weakly significant in the case of high credit rating. Thus, I do not find evidence that a higher cost of capital leads to be more prone to listen to exit shareholders.

Table F1: **Heterogeneity in Response to Changes in Exit Pressure, by Level of Cost of Capital – IV Estimation**

Dependent Variable:	$\text{Controversy}_{n,t+2}$-$\text{Controversy}_{n,t}$							
Cost of capital measure:	WACC based on						Long-term credit rating	
	CAPM		FF3		GMM		S&P Rating	
Sub-sample	Above median	Below median	Above median	Below median	Above median	Below median	Junk rating	IG rating
Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Variables								
Instrumented Change in Exit	-0.437	0.306	0.210	-0.211	0.024	-0.061	0.807*	-1.93*
	(0.453)	(0.401)	(0.331)	(0.500)	(0.393)	(0.454)	(0.419)	(1.15)
Controls	✓	✓	✓	✓	✓	✓	✓	✓
Fixed-effects								
Quarter	✓	✓	✓	✓	✓	✓	✓	✓
Fit statistics								
Observations	22,563	22,295	22,738	22,120	23,067	21,788	13,094	18,298
Effective F-statistic	250.60	122.66	136.18	152.76	207.94	133.55	71.471	89.161

Note: This table reports estimated coefficients from model 4:

$$\text{Controversy}_{n,t+2} - \text{Controversy}_{n,t} = \beta_{Exit} \overbrace{(\text{Exit}_{n,t+1} - \text{Exit}_{n,t-1})}^{\text{Instrumented by } Z^{Exit}_{n,t}} + \delta_{t+2} + u_{n,t+2},$$

for different sub-samples. The sub-samples are based on being above or below the (lagged) median cost of capital, for different measures of a firm's cost of capital. Columns 1 to 6 are based on a Weighted Average Cost of Capital (WACC, from Model F1), and on the S&P long-term credit rating in Columns 7 and 8. The WACC is, alternatively, computed using a cost of equity based on: the CAPM (Columns 1 and 2), the Fama and French (1993) 3-factor model (Columns 3 and 4), and the Gordon Growth Model (Columns 5 and 6). Standard errors clustered at the firm level are reported between parentheses. *Change in Social Score* is divided by 100 for readability. The *Effective F-statistic* is the Olea and Pflueger (2013) first-stage F-statistic. Signif. Codes: ***: 0.01, **: 0.05, *: 0.1