

Are All ESG Funds Created Equal? Only Some Funds Are Committed

Finance Working Paper N° 874/2023

March 2023

Michelle Lowry
Drexel University and ECGI

Pingle Wang
University of Texas at Dallas

Kelsey D. Wei
University of Texas at Dallas

© Michelle Lowry, Pingle Wang and Kelsey D. Wei 2023. All rights reserved. Short sections of text, not to exceed two paragraphs, may be quoted without explicit permission provided that full credit, including © notice, is given to the source.

This paper can be downloaded without charge from:
http://ssrn.com/abstract_id=4104700

www.ecgi.global/content/working-papers

ECGI Working Paper Series in Finance

Are All ESG Funds Created Equal? Only Some Funds Are Committed

Working Paper N° 874/2023

March 2023

Michelle Lowry
Pingle Wang
Kelsey D. Wei

The authors would like to thank seminar participants at Drexel University, University of Kansas, Texas Tech University, University of North Texas, and the ECGI conference on New Research on Corporate Purpose, Stakeholderism and ESG for their comments and suggestions. Special thanks to Zacharias Sautner for sharing the list of keywords on environmental impacts. All remaining errors are our own.

© Michelle Lowry, Pingle Wang and Kelsey D. Wei 2023. All rights reserved. Short sections of text, not to exceed two paragraphs, may be quoted without explicit permission provided that full credit, including © notice, is given to the source.

Abstract

Although flows into ESG funds have risen dramatically, it remains unclear whether these funds are truly committed to sustainable investments and how much their investments matter. We shed light on this debate by examining the incentives of fund managers. We find that conditional on similarly large ESG investments, ESG funds vary in their incentives to engage with portfolio firms. ESG funds with higher incentives to engage – committed ESG funds – hold their ESG investments longer, pay more attention to portfolio firms' ESG risk exposure and implement less negative screening. They also demonstrate more discretionary voting on portfolio firms' ESG proposals. Strikingly, only investments by committed ESG funds contribute to real ESG-improvements, and these funds have outperformed other ESG funds on their ESG holdings. Our paper highlights the importance of incentives when assessing the real impacts of sustainable investments and calls for greater investor awareness of a hidden form of greenwashing.

Keywords: mutual funds, ESG

JEL Classifications: G11, G30

Michelle Lowry

TD Bank Endowed Professor of Finance
Drexel University, LeBow School of Business
3220 Market Street Philadelphia
PA 19104, USA
phone: (215) 895-6070
e-mail: michelle.lowry@drexel.edu

Pingle Wang*

Assistant Professor
University of Texas at Dallas
JSOM 14.312 800 W Campbell Road
Richardson, TX 75080, USA
e-mail: pingle.wang@utdallas.edu

Kelsey D. Wei

Associate Professor
University of Texas at Dallas
JSOM 14.320 800 W Campbell Road
Richardson, TX 75080, USA
e-mail: kelsey.wei@utdallas.edu

*Corresponding Author

Are All ESG Funds Created Equal? Only Some Funds Are Committed*

Michelle Lowry[†] Pingle Wang[‡] Kelsey D. Wei[§]

March 2023

Abstract

Although flows into ESG funds have risen dramatically, it remains unclear whether these funds perceive ESG to be a value driver, and relatedly, whether they strive to influence portfolio firms' ESG policies. We shed light on this debate by examining the incentives of fund managers. We find that conditional on similarly large ESG investments, ESG funds with higher incentives to engage with portfolio firms—committed ESG funds—adopt longer-term investment strategies, pay more attention to portfolio firms' ESG risk exposure, and implement less negative screening. Committed funds also demonstrate more discretionary voting on portfolio firms' ESG proposals and devote more attention to ES issues during the Q&A section of earnings conference calls. Strikingly, only investments by committed ESG funds contribute to real ESG-improvements, and these funds have outperformed other ESG funds on their ESG holdings. Our paper highlights the importance of incentives when assessing the real impacts of sustainable investments.

* The authors would like to thank seminar participants at Drexel University, University of Kansas, Texas Tech University, University of North Texas, and the ECGI conference on New Research on Corporate Purpose, Stakeholderism and ESG for their comments and suggestions. Special thanks to Zacharias Sautner for sharing the list of keywords on environmental impacts. All remaining errors are our own.

[†] Michelle Lowry: Michelle.Lowry@drexel.edu, LeBow School of Business, Drexel University.

[‡] Pingle Wang: Pingle.Wang@utdallas.edu, Jindal School of Management, University of Texas at Dallas.

[§] Kelsey D. Wei: Kelsey.Wei@utdallas.edu, Jindal School of Management, University of Texas at Dallas.

1. Introduction

According to Morningstar, in 2021 investors invested nearly \$70 billion into open-end and exchange-traded funds that claim some type of sustainable investing mandate.¹ The growing flows into this space arguably reflect an increase in investors' prioritization of sustainability-related issues. This raises a key question: do these funds influence corporations along these dimensions?

While ESG funds typically claim to deliver both financial returns and ESG outcomes, regulators, academics and industry experts question whether these funds' claims simply represent greenwashing. The view is well expressed by Tariq Fancy the former head of BlackRock's sustainable investing, "The major problem that I have is that even if they're [ESG funds] marketed correctly, they actually have no demonstrable impact."²

One reason that ESG funds may not have impact is that fund managers do not perceive ESG to be a value driver. These funds may be created just to capture flows, and these funds' statements of purpose reflect a form of greenwashing. Alternatively, even if fund managers do perceive ESG to be a value driver, we argue that some ESG funds are more likely to have impact than others.

As shown by Lewellen and Lewellen (2022), institutional investors vary in their incentives to engage with portfolio firms. These incentives should affect both investment policies and interactions with firms. Within the set of ESG funds, we refer to funds with high incentives to engage as committed funds. If committed funds view ESG policies as a value driver, then these funds' investment and engagement strategies should extend to ESG issues, and their

¹ See at <https://www.morningstar.com/articles/1080300/sustainable-funds-landscape-highlights-and-observations>.

² <https://www.greenbiz.com/article/blackrocks-former-head-sustainable-investing-says-esg-and-sustainability-investing-are>.

actions should impact portfolio firms' ESG profiles. Moreover, this allocation of resources should contribute to improved portfolio returns. In contrast, other ESG funds' lack of similar incentives means they would be less likely to actively work with firms and, as such, they would not have a similar impact on firms' ESG performance. Our focus on incentives to engage is motivated by the fact that ESG is a long-term strategy, suggesting that long-term engagement will be more effective than short-term strategies. Broccardo, Hart and Zingales (2022) and Berk and van Binsbergen (2021) highlight the potential value of engagement, as opposed to exit, which generally has a relatively small effect on firms' cost of capital.³

We adopt two approaches to identifying committed ESG funds, that is, funds with high incentives to engage. First, we use the Lewellen and Lewellen (2022) (LL) "Incentive to Engage" proxy. It equals a direct component plus an indirect component, averaged across all firms in a fund's portfolio. The direct component is based on the dollar investment in the firm; it captures the extent to which greater engagement increases firm value, thus contributing to higher fund value and higher management fees. The indirect component is based on the fund's holdings in the firm relative to holdings of peer funds; it captures how the mutual fund's relative performance affects subsequent fund flows. Our second incentive measure is constructed based on the Pastor, Stambaugh and Taylor's (2020) (PST) measure of portfolio liquidity. Fund liquidity is positively related to two factors: the liquidity of the portfolio stocks and portfolio diversification. Funds with lower portfolio liquidity have greater costs of exit and thus higher incentives to engage. Holding constant portfolio weight on high ESG stocks, we categorize ESG mutual funds as *committed ESG funds* if their incentive measures are above-median, and *other*

³ Several studies similarly show that divestment has little impact on firms' cost of capital or ESG practices (see, e.g., Heath et al., 2022 and Hartzmark and Shue, 2023). In contrast, Gantchev et al. (2022) find that small share sales lead firms to improve their ESG policies. While we primarily focus on the engagement channel, our empirical approach enables us to also compare the impact of funds that are more likely to engage versus exit.

ESG funds otherwise.

By design both sets of funds (i.e., committed ESG funds and other ESG funds) invest the same portion of net asset value (NAV) in high ESG firms - within our sample this equals 39%. In contrast to existing studies that characterize greenwashing according to the nature of ESG funds' investments, i.e., whether or not they invest heavily in high ESG firms (see, e.g., Kim and Yoon, 2021 and Gibson et al., 2021), our empirical tests go one step further by focusing on ESG funds' investment and engagement strategies toward ESG-related issues.

We conduct several validation exercises, which confirm that our incentive to engage measures capture variation in fund strategy. First, our classification matches well with the newly introduced Morningstar ESG Commitment Level measure. Based on the 2020 Morningstar report, committed (other) ESG funds are more likely to have a Morningstar ESG Commitment Level of Leader or Advanced (Basic or Low). Second, consistent with committed funds devoting more resources to monitoring and working with management to achieve change, we find that they implement a longer-term investment strategy. On average across all stocks in their portfolio, committed ESG funds are less likely to sell a stock after poor performance, as compared to other ESG funds. This evidence is novel as it cannot be explained by potential endogenous matching between the horizon of investors and the horizons of their portfolio firms (Starks, Venkat and Zhu, 2021), given that both committed and other ESG funds invest heavily in high ESG firms.

Turning to our main empirical tests, we first analyze funds' information acquisition. Committed funds' higher incentives to engage with portfolio firms incentivize them to conduct more research on issues that they perceive to influence firm value. If fund managers view ESG as a value driver, then this greater research should include ESG-related issues. This is precisely what we find. Committed ESG funds are significantly more likely to view a firm's regulatory

filings when the firm is exposed to heightened ESG risk, before, during and after the risk events. In contrast, the views of other ESG funds' (which lack similar incentives to engage with portfolio firms) are significantly less intensive and persistent around these risk events and do not vary with their severity.

Next, we turn to funds' investment strategies. Committed funds should have a longer-term strategy toward their portfolio firms' material (i.e., value-relevant) issues, as they work with firms to achieve change. Consistent with this, we find that committed ESG funds are significantly less likely to sell firms following negative ESG risk events, compared to other ESG funds. That is, they rely less on negative screening.

Analyses of funds' engagement provide further evidence that committed funds differ significantly from other ESG funds. First, we measure funds' engagement on ESG issues via voting. Following Iliev and Lowry (2015), we employ two proxies: the tendency of a fund to vote independently from ISS, and the tendency of a fund to not vote in a one-size-fits-all manner. Both measures lead to the same conclusion. Committed funds are significantly more likely than other ESG funds to devote resources to voting, providing further evidence that they view ESG issues as a value driver and strive to impact firms' ESG policies. Second, we analyze the Q&A section of firms' earnings conference calls. Within the same call, analysts from committed fund families demonstrate a greater frequency and intensity of questions related to environmental and social impacts. This is particularly salient evidence on their commitment to ESG given the low unconditional probability of active buy-side participation in these calls (Jung, Wong and Zhang, 2018). It also suggests that committed funds consider ESG as a value driver given that these calls are mainly platforms for discussing firms' financial performance and business prospects.

We expect that committed funds' significantly greater attention to ESG, in terms of

information acquisition, investment policies, and engagement, will manifest in greater impact. This is precisely what we find, using both linear regression models and a difference-in-differences approach to account for endogeneity. First, firms intensely bought by committed funds following severe ESG incidents subsequently experience a 31% reduction in their risk index, relative to the base case in which these firms are neither intensely bought nor intensely sold by ESG funds. Second, this relation cannot be explained by funds' ability to select good ESG firms. Following Hartzmark and Sussman (2019), we use the initiation of Morningstar Sustainability Ratings in early 2016 as a shock to flows into high ESG funds. This shock caused funds to increase the dollars invested within existing portfolio firms (in addition to any investments in new firms). This greater ownership increases funds' ability to influence firms' policies and thus increases the potential benefit of funds' engagement. Under the premise that this shock is exogenous to funds' pre-shock investments choices, this channel enables us to shut down the selection effect and focus on the engagement channel. Consistent with the engagement channel driving results, firms overweighted by committed funds prior to the shock experience a significant decrease in their ESG risk and their carbon footprint after the shock.

Can funds do well by doing good? In the last part of the paper, we examine this question. We find that committed ESG funds have outperformed both the market and other ESG funds on their ESG investments. This is consistent with committed funds being more informed about sustainable investments, as one would expect given their engagement on these issues and their resulting expertise in value-enhancing ESG practices. Our findings also suggest that committed funds' engagement contributes to both better ESG-related outcomes and better firm performance, as one would expect if ESG is a value driver.

Our paper contributes to several streams of literature. First, it contributes to the literature

on mutual funds' engagement on ESG issues. While Broccardo, Hart and Zingales (2022) conclude that voice is an effective mechanism to achieve socially desirable outcomes even when the majority of investors are just slightly socially responsible, He, Kahraman and Lowry (2021) and Li, Naaraayanan, and Sachdeva (2021) show that ES shareholder proposals rarely pass and thus rarely succeed in pressuring firms to change. Relative to their findings, our paper highlights the influence of funds' incentives to engage and examines the ways in which this leads to real impacts. In this sense, our findings relate to Hoepner et al. (2022) and Dimson, Karakas and Li (2015), which both analyze ESG-related engagements but focus solely on one large institutional investor. Here, our study provides a key advantage: it does not suffer from any selection bias arising from the fact that funds whose engagement activities have been successful may be more willing to share their data.

Second, our paper relates to the growing literature on greenwashing. The identification of which entities are more socially responsible is often not clear. Cohen, Gurun and Nguyen (2021) find that brown firms, for example oil and gas firms, produce more green innovation than firms typically identified as 'green'. Kim and Yoon (2021) and Gibson et al. (2021) find that mutual funds that sign the United Nations Principles for Responsible Investment (PRI) attract large fund inflows, but do not significantly change their ESG investments. Our evidence suggests a new form of greenwashing: conditional on the aggregate dollars invested in high ESG firms, the distribution of these dollars and the associated effects on funds' incentives to engage play a critical role. Our findings call for greater attention to this hidden form of greenwashing.

Lastly, our study complements several recent studies suggesting that investor divestiture might not be the most effective way to influence corporate ESG conduct (see, e.g., Berk and van Binsbergen, 2021; Cohen, Gurun and Nguyen, 2021; Atta-Darkua et al., 2022). There is no clear

evidence that firms receiving more capital from ESG funds have a lower cost of capital or better ESG performance (e.g., Heath et al., 2021). Our finding that committed funds influence firm behavior without relying on negative screening suggests that the divestment-oriented strategies of many institutional campaigns, including those led by the PRI, may be misguided.

2. Data and Methodology

2.1 Description of data sources

We use MSCI ESG Ratings data to assess firm-level ESG performance. MSCI is the world's largest provider of ESG ratings and provides the most comprehensive coverage (Eccles and Strohle, 2018). Moreover, Berg et al. (2021) conclude that its ESG ratings are less noisy than those of other vendors. MSCI assigns percentage risks to each ESG factor for each company, combines these into a single company-level score, and normalizes this score relative to industry peers to achieve the overall company ESG rating. ESG scores range from zero to ten and are updated at least once a year. Each quarter we place stocks into deciles by their ESG score and classify those within the top three deciles as high ESG stocks. Since MSCI did not start covering small U.S. stocks until late 2012, our sample period is January 2013 to December 2020. We use Center for Research in Security Prices (CRSP) monthly stock files and Compustat for data on stock returns and financial characteristics.

Our sample of mutual funds includes actively managed U.S. domestic equity mutual funds. We rely on the CRSP Survivor-Bias-Free Mutual Fund Database to extract monthly fund characteristics and net-of-fees returns. We obtain funds' quarterly equity holdings from the Thomson/Refinitive s12 database and merge them with the CRSP Mutual Fund data using the MFLINKS tables available via WRDS (Wermers, 2000). We also rely on SEC EDGAR and

Morningstar for additional information on fund characteristics.

We employ the EDGAR server log data and IP demographic data to examine asset managers' views of their portfolio firms' filings around ESG news events. The EDGAR server log data identify the individual (partially masked) IP addresses that view each firm filing each day up to June 2017. Following Wang (2019), we match the IP addresses from EDGAR to the institution that holds a block of corresponding IP addresses.

Our first measure of funds' engagement activities is mutual fund votes, which are obtained from the Institutional Shareholder Services (ISS) Voting Analytics database. We match ISS fund IDs to the CRSP mutual fund database by ticker with the help of the N-PX header. We follow He, Kahraman and Lowry (2021) to identify the subset of shareholder proposals related to environmental and social (ES) issues. We additionally identify the subset of shareholder proposals related to governance (G) issues. During our sample period, there are 732 firm-years with 973 ES proposals, and 1,673 firm-years with 2,122 G proposals.

Our second proxy for funds' engagement activities comes from buy-side analysts' questions concerning environmental and social impacts during the Q&A section of firms' earnings conference calls. We obtain earnings conference call transcripts of all US public firms from the Capital IQ Transcripts database. After merging with Compustat and CRSP, we have 121,129 transcripts on 5,711 unique firms. For analysts asking questions during the Q&A section of the call, we manually match their self-identified affiliations with CRSP fund family names. On average, 19% of the earnings calls have at least one question from buy-side institutions.

We use several proxies to measure firms' ESG risk exposures. First, to measure firms' environmental activities at a micro level, we use each firm's annual on-site waste release from the Toxics Release Inventory (TRI) dataset, as provided by the EPA (see, e.g., Naaraayanan,

Sachdeva and Sharma, 2021; Lyu, Shan and Tang, 2021). Second, we employ RepRisk daily news counts to capture negative ESG incidents. We also use the RepRisk Risk Index to measure a firm's overall ESG risk exposure (see, e.g., He, Kahraman and Lowry, 2021; and Gantchev, Mariassunta and Li, 2022). Finally, we use the Ravenpack News Analytics dataset to quantify individual firms' non-ESG related news coverage.⁴

2.2 Committed vs. Other ESG funds

We begin by classifying all actively managed equity funds into ESG versus non-ESG funds, using an approach similar to that of rating agencies such as Morningstar. We classify funds according to the asset weighted MSCI ESG scores of their holdings. Similar to the Morningstar Sustainability Rating (which was introduced in 2016), we calculate a fund's quarterly ESG rating as the weighted average of their trailing four quarters' ESG scores, with recent quarters weighted more heavily.⁵ Each quarter, funds with ESG ratings ranked within the top tercile are classified as ESG funds while the rest are classified as non-ESG funds.⁶

Within the set of ESG funds, we classify funds into two groups according to each fund's benefits and costs of engaging with portfolio firms. Our first approach employs the Lewellen and Lewellen (LL) (2022) "Incentive to Engage" measure. For each stock in a fund's portfolio, the incentive to engage includes: the direct component, which is the stock's weight, and the flow component, which is the product of flow-to-performance sensitivity and the deviation of the stock's weight in the fund from the fund's portfolio benchmark. Intuitively, the direct component

⁴ To avoid double counting, we only consider Ravenpack news that is not released on the same day as RepRisk incidents concerning the same firm.

⁵ We adopt the weighting scheme of the Morningstar Sustainability Rating. To receive a fund-level ESG score, at least 67% of a portfolio's AUM must have an MSCI ESG rating. Further detail can be found at https://www.morningstar.com/content/dam/marketing/shared/research/methodology/744156_Morningstar_Sustainability_Rating_for_Funds_Methodology.pdf.

⁶ Because MSCI's ESG ratings represent industry-adjusted metrics, high ESG funds do not necessarily exclude firms in brown industries. Figure A2 shows the distribution of ratings across brown versus non-brown industries.

captures the direct impact of a holding's performance on a fund's AUM and thus on management fees, and the flow component captures the indirect impact from performance-related fund flows.

A fund's incentive to engage is the weighted sum, across its holdings, of these two components:

$$\text{Incentive to Engage} = \sum_{i \in E} w_i [w_i + \beta(w_i - v_i)],$$

where E is the set of stocks in the fund's portfolio, w_i is the weight of each stock i in the fund's portfolio, v_i is the weight of stock i in the benchmark portfolio, and β is the flow-to-performance sensitivity of the fund. Flow-to-performance sensitivity is estimated following LL by regressing fund flows in quarters $t+1$ through $t+12$ on benchmark-adjusted returns in quarter t and summing the slope coefficients. We use the aggregated holdings of all index funds within the same Morningstar style category as the fund's benchmark portfolio.

Our second proxy of funds' incentives to engage is based on the cost of exit, as motivated by the portfolio liquidity measure in Pastor, Stambaugh and Taylor (PST) (2020). As discussed by PST, a fund's portfolio liquidity depends on both liquidity of the stocks held in the portfolio and the degree to which the portfolio is diversified. For each fund-quarter, we compute the product of the portfolio-weighted Amihud illiquidity and the Herfindahl-Hirschman Index of portfolio weights across all the fund's holdings. Funds with high portfolio illiquidity face greater costs of liquidation due to either the illiquidity of fund holdings or potential price impacts from selling concentrated holdings. Such funds are more likely to engage with portfolio firms.

Similar to the approach used to calculate the fund-level ESG score, we classify ESG funds based on the four-quarter moving average of the respective fund-level incentive to engage measure. We rank all ESG funds into terciles by their ESG scores, and we classify each ESG fund as committed (other) if its incentive to engage is above (below) the median within the tercile. We do this separately for the LL and PST measures. By ranking funds within their ESG

score terciles, we ensure that a fund's incentive to engage is not correlated with the weight of high ESG stocks within its portfolio.

The overlap in funds' commitment status by the LL versus PST measures is 78%. Using either measure, an ESG fund's commitment status is highly persistent, likely reflecting a systematic investment strategy. The probability of an ESG fund remaining in the same commitment group, i.e., either committed or other, in the subsequent year is 94% (93%) under the LL (PST) measure.

Since some of analyses are at the fund family level, we also classify ESG families in a similar fashion. First, each quarter we classify a fund family as an ESG family if the fraction of assets within ESG funds is in the top tercile. Second, within ESG families, a family is committed (other) if the fraction of TNA held by committed ESG funds (over all ESG funds in the family) is above (below) median. As shown in Internet Appendix Figure A1, families are clustered in each tail of the distribution, suggesting that incentives to engage are shared across funds within a family.

2.3 Summary Statistics

Table 1 tabulates the summary statistics for committed and other ESG funds. Panel A is based on the LL measure and Panel B on the PST measure. Across both panels, committed ESG funds have significantly higher incentives to engage on both high-ESG and other stocks, compared to other ESG funds. We also observe that committed funds have significantly stronger incentives to engage on their high ESG holdings than on other holdings.⁷ We do not observe a

⁷ We employ a similar procedure to calculate funds' incentives to engage on high ESG stocks versus all other stocks. To account for the effect of relative portfolio weight and to make the two incentive measures comparable, we divide each measure by the percent of the portfolio held in the analogous set of stocks. When constructing the PST incentive measure among a fund's high ESG versus other holdings, we similarly adjust for the effect of the number of stocks in each sub portfolio on its Herfindahl index.

similar difference among other ESG funds.

Looking at Table 2, both committed and other ESG funds allocate 39% of their total net assets (TNA) to high ESG stocks, compared to 28% for non-ESG funds. Both groups of ESG funds also have similar fund turnover ratio, performance, flows, family size and proportion of load funds, though committed funds tend to be somewhat younger and smaller.

We find that both groups of ESG funds outperform non-ESG funds during our sample period. This is consistent with the price run-ups experienced by high ESG stocks, which Pastor, Stambaugh, and Taylor (2021) conclude stemmed from unexpectedly strong preferences by ESG investors. ESG funds also have lower turnover than non-ESG funds, potentially reflecting their greater asset allocation to high ESG stocks that are typically associated with longer payout periods (Starks, Venkat and Zhu, 2021). On the other hand, there is no evidence that committed funds, which exhibit the lowest turnover among the three groups of funds, are more passive investors. In fact, committed funds appear to be more active funds as indicated by their higher Industry Concentration Index and their higher Active Share, compared to either other ESG funds or non-ESG funds (Kacperczyk, Sialm and Zheng, 2005; Cremers and Petajisto, 2009).

2.4 Validation of ESG fund classification

We employ two approaches, at the fund family and individual fund levels, respectively, to verify that the LL and PST measures provide an effective way to identify institutional investors with greater incentives to engage. First, we assess fund families' dedication to sustainable investments according to the Morningstar ESG Commitment Level measure, which was introduced in 2020. Unlike the quantitative Morningstar Sustainability Rating, which measures the extent to which funds invest in firms with low ESG risk, the Morningstar ESG Commitment Level is based on the investment process and active engagement on ESG issues

(Morningstar, 2020).⁸ Among the short list of asset managers with Morningstar ESG Commitment Level of Leader or Advanced in 2020, the only two U.S. companies (Calvert and Parnassus) are classified as committed ESG fund families under our classification (i.e., families with more assets held by committed ESG funds). Moreover, 10 out of the 12 US asset managers that are rated as having Commitment Level of Basic or Low are classified as other (i.e., non-committed) ESG families.

Second, we conduct a textual analysis on the Principal Investment Strategies (PIS section) of each fund prospectus. Following prior studies (see, e.g., Li et al., 2021, Heath et al., 2021), we compile a list of ESG keywords and their synonyms and examine their occurrence in the PIS. Our findings provide further evidence of committed funds being more likely to consider sustainable investments as a main pillar of their investment strategies. In untabulated results, we find that unlike other ESG funds that significantly increase their mentioning of ESG keywords only in recent years, committed funds have maintained a significantly higher average likelihood of mentioning ESG keywords across our sample period, compared to either other ESG funds or non-ESG funds.⁹

3. Comparing Investment Strategies across Different Types of ESG Funds

We expect that committed versus other ESG funds' differing incentives lead to different investment strategies. In subsection 3.1, we verify this difference in overall investment strategy. In subsection 3.2, we focus on funds' investment strategy around severe ESG incidents.

3.1 Are ESG funds more patient investors?

⁸ The majority of the rated funds are ESG funds being tagged as "sustainable investment" by Morningstar.

⁹ These findings are robust to using a dictionary of ESG keywords derived from machine learning models to define the relevant vocabulary, as described in more detail in Section 4.2.

Engagement requires time: if a fund seeks to increase the value of a firm through engagement, the fund will tend to hold that firm longer. Therefore, we expect committed funds to be less sensitive to recent performance when making trading decisions. We verify this conjecture in Table 3 using both the LL (columns 1 and 2) and PST (columns 3 and 4) measures. The sample represents a mutual fund \times portfolio firm \times quarter panel. We regress *Net Trades* of each fund in each firm on *Poor Firm Performance* and this variable interacted with *Committed ESG Fund* and with *Other ESG Fund*. *Net Trades* equals the dollar amount of a fund's trading of a stock (multiplied by 100) during the quarter, scaled by the fund's portfolio value in the prior quarter. In Columns 1 and 3 (2 and 4), *Poor Firm Performance* equals one if the stock is ranked in the bottom quintile by earnings surprise (3-month stock returns) in the prior quarter, zero otherwise. Earnings surprise equals the difference between the firm's actual earnings and the median analyst forecast.¹⁰ We include fund-by-quarter fixed effects to control for any differences in funds' investment horizon, for example due to investment style.

Consistent with existing evidence, we find that mutual funds, on average, behave more like momentum traders, selling stocks with poor performance in the past quarter. However, committed funds pursue a longer-term investment strategy, as indicated by the significantly positive coefficient on *Poor Firm Performance* \times *Committed ESG Fund*. In contrast, other ESG funds' trading responses are no different than those of non-ESG funds; they behave more like momentum traders, selling stocks with poor performance in the past quarter. Relative to Starks, Venkat and Zhu (2021), we show that not all ESG funds are longer-term investors.

3.2 ESG funds' investment strategy following ESG risk incidents

¹⁰ We extract median analyst forecasts from I/B/E/S. Earnings surprise is scaled by stock price as of the fiscal quarter end corresponding to the reported earnings.

If managers of committed funds perceive ESG to be a value driver, then these funds' higher incentives to engage should manifest in their monitoring of portfolio firms' ESG risks and their longer-term approach towards the related risk events.

3.2.1 Evidence on funds' research of portfolio firms

Our analysis on funds' research is motivated by Crane, Crotty and Umar (2021) and Wang (2019), who conclude that sophisticated investors collect information from financial filings to improve performance. We compare views of SEC financial filings by committed versus other ESG fund families (using the same family-level definitions as in Section 2.2).¹¹ To measure portfolio firms' ESG risk events, we rely on RepRisk ESG news. RepRisk identifies and assesses material ESG risks by screening and analyzing information daily from a wide range of public sources, and it provides time-stamped data on ESG risk incidents concerning individual firms.

Figure 1 illustrates the probability of each family type viewing firm financial statements on EDGAR, during the ten days around each negative ESG news announcement. We separately present results using the LL (Panels a and b) and PST (Panels c and d) incentive measures. Panels a and c focus on severe ESG news events, defined as cases in which the three-day cumulative abnormal returns (CAR) around the news announcement day falls into the bottom quintile among all risk events (where quintiles are defined each quarter). All other ESG news events are considered non-severe, and these are shown in Panels b and d.

Both types of ESG fund families exhibit elevated attention to a firm when it is exposed to an ESG risk event. However, committed funds' attention is higher than that of other ESG funds in the days immediately around the news release day, and the difference is significant on

¹¹ The identity of downloading institutions can only be determined at the fund family level.

the first two days following the announcement. There is also some indication that committed funds' heightened interest begins prior to the news announcement, potentially reflecting awareness of the issue before it is covered widely by the news media.

3.2.2 Evidence from trading activities

Severe ESG risk events, by definition, are accompanied by negative market reactions, and they can result in downgrades of firms' ESG ratings. To the extent that committed funds have a better understanding of the value-effects of these events and greater incentives to engage with portfolio firms, as suggested by Figure 1 and Table 1 respectively, then they will be less likely to indiscriminately divest following these events. In comparison, other ESG funds' lower research and lower incentives to engage suggest that they would be more likely to sell shares.

We examine fund trading during the quarter in which a firm experiences a ESG risk event. We also control for non-ESG news, as captured by Ravenpack News Analytics. We classify each type of event as 'Severe' if the three-day announcement CAR ranks in the bottom quintile across all news events in a quarter, and as 'Non-severe' otherwise. Importantly, because RepRisk focuses exclusively on adverse ESG incidents, the 'Non-severe ESG news' category is restricted to negative news. In contrast, Ravenpack includes all news, meaning the 'Non-severe Non-ESG News' category includes both small negative and positive news. All our news variables represent the number of the news articles, of the designated type, during the quarter.

To capture additional factors that potentially influence fund trading, we control for the following set of stock characteristics measured as of the quarter before the event: the natural logarithm of market capitalization, book-to-market, stock performance, and Amihud illiquidity.

Results are shown in Table 4. Given the high overlap between the LL and PST classifications (78%) and the similarity of results using each measure to this point, we present

results using the LL measure here and report those using the PST measure in Internet Appendix Table A1. Panel A estimates fund-security level regressions where the dependent variable is the fund's *NetTrade*. Panel B shows security level regressions where the dependent variable is the aggregate change in the number of shares held by a fund type, scaled by the number of shares outstanding in basis points. The fund-security level analyses give equal weight to individual funds, while the aggregated security-level analyses give more weight to larger funds, which tend to make larger trades.

Looking first at Panel A, we find significant differences in trading among the different fund types. Within the set of ESG funds, committed funds exhibit no tendency to have lower net trades following severe ESG events. In comparison, other ESG funds' net trades are significantly lower. The contrast between committed and other ESG funds is striking. While Chen et al. (2021) and Gantchev et al. (2022) conclude that institutional investors, and particularly ESG-conscious investors, are more likely to sell after ESG incidents, our findings show that this effect is limited to the subset of ESG funds with weak incentives to engage.

The finding from the fund-security level regressions that only non-committed ESG funds are significantly more likely to sell around severe ESG negative news implies that the ownership composition of the stocks may change during these times. Regressions at the security level, shown in Panel B, show that this is the case. The ownership of committed ESG funds significantly increases following these events, whereas the ownership of other ESG funds significantly decreases. These findings are consistent with committed ESG funds, in aggregate, providing liquidity to the other ESG funds, which are more likely to sell. In addition, a comparison with the trading responses of non-ESG funds to different types of news suggests that other ESG funds' trading strategy is very similar to that non-ESG funds. As reported in Internet

Appendix Table A1, results using the PST measure are similar.

In addition to adopting a longer-term investment strategy around negative ESG risk events, several factors suggest that committed funds will adopt a longer-term investment strategy among ESG stocks more generally, relative to other stocks. First, as discussed by Starks, Venkat and Zhu (2021), ESG-related investments can take time to pay off and can contribute to short-term underperformance. Second, as shown in Table 1, committed funds' investment positions generate higher incentives to engage on their ESG stocks than on other stocks. Results, shown in Internet Appendix Table A2, provide support for this conjecture: committed funds maintain their investments in high ESG firms even during periods of poor short-term performance. This finding is consistent with these funds viewing ESG as a long-term value driver.

4. Funds' ESG Engagement Activities

Given the differences between committed and other ESG funds' investment strategies, we conjecture that there will be a similar contrast in engagement strategies. We examine two types of engagement: voting on ESG issues and questions during conference calls on these issues.

4.1 Fund voting on ESG proposals

Mutual funds have a fiduciary duty to vote their shares on all items on the proxy statement. We focus our analysis on shareholder proposals related to ESG issues. Incremental to other factors such as fund family or the active versus passive nature of the fund, we predict that committed ESG funds will devote more attention to voting on ESG proposals, compared to other ESG funds or non-ESG funds.¹²

¹² Michaely, Ordonez-Calafi and Rubio (2022), Dikolli, Frank, Guo and Lynch (2021) and Li, Naaraayanan and Sachdeva (2021) find that the fund family to which an ESG fund belongs, whether a fund is active or passive, and whether the proposal relates to ES vs G issues influence voting.

Committed funds' incentives to engage with portfolio firms are based on fund managers' perceived financial gains from engagement, as highlighted by LL. If these funds view ESG issues as a value driver and adopt a strategy of engaging with portfolio firms on ESG issues, then they will take an informed approach toward voting on ESG proposals. Following Iliev and Lowry (2015), this generates two predictions. First, committed funds will independently assess items up for vote, rather than indiscriminately following the advice of a proxy advisory service company such as ISS. Second, committed funds will separately assess the issue up vote for each portfolio firm, rather than adopting a one-size-fits-all strategy of always supporting or rejecting certain agenda items. In contrast, other ESG funds would be more likely to follow ISS and more likely to adopt one-size-fits-all strategies.

Looking first at Table 5, we estimate regressions where the dependent variable is an indicator equal to one if the fund's vote was different than ISS's recommendation, zero otherwise. Independent variables of interest include committed ESG fund and other ESG fund indicator variables. Because funds' incentives to actively engage in voting depend on the potential benefits and costs, we control for the logarithm of fund size and fund turnover; large funds and funds with longer investment horizons benefit more from active voting (Iliev and Lowry, 2015). We additionally control for other firm and fund characteristics, including ownership of the firm by the fund, the firm's portfolio weight in the fund, agenda item fixed effects, industry fixed effects, and year fixed effects. We focus on the subsample of ESG proposals that have a non-zero historical passing rate to increase the power of our tests.¹³ Columns 1 – 2 focus on ES proposals, and columns 3 – 4 focus on G proposals. We estimate regressions based on all funds (odd-numbered columns) and based only on ESG funds (even-

¹³ 370 out of 973 ES proposals have non-zero historical passing rate, defined as never having passed up until a point in time. 1950 out of 2122 governance proposals have a positive passing rate.

numbered columns). Panel A employs the LL classification and Panel B the PST classification.

Among the ES proposals, conclusions are similar across every specification. Committed ESG funds are significantly more likely to come to a different conclusion than ISS, compared to either non-ESG funds or other ESG funds (the benchmark category in the odd-numbered and the even-numbered columns, respectively). Results are similar among G proposals, though slightly weaker. In sum, results are consistent with our prediction that committed ESG funds take a more active role in voting, rather than indiscriminately following the recommendations of ISS. This is consistent with them viewing ESG as a value driver and actively engaging on these issues as they strive to impact firms' policies.

In Table 6, we examine funds' propensity to take a blanket approach towards voting. To construct a one-size-fits-all measure of voting, for each fund \times agenda item \times year, we calculate the absolute difference in the number of proposals the fund supports versus the number it opposes during the following five-year period, divided by the total number of proposals voted by the fund during the period. Funds that exhibit more discretionary voting across firms on the same agenda item will have a smaller one-size-fits-all measure. Similar to Table 5, we focus on those proposals with a non-zero historical passing rate. Control variables include the subset of Table 6 controls that are at the fund level.

The format of Table 6 is similar to that of Table 5, where the four columns include specifications using all funds and just ESG funds, and using ES proposals versus G proposals. For conciseness we focus on the LL measure. Results using the PST measure are shown in Internet Appendix Table A3.¹⁴ Results provide further support for committed funds being more active voters: they are significantly less likely to follow one-size-fits-all strategies. That is, for

¹⁴ Results using the PST measure are slightly weaker than those using the LL measure.

the same ES agenda item, they are more likely to vote yes for some firms and no for others. In contrast, other ESG funds tend to adopt a more passive voting strategy, which is consistent with their lower incentives to engage with their portfolio firms.

4.2 Fund attention to ESG issues during earnings conference calls

As a second proxy for fund engagement on ESG issues, we examine fund families' questions during the Q&A section of firms' earnings conference calls. Several factors motivate this proxy. First, Li et al. (2021) and Cen, Han and Harford (2022) show that call participants' questions often reveal their interest and expertise in specialized areas. Second, any questions about ESG arguably signals a belief that these issues are material, particularly given buy-side institutions' low overall participation rate in these calls (Jung, Wong and Zhang, 2018). Third, ESG related discussions during the Q&A section of these calls likely reflect "soft" information, beyond what can be deciphered from disclosures such as financial statements. Lastly, since earnings calls are mainly designed to discuss firms' financial performance and business prospects, the questions are less likely to be subject to concerns of greenwashing by ESG funds. Rather, they arguably reflect a fund's belief in ESG as an essential value driver.

Since conference call discussions concerning corporate governance tend to be generic and difficult to quantify, we follow existing studies and focus on environmental and social issues (E&S). We employ two sets of keywords to conduct textual analyses of earnings call transcripts. First, we utilize a comprehensive set of environmental keywords derived from earnings call transcripts as employed in Sautners, van Lent, Vilkov and Zhang (2022).¹⁵ A key benefit of this source is that it captures the context-specific jargon used in earnings conference calls, an

¹⁵ We thank Zacharias Sautners for generously sharing this list of keywords. As described in more detail in Sautners et al., this list is generated via the keyword discovery algorithm proposed in King, Lam, and Roberts (2017).

important consideration given that the language used by scientists, social media, regulatory authorities and financial market participants could vary significantly.

Second, we follow Chava, Du and Malakar (2021) and Li et al. (2021) to identify the five most mentioned social impact keywords (*human rights, discrimination, gender equality, racial ethnic, employee engagement*) based on key sustainability standards and documents, and we use them as seed words.¹⁶ Following Li et al. (2021), we apply a machine learning model, *word2vec*, to the aforementioned sustainability documents and compute the cosine similarity between word vectors containing the seed words and other word vectors to generate an expanded social impact directory.

After constructing E&S dictionaries, we measure the occurrence of these issues in the conference call Q&As. Analyses are at the fund family-firm-quarter level, consistent with buy-side analysts representing fund families (rather than specific funds). For each conference call, we classify buy-side analysts into two groups, those from committed ESG families versus other ESG families. For conciseness, we focus on the LL measure as a basis of classification.¹⁷

In Table 7, we examine the relation between E&S questions and the committed ESG family status. The dependent variable in columns 1 and 2 is a dummy variable indicating at least one E&S question during the call. The dependent variable in columns 3 and 4 captures the intensity of E&S issues within the question. Following prior studies (Chava, Du, Malakar, 2021; Sautners, van Lent, Vilkov and Zhang, 2022), we measure the intensity as the ratio of E&S keywords in the analyst's question over the total word count of the question. The independent variable of interest is a Committed family indicator variable.

¹⁶ This includes Sustainability Accounting Standards Board (SASB), United Nation Global Impact's guide to corporate sustainability, 2022 S&P Global Corporate Sustainability Assessment, and data manuals of MSCI KLD, Reprisk and Sustainalytics.

¹⁷ Results using the PST measure reported in Internet Appendix Table A4.

As Jung, Wong and Zhang (2018) discuss, buy-side analyst participation in conference calls is determined by many firm- and institution-specific factors. Also, the earnings call data only identifies cases in which a fund family asks at least one question; it does not differentiate between calls in which a fund family does not participate, remains silent, or intended to ask questions but was not selected to speak. We limit our sample along two alternative dimensions to mitigate such concerns. In columns 1 and 3, we limit the sample to family-firm pairs in which the fund family asked at least one question about the firm in the past year, indicating some level of attention to the firm. To account for firm-specific factors that trigger analyst questions, we include firm fixed effects and control variables that proxy for the uncertainty of earnings, past performance, and firm size, all measured as of the prior-quarter end. We also include a dummy variable indicating whether the firm is currently held by the family's ESG funds. We code the absence of any E&S questions from the family in a call as zero. This accounts for the fact that a fund family that does not consider ESG to be a value driver may simply remain silent during the entire call, but it also introduces noise into the analysis since the fund family may not be present in the call. In columns 2 and 4, we adopt the stricter criteria of focusing on conference calls in which analysts from both committed and other ESG families asked at least one question, and we include conference call fixed effects to control for factors such as firm performance and tone of management discussion that may affect the level of engagement from buy-side institutions.

Consistent with predictions, columns 1 and 2 indicate that committed ESG families are more likely to ask E&S questions during firms' earnings conference calls, relative to other ESG families. In columns 3 and 4, we compare the intensity of E&S questions between committed and other ESG families. Given that the unconditional probability of questions from buy-side analysts is fairly low, the power of this analysis is relatively weak. Nonetheless, results indicate a

positive relation, and it is significant at the 5% level in column 4.

In sum, the findings in this section provide further evidence that committed funds, which invest heavily in high ESG firms and have strong ex-ante incentives to engage with portfolio firms, demonstrate more engagement on ESG issues. This finding is precisely what one would expect if the funds view E&S as a value driver.

5. Real Impacts on Firms' ESG Performance?

Our findings of heterogeneity across ESG funds in investment strategy and engagement suggests that the different types of ESG funds will differentially impact portfolio firms. We begin in section 5.1 with an analysis on changes in firms' ESG performance, and in Section 5.2 we use a difference-in-differences framework that addresses endogeneity concerns.

5.1 Changes in ESG performance following trades by ESG funds

We begin by examining how changes in firm ownership by different types of ESG funds relates to firms' subsequent ESG risk profiles. As previously shown in Table 4, committed ESG funds tend to maintain their investments in firms following negative ESG events, whereas other ESG funds are more likely to at least partially divest during such times. In this section, we analyze how changes in ownership profile relate to future changes in firm risk.

To quantify funds' trading in each stock, we classify a stock as subject to intensive buy (sell) by committed ESG funds if the stock is in the top (bottom) quintile among committed funds' trading during quarter t . We label these cases 'Committed ESG buy' and 'Committed ESG sell', respectively. 'Other ESG buy' and 'Other ESG sell' are defined analogously. Results are shown in Table 8. For conciseness, we report results using the LL classification. Findings using the PST classification are similar, as reported in Internet Appendix Table A5.

We estimate regressions in which the dependent variable represents the change in the RepRisk ESG risk index over periods ranging from one to four quarters after the quarter of a risk incident. Specifically, the dependent variables in columns 1 – 4 represent $\Delta RRI_{t, t+1}$, $\Delta RRI_{t, t+2}$, $\Delta RRI_{t, t+3}$, and $\Delta RRI_{t, t+4}$, respectively. The baseline case represents stocks not intensively traded by any ESG funds; this soaks up changes in firms' ESG risk over time that are unrelated to intensive trades by ESG funds. Control variables include firm size and book-to-market as of the end of quarter t , and stock returns during quarter t .

We find that *Committed ESG Buy* is significantly related to decreases in firm risk over the subsequent three quarters. In economic terms, firms intensely bought by committed funds experience a risk reduction of 16.7% after two quarters. Compared to the base case of firms that are neither intensively bought nor sold, this represents a 31% reduction.¹⁸

Although other ESG funds tend to sell firms experiencing severe ESG risk incidents (as shown in Table 4), this exit strategy does not have significant disciplinary effects on firms' ESG performance. This finding echoes the view that divestiture is unlikely the most effective way to influence corporate ESG conduct (see, e.g., Cohen, Gurun and Nguyen, 2021; Berk and van Binsbergen, 2021). Instead, continued investments by committed funds that tend to engage with firm management are associated with more persistent improvements in firms' ESG conduct.

5.2. *The causal impact of investments by committed funds*

While findings in the prior section provide suggestive evidence regarding the influence of committed funds on portfolio firms' ESG policies, endogeneity is a potential concern. The positive relation between fund buying and changes in a firm's ESG risk potentially reflects one

¹⁸ When all dummies (committed and other, buy and sell) are set to zero, the average change in RRI from t to $t+2$ is -12.7%. The coefficient on Committed Buy of -4.045% indicates that the total change in RRI when committed funds purchase is -16.7%; $(16.7 - 12.7) / 12.7 = 31\%$,

of two phenomena: fund engagement that causes the firm to modify their behavior in ways that lower risk (engagement channel), or the fund predicting changes in risk and buying on that information (selection channel). We use a natural experiment to isolate the engagement channel.

Hartzmark and Sussman (2019) find that after the introduction of the Morningstar Sustainability Rating in 2016, funds ranked as low sustainability experienced net outflows while those categorized as high sustainability attracted large inflows. Importantly, the additional inflows are unrelated to fund performance and the fundamentals of fund holdings. As such, these inflows represent an exogenous shock to ESG funds' TNA, which will, on average, lead to increased positions within the portfolio firms. The funds' increased ownership (as a percent of firm market capitalization) enhances the funds' ability to influence firm policies, and thus raises the benefits of active engagement (Iliev and Lowry, 2015).

Consistent with Hartzmark and Sussman (2019), Figure 2 shows that around the introduction of the Morningstar Sustainability Rating, ESG funds experience significant inflows relative to non-ESG funds. Time 0 represents the end of the quarter in which Morningstar introduced this rating, March 2016. Flows into funds are tracked from 15 months prior to this date through 15 months after. To clearly contrast flows into ESG funds before and after the rating introduction, cumulative flows are set to zero both in month -15 (to track the flows prior to the rating introduction) and in month 0 (to track flows after the rating introduction).¹⁹

To shut down the selection channel and focus solely on the engagement channel, we fix the portfolios of firms held by each fund as of the quarter prior to the shock. We then examine whether those firms that were part of an ESG fund's portfolio before the shock subsequently experience significant changes in their ESG performance.

¹⁹ See, e.g., the following blog that discusses the introduction of Morningstar Sustainability Rating in August 2015. <http://www.justmeans.com/blogs/sustanalytics-and-morningstar-partner-to-launch-first-esg-scores-for-funds>

Results are shown in Table 9. We estimate annual regressions, which provides two advantages over the quarterly interval employed in Table 8. First, effective engagement often requires substantial time, which is better captured at the annual level. Second, we can examine outcome measures that are not available at the quarterly interval. We employ two measures of firms' ESG performance: each firm's annual RepRisk Risk Index and each firm's annual toxic release, as available from the Toxics Release Inventory (TRI) Program of the U.S. EPA. The former provides an overall assessment of a firm's ESG performance while the latter provides a more precise measure of a firm's environmental practices. Firms' on-site toxic release captures pollutants released to the air, surface water, land, and underground (Lyu, Shan and Tang, 2021).

Our first step is to isolate the effects of the exogenous fund flows on ESG funds' additional investments into portfolio firms. We follow the approach of Doshi, Elkamhi, and Simutin (2015). Focusing on the last quarter of 2015, we create an aggregate portfolio representing the sum of all company shares held by committed ESG funds. For each company, we calculate its weight in this 'committed' portfolio minus its weight in the market portfolio. This difference represents an estimate of the stock's overweighting by committed ESG funds. The dummy variable *High Committed ESG Overweight* equals one if this measure is in the top quintile. We employ an analogous approach to calculate each stock's overweighting by other ESG funds to create the *High Other ESG Overweight* dummy.

We regress the logarithm of the RepRisk Risk Index and the logarithm of the TRI on-site release on the interaction terms *High Committed ESG Overweight* × *Post* and *High Other ESG Overweight* × *Post*, where *Post* is a dummy variable equal to one in the post-2015 period. These interaction terms capture the extent to which an exogenous increase in funds' ownership of high ESG stocks relates to subsequent changes in firm operations, specifically to a decrease in ESG-

related risk or to a decrease in emissions. As such, they isolate the effects of the engagement channel. We predict a significant negative coefficient on these interaction terms.

Results from this specification are shown in columns 1, 3, 5, and 7 of Table 9; columns 1 and 3 (5 and 7) are based on the RepRisk Index (TRI), using either the LL or PST measure. Across all specifications, findings indicate that committed funds' higher incentives to engage, combined with their greater information acquisition and longer-term investment strategy, have real effects. Greater overweighting by such funds leads to significant decreases in ESG-related risk (the RRI Risk Index) and to significant decreases in emissions. In contrast, although firms heavily overweighted by other ESG funds also receive additional investment, there is no significant change in either of these ESG performance metrics. All ESG funds are not equal.

In columns 2, 4, 6, and 8, we examine in more detail the years in which these changes occur. We substitute year dummies for the Post dummy. That is, we separately interact *High Committed Overweight* with individual year dummies for 2013 to 2018. Consistent with predictions, we observe strong positive effects in years 2016 – 2018. We also observe some effects in 2015, consistent with the run-up in flows that coincided with early Morningstar discussions (as similarly documented by Hartzmark and Sussman).

In additional analyses, we examine heterogeneity across firm types. Several factors suggest that the observed changes in firms, as shown in Table 9, will be concentrated within high ESG firms. First, as reported in Table 1, committed funds' incentives to engage are significantly higher on ESG stocks than on non-ESG stocks. Second, high ESG firms should be more affected by exogenous capital infusions from committed funds since these funds have more concentrated

portfolio weights in these firms.²⁰ Third, ESG engagement may be more likely to succeed when targets are more sensitive to ESG rating downgrades and thus more cooperative (Dimson, Karakas and Li, 2015 and Barko et al., 2021). Our findings are consistent with these predictions. As reported in Internet Appendix Table A6, exogenous shocks to capital within committed ESG funds are followed by significant ESG-related improvements among high ESG stocks. In contrast, effects are weaker within non-ESG stocks.

Overall, results show that different types of ESG funds employ different strategies. Committed ESG funds adopt ESG integrated investment strategies that are more sophisticated and rely more on independent research; their continued investments and associated engagement are more effective in improving firms' ESG performance. In contrast, other ESG funds have more dispersed investments as a result face fewer incentives to engage with their portfolio companies on ESG related issues. They are more likely to sell firms exposed to severe ESG risk, and we find no evidence that this exit strategy leads to real impacts at underlying firms.

6. Performance and Flows of ESG Funds

6.1 Performance of ESG funds

Prior studies find mixed evidence regarding the performance of institutional investors engaging in sustainable investments. There is no consensus on whether funds can “do well by doing good.” On the one hand, ESG funds could outperform since good ESG practices help reduce firms' downside risk and increase their long-term value (see, e.g., Hoepner et al., 2021; Chen et al., 2021). On the other hand, several studies suggest that high sustainability funds may

²⁰ This assumption is consistent with the fact that individual firms' portfolio weights in a fund remains relatively stable during the quarters leading up to the event. Specifically, 83% of overweighted firms by a fund at the end of 2014 remain as overweighted at the end of 2015.

underperform due to the constraints imposed on their portfolios, and financial losses may even be the necessary condition for them to achieve impacts (Riedl and Smeets, 2017; Liang, Sun, and Teo, 2020; Oehmke and Opp, 2020; Barber, Morse, and Yasuda, 2021).

We examine in Table 10 whether committed funds' greater focus on ES-related issues comes at the expense of financial performance. Evidence throughout the paper indicates that committed funds devote more resources to ESG-related issues, in terms of both attention and engagement. This may provide an advantage in identifying best ESG practices that contribute to firms' long-term value. This information advantage potentially enables committed funds to earn higher returns on high ESG stocks via two channels: engagement efforts and stock selection.

In Columns 1 and 2, the dependent variable, fund performance, is measured as the DGTW (1997) characteristics-adjusted returns of fund holdings over a 12-month horizon. In column 3 (column 4), these returns are measured only across the subset of the fund's holdings that represent high ESG stocks (all other stocks). We regress these measures of fund performance on *Committed ESG fund*, *Other ESG fund*, and a battery of fund characteristics that have been shown to affect fund performance. We focus on the LL measure of engagement, though results using the PST measure, shown in Internet Appendix Table A7, are similar.

Looking first at column 1, the sample includes all funds, meaning the benchmark category is non-ESG funds. The significantly positive coefficients on both *Committed ESG fund* and *Other ESG fund* indicate that both types of ESG funds outperform non-ESG funds during our sample period. This may reflect either the value of integrating ESG considerations into portfolio decisions (Chen et al., 2021) or the unexpectedly strong demand for high ESG stocks that contributed to price run-ups over the most recent decade (Pastor, Stambaugh, and Taylor, 2021). Column 2 shows that committed and other ESG funds perform roughly equally, as

evidenced by the insignificant coefficient on the *Committed* dummy in this specification.

Results in column 3 of Table 11 indicate that the attention to ESG has given committed ESG funds an advantage, at least during our sample period. Committed funds significantly outperform other ESG funds on their ESG investments, with an economic magnitude of approximately 50 bps per year. In contrast, column 4 indicates that these two groups of ESG funds have not performed significantly differently on their non-ESG stocks.

The finding that committed funds outperform other ESG funds only on the subset of ESG stocks is striking along several dimensions. First, committed funds' outperformance cannot be explained by greater holdings in ESG stocks, as the conclusions of Pastor et al. (2021) might suggest. Both sets of ESG funds invest a similar percent of AUM in ESG stocks, as shown in Table 2. Second, committed funds' outperformance cannot be attributed to higher active share or industry concentration index— attributes that could be related to managerial skill (Kacperczyk, Sialm and Zheng, 2005; Cremers and Petajisto, 2009). This is because committed and other ESG funds perform similarly on other holdings (as shown in column 4). Third, committed funds' outperformance on high ESG holdings is consistent with the value of specialization resulting from proprietary ESG research (Cremers, Reiley and Zambrana, 2023). Through long term engagement with portfolio firms on ESG issues, committed funds might be better at selecting firms where ESG performance can contribute significantly to financial performance.

6.2 Flows of ESG funds

In this subsection, we examine whether investors are aware of the differences between committed and other ESG funds. That is, are committed funds rewarded for their more sophisticated ESG integration and greater impacts? We address these questions through an examination of fund flows.

We calculate fund flows as the quarterly changes in fund TNA, adjusted for fund returns. We regress fund flows on *Committed ESG fund* and *Other ESG fund*. We control for fund performance, measured by either three-year net-of-fee returns or the Carhart (1997) four-factor alpha estimated using monthly fund returns over the past 36 months. In addition to fund performance, we also control for fund characteristics such as expense ratio, turnover, the logarithm of fund TNA, the logarithm of fund age, prior-quarter fund flows, and flows of the fund's investment style. Since investor awareness of sustainable investments has increased significantly in recent years, particularly after Morningstar introduced its Morningstar Sustainability Rating, we examine flows into committed versus other ESG funds separately for the pre-2016 and post-2016 periods. Results are presented in Table 11. We again focus on the LL measure, with results using the PST measure reported in Internet Appendix Table A7.

The first takeaway is that there has been a shift during our sample period, which coincides with the introduction of the Morningstar Sustainability Index. While columns 1 and 2 show no effect during the pre-2016 period, columns 3 and 4 indicate that both committed and other ESG funds have attracted significantly positive abnormal flows over the post-2016 period.

A comparison of the coefficients on *Committed ESG fund* and *Other ESG fund* provides no evidence that committed funds are rewarded for their greater engagement with ESG firms. Despite their preferences for sustainable investments, average mutual fund investors are not sophisticated enough to differentiate between sustainable investments that are positioned to have social impacts and opportunistic window dressing behavior that aims to attract investor flows. Our evidence calls for greater investor awareness on the heterogeneity across ESG funds.

7. Conclusion

Regulatory authorities and academic studies often measure sustainable investments by asset managers' dollar investments in high ESG firms. Yet, several recent studies find no evidence that funds engaging in sustainable investments exert material impacts on firms' cost of capital or improve corporate conduct (see, e.g., Berk and van Binsbergen, 2021 and Heath et al., 2021). We hypothesize that investors will only have an impact if they perceive ESG issues to be a value driver and if they have incentives to engage with portfolio firms.

We find that committed ESG funds, which have higher incentives to engage, monitor ESG-related issues more intensely, have a longer-term investment strategy toward ESG firms and firms exposed to ESG risks, and devote more resources to engagement on ESG related issues. This strategy is effective: investments by committed funds contribute to improvements in firms' ESG performance.

In contrast, other ESG funds' strategy of exiting following negative ESG incidents has no observable impact on firms' ESG policies. It is possible that their divestments following negative firm ESG incidents are motivated by a desire to exit firms facing a downgrade in ESG ratings, and thereby preserve the fund's ESG status. In aggregate, our results suggest that these funds are better characterized by greenwashing. While they hold a similar percent of AUM in ESG firms as committed funds, they have no impact on the underlying firms.

Committed funds' greater attention to ESG issues generates value: committed ESG funds outperform other ESG funds on their high ESG investments. However, we find no evidence that average investors are sophisticated enough to identify these impactful funds. Conditional on performance, we find no evidence that committed funds attract higher flows.

Our study highlights the importance of understanding funds' incentives to engage firms on ESG-related issues. Not all ESG funds are created equal; committed ESG funds are

significantly more likely to pressure firms into improving their environmental and social impacts. Our paper also suggests that engagement, as opposed to divestiture, is likely to be a more effective mechanism to influence corporate ESG conduct.

References

- Azar, José, Miguel Duro, Igor Kadach, and Gaizka Ormazabal, 2021, The Big Three and corporate carbon emissions around the world, *Journal of Financial Economics* 142, 674–696.
- Barber, Brad M, Adair Morse, and Ayako Yasuda, 2021, Impact investing, *Journal of Financial Economics* 139, 162–185.
- Barko, Tamas, Martijn Cremers, and Luc Renneboog, 2021, Shareholder engagement on environmental, social, and governance performance, *Journal of Business Ethics* 1–36.
- Becht, Marco, Julian R Franks, and Hannes F Wagner, 2021, The benefits of access: Evidence from private meetings with portfolio firms, European Corporate Governance Institute–Finance Working Paper.
- Berg, Florian, Julian F Kölbel, Anna Pavlova, and Roberto Rigobon, 2021, ESG confusion and stock returns: Tackling the problem of noise, Available at SSRN 3941514.
- Berk, Jonathan, and Jules H van Binsbergen, 2021, The impact of impact investing, Available at SSRN 3909166.
- Broccardo, Eleonora, Oliver Hart, and Luigi Zingales, 2022, Exit versus voice, *Journal of Political Economy* 130, 3101–3145.
- Carhart, Mark M, 1997, On persistence in mutual fund performance, *The Journal of Finance* 52, 57–82.
- Ceccarelli, Marco, Stefano Ramelli, and Alexander F Wagner, 2021, Low-carbon mutual funds, Swiss Finance Institute Research Paper.
- Cen, Ling, Yanru Han, and Jarrad Harford, 2022, What do questions reveal? skill acquisition, detection, and recognition in the capital markets, Available at SSRN 3730815.
- Chava, Sudheer, Wendi Du, and Baridhi Malakar, 2021, Do managers walk the talk on environmental and social issues?, Georgia Tech Scheller College of Business Research Paper.
- Chen, Linqun, Yao Chen, Alok Kumar, and Woon Sau Leung, 2021, Firm-level ESG news and active fund management, University of Miami Business School Research Paper.
- Cohen, Lauren, Umit G Gurun, and Quoc Nguyen, 2021, The ESG-innovation disconnect: Evidence

- from green patenting, European Corporate Governance Institute–Finance Working Paper.
- Crane, Alan, Kevin Crotty, and Tarik Umar, 2021, Hedge funds and public information acquisition, Available at SSRN 3127825.
- Cremers, KJ Martijn, and Antti Petajisto, 2009, How active is your fund manager? A new measure that predicts performance, *The Review of Financial Studies* 22, 3329–3365.
- Cremers, Martijn, and Ankur Pareek, 2016, Patient capital outperformance: The investment skill of high active share managers who trade infrequently, *Journal of Financial Economics* 122, 288–306.
- Daniel, Kent, Mark Grinblatt, Sheridan Titman, and Russ Wermers, 1997, Measuring mutual fund performance with characteristic-based benchmarks, *The Journal of Finance* 52, 1035–1058.
- Dimson, Elroy, Oğuzhan Karakaş, and Xi Li, 2015, Active ownership, *The Review of Financial Studies* 28, 3225–3268.
- Dimson, Elroy, Oğuzhan Karakaş, and Xi Li, 2021, Coordinated engagements, European Corporate Governance Institute–Finance Working Paper.
- Doshi, Hitesh, Redouane Elkamhi, and Mikhail Simutin, 2015, Managerial activeness and mutual fund performance, *The Review of Asset Pricing Studies* 5, 156–184.
- Eccles, Robert G, and Judith C Strohle, 2018, Exploring social origins in the construction of ESG measures, Available at SSRN 3212685.
- Edmans, Alex, 2022, The end of ESG, European Corporate Governance Institute–Finance Working Paper.
- Gantchev, Nickolay, Mariassunta Giannetti, and Rachel Li, 2022, Does money talk? Market discipline through selloffs and boycotts, European Corporate Governance Institute–Finance Working Paper.
- Gibson, Rajna, Simon Glossner, Philipp Krueger, Pedro Matos, and Tom Steffen, 2021, Do responsible investors invest responsibly?, Swiss Finance Institute Research Paper.
- Hartzmark, Samuel M, and Abigail B Sussman, 2019, Do investors value sustainability? A natural experiment examining ranking and fund flows, *The Journal of Finance* 74, 2789–2837.

- He, Yazhou, Bige Kahraman, and Michelle Lowry, 2021, ES risks and shareholder voice, European Corporate Governance Institute–Finance Working Paper.
- Heath, Davidson, Daniele Macciocchi, Roni Michaely, and Matthew C Ringgenberg, 2021, Does socially responsible investing change firm behavior?, Available at SSRN 3837706.
- Heeb, Florian, Julian F Kölbel, Falko Paetzold, and Stefan Zeisberger, 2022, Do investors care about impact?, Available at SSRN 3765659.
- Hoepner, Andreas GF, Ioannis Oikonomou, Zacharias Sautner, Laura T Starks, and Xiaoyan Zhou, 2022, ESG shareholder engagement and downside risk, European Corporate Governance Institute–Finance Working Paper.
- Iliev, Peter, and Michelle Lowry, 2015, Are mutual funds active voters?, *The Review of Financial Studies* 28, 446–485.
- Jung, Michael J, MH Franco Wong, and X Frank Zhang, 2018, Buy-side analysts and earnings conference calls, *Journal of Accounting Research* 56, 913–952.
- Kacperczyk, Marcin, Clemens Sialm, and Lu Zheng, 2005, On the industry concentration of actively managed equity mutual funds, *The Journal of Finance* 60, 1983–2011.
- Kim, Soohun, and Aaron Yoon, 2021, Analyzing active managers’ commitment to ESG: Evidence from united nations principles for responsible investment, Available at SSRN 3555984.
- King, Gary, Patrick Lam, and Margaret E Roberts, 2017, Computer-assisted keyword and document set discovery from unstructured text, *American Journal of Political Science* 61, 971–988.
- Krueger, Philipp, Zacharias Sautner, and Laura T Starks, 2020, The importance of climate risks for institutional investors, *The Review of Financial Studies* 33, 1067–1111.
- Lewellen, Jonathan, and Katharina Lewellen, 2022, Institutional investors and corporate governance: The incentive to be engaged, *The Journal of Finance* 77, 213–264.
- Li, Kai, Feng Mai, Rui Shen, and Xinyan Yan, 2021a, Measuring corporate culture using machine learning, *The Review of Financial Studies* 34, 3265–3315.
- Li, Tao, S Lakshmi Naaraayanan, and Kunal Sachdeva, 2021b, Conflicting objectives between ESG funds and their investors: Evidence from mutual fund voting records, Available at SSRN

3760753.

Liang, Hao, Lin Sun, and Melvyn Teo, 2020, Greenwashing, Available at SSRN 3610627.

Lyu, Xiaoyi, Chenyu Shan, and Dragon Yongjun Tang, 2021, Corporate finance and firm pollution, Available at SSRN 3805629.

Morningstar, 2020, The Morningstar ESG commitment level: Our first assessment of 100-plus strategies and 40 asset managers.

Naaraayanan, S Lakshmi, Kunal Sachdeva, and Varun Sharma, 2021, The real effects of environmental activist investing, European Corporate Governance Institute–Finance Working Paper.

Oehmke, Martin, and Marcus M Opp, 2020, A theory of socially responsible investment, Swedish House of Finance Research Paper.

Pástor, L'uboš, Robert F Stambaugh, and Lucian A Taylor, 2020, Fund tradeoffs, *Journal of Financial Economics* 138, 614–634.

Pastor, Lubos, Robert F Stambaugh, and Lucian A Taylor, 2021, Dissecting green returns, NBER Working Paper.

Renneboog, Luc, Jenke Ter Horst, and Chendi Zhang, 2008, The price of ethics and stakeholder governance: The performance of socially responsible mutual funds, *Journal of Corporate Finance* 14, 302–322.

Riedl, Arno, and Paul Smeets, 2017, Why do investors hold socially responsible mutual funds?, *The Journal of Finance* 72, 2505–2550.

Sautner, Zacharias, Laurence van Lent, Grigory Vilkov, and Ruishen Zhang, 2022, Firm-level climate change exposure, European Corporate Governance Institute–Finance Working Paper.

Starks, Laura T, Parth Venkat, and Qifei Zhu, 2021, Corporate ESG profiles and investor horizons, Available at SSRN 3049943.

Wang, Pingle, 2019, Demand for information and stock returns: Evidence from EDGAR, Available at SSRN 3348513.

Wermers, Russ, 2000, Mutual fund performance: An empirical decomposition into stock-picking talent, style, transactions costs, and expenses, *The Journal of Finance* 55, 1655–1695.

Figure 1

Filing downloads around ESG negative news

This figure plots the probability of a committed (other) ESG fund family downloading a firm’s filings on EDGAR during the days surrounding ESG negative news. For each news release, we calculate the three-day cumulative market-adjusted abnormal return (CAR) of the firm around the release and consider an ESG news event as a severe ESG negative news event if its CAR is ranked in the bottom quintile in a given quarter, and non-severe ESG negative news event otherwise. The x-axis shows the days relative to the news release ($t = 0$). The shaded area plots the 95% confidence interval.

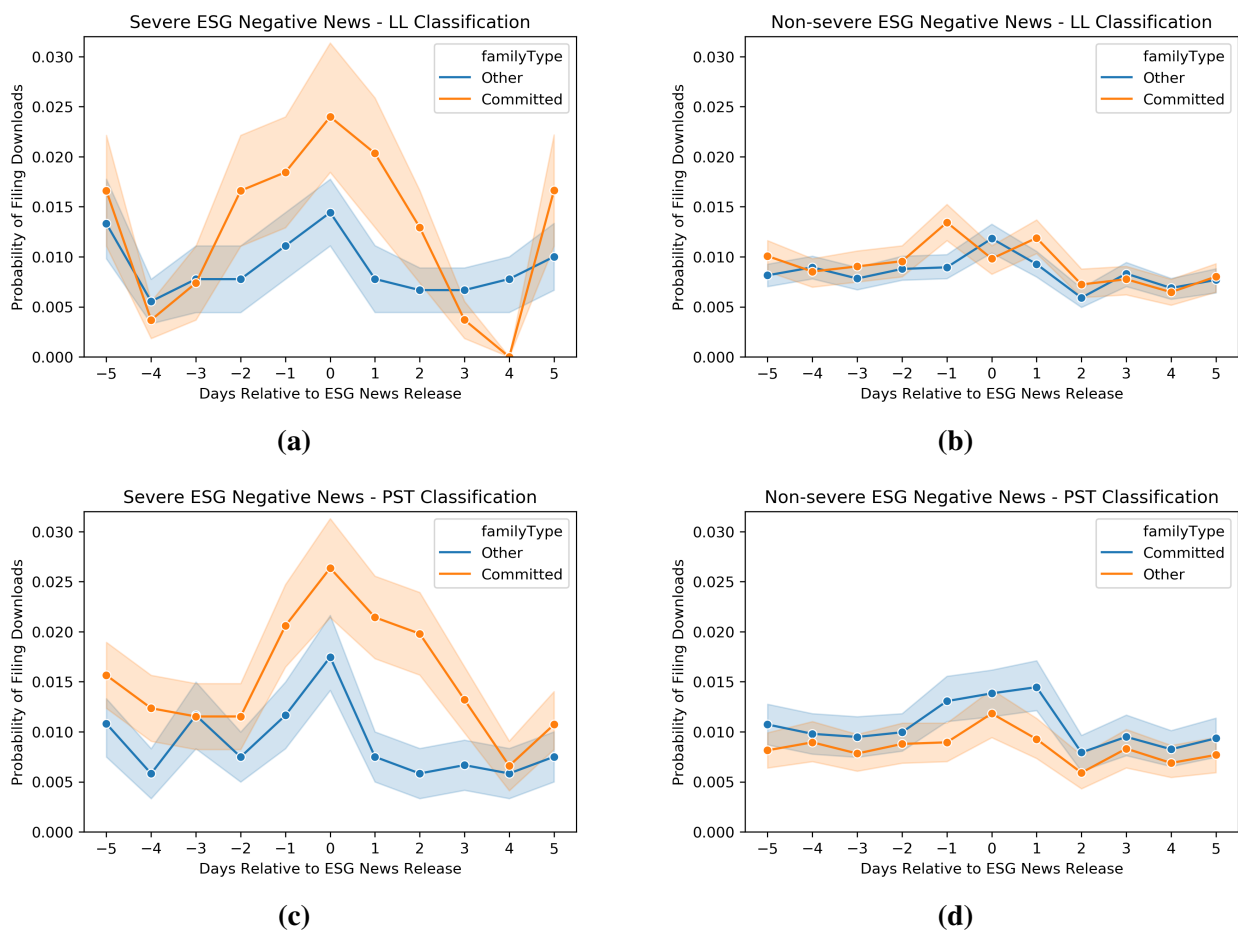


Figure 2

Flows to ESG funds around the introduction of Morningstar Sustainability Ratings

This figure plots the cumulative flows to funds around the introduction of Morningstar Sustainability Ratings, separately for high and low ESG funds as determined by their asset-based ESG score tercile rankings in December 2015. The x-axis denotes the number of months relative to the month of the introduction, March 2016. The y-axis denotes cumulative fund flows. Following Hartzmark and Sussman (2019), we accumulate fund flows after removing year-by-month fixed effects for 15 months before and after the introduction. Cumulative flows are set to zero both in month -15 and in month 0. Shaded areas indicate the 95% confidence interval.

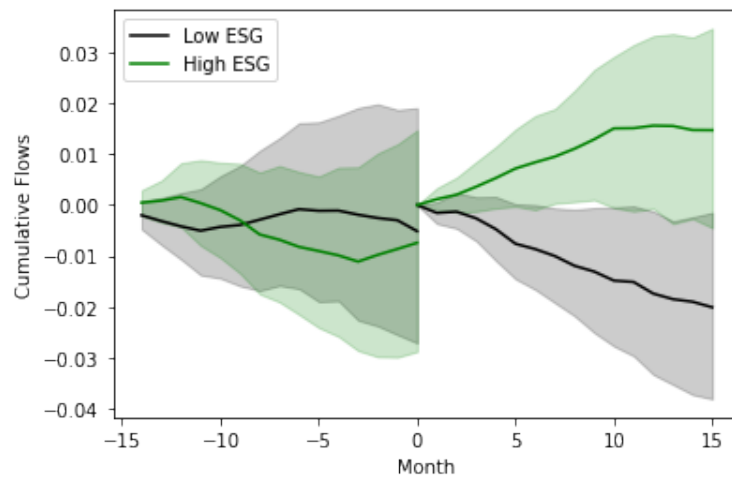


Table 1
Incentive to engage and portfolio illiquidity

This table reports the Lewellen and Lewellen (2022) “Incentive to Engage” measure and Pástor, Stambaugh, and Taylor (2020) “Portfolio Illiquidity” measure of committed and other ESG funds, separated for high ESG and other holdings. High ESG holdings are firms ranked within the top three deciles according to their MSCI ESG scores. In Panels A and B, ESG funds are classified as committed and other ESG funds by the Incentive to Engage measure and Portfolio Illiquidity measure, respectively. We also test the statistical significance of the differences in measures between high ESG and other firms for committed and other funds, respectively, in the last row.

Panel A: LL classification		
Incentive to engage	Committed ESG Funds	Other ESG Funds
All firms	0.087	0.035
High ESG firms	0.091	0.037
Other firms	0.075	0.032
High ESG vs other firms	0.016***	0.005

Panel B: PST classification		
Portfolio illiquidity	Committed ESG Funds	Other ESG Funds
All firms	0.009	0.003
High ESG firms	0.077	0.019
Other firms	0.071	0.018
High ESG vs other firms	0.006*	0.001

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 2
Fund characteristics

This table reports fund characteristics of committed ESG funds, other ESG funds, and non-ESG funds. *Weight on High ESG Stocks* is the weight of high ESG stocks in fund portfolio. *Expense Ratio* is the annual operating expenses relative to AUM in percentage. *Turnover Ratio* is annual fund turnover ratio. *Age* is the number of years since fund inception. *Load* is a dummy variable indicating funds charging front or rear load fees. *TNA* is the total net assets of a fund in billion dollars. *Family TNA* is the total net assets of all funds in the fund family in billion dollars. *Quarterly Return* is the quarterly return net of fees in percentage. *Quarterly 4-factor Alpha* is Carhart four-factor alpha estimated from 36-month rolling regressions. *Quarterly Flow* is quarterly fund flow in percentage, estimated as TNA at the end of quarter minus last quarter's TNA times this quarter's return, divided by last quarter's TNA. *Industry Concentration Index* is the sum of the squared deviations of portfolio weights for each of the 10 different industries held by the fund relative to their market portfolio weights, following Kacperczyk et al. (2005). *Active Share* is the share of a fund's portfolio holdings that differ from the benchmark portfolio holdings, following Cremers and Petajisto (2009). The last two columns report differences in fund characteristics between committed and other funds and between committed and non-ESG funds.

Panel A: LL classification

	Committed ESG	Other ESG	Non-ESG	Committed - Other	Committed - Non
Weight on High ESG Stocks	0.39	0.39	0.28	0.00	0.11***
Expense Ratio (%)	1.12	1.00	1.08	0.12***	0.04
Turnover Ratio (%)	55.79	60.44	72.83	-4.65	-17.04***
Age (year)	20.80	22.78	19.70	-1.98**	1.10
Load	0.71	0.69	0.72	0.02	-0.01
TNA (billion)	1.55	3.01	2.13	-1.46***	-0.58***
Family TNA (billion)	158.28	196.56	195.53	-38.28	-37.25
Quarterly Return (%)	3.07	3.31	2.60	-0.24	0.47***
Carhart 4-factor Alpha (%)	-0.51	-0.43	-0.78	-0.08	0.27***
Quarterly Flow (%)	-1.41	-1.31	-1.43	-0.10	0.02
Industry Concentration Index	0.27	0.19	0.22	0.08***	0.04***
Active Share	0.85	0.75	0.82	0.10***	0.03***

Panel B: PST classification

	Committed ESG	Other ESG	Non-ESG	Committed - Other	Committed - Non
Weight on High ESG Stocks	0.39	0.39	0.28	0.00	0.11***
Expense Ratio (%)	1.11	1.00	1.08	0.11***	0.03
Turnover Ratio (%)	56.66	59.62	72.83	-2.96	-16.17***
Age (year)	20.47	23.04	19.70	-2.57**	0.77
Load	0.72	0.68	0.72	0.04	0.00
TNA (billion)	1.43	3.08	2.13	-1.65***	-0.70**
Family TNA (billion)	132.90	219.60	195.53	-86.70	-62.63
Quarterly Return (%)	2.91	3.46	2.60	-0.55	0.31***
Carhart 4-factor Alpha (%)	-0.47	-0.47	-0.78	-0.00	0.31***
Quarterly Flow (%)	-1.41	-1.31	-1.43	-0.10	0.02
Industry Concentration Index	0.25	0.20	0.22	0.05***	0.03***
Active Share	0.85	0.75	0.82	0.10***	0.03***

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 3
Fund trading in response to poor firm performance

This table examines whether funds' trading responses to poor past performance differ across fund types. The dependent variable $Net\ Trades_{ijt}$ is the dollar amount of fund i 's trading of stock j from quarter $t - 1$ to quarter t , scaled by the fund's portfolio value in quarter $t - 1$, expressed in percentage. The dummy variable $Poor\ Firm\ Perf$ is equal to one if a stock is ranked in the bottom quintile by either prior-quarter earnings surprise (columns 1 and 3) or three-month stock returns (columns 2 and 4), and zero otherwise. We estimate a pooled regression of all funds, where the dependent variable is $NetTrade$, and independent variables include $Poor\ Firm\ Perf$, fund type dummies, and their interaction terms. All regressions control for the natural logarithm of the stock's market capitalization, book-to-market, stock returns, and Amihud illiquidity measure in quarter $t - 1$, and include $fund \times time$ fixed effects. Standard errors are clustered at the fund level.

	Dept Var = NetTrade			
	LL Classification		PST Classification	
	(1)	(2)	(3)	(4)
Poor Firm Perf	-0.008*** (-6.95)	-0.008*** (-5.00)	-0.008*** (-6.95)	-0.008*** (-4.99)
Committed ESG Fund X Poor Firm Perf	0.009** (2.05)	0.018** (2.14)	0.009** (2.52)	0.021*** (3.35)
Other ESG Fund X Poor Firm Perf	-0.002 (-0.89)	-0.009** (-2.46)	-0.003 (-1.52)	-0.015*** (-3.54)
Past Performance Measure	Lag SUE	Lag 3-month Return	Lag SUE	Lag 3-month Return
Fund X Time FE	Y	Y	Y	Y
Stock Control	Y	Y	Y	Y
N	3238712	3471788	3238712	3471788
Adjusted R-squared	0.038	0.038	0.038	0.038

t-statistics in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 4
Fund trading following ESG risk incidents

This table examines how funds trade stocks experiencing negative ESG news. Committed and other ESG funds are classified using LL measure. In Panel A, the regressions are estimated at fund-security level with fund-time fixed effects, and the dependent variable $Net\ Trades_{ijt}$ is the dollar amount of fund i 's trading of stock j from quarter $t - 1$ to quarter t , scaled by the fund's portfolio value in quarter $t - 1$, expressed in percentage. In Panel B, fund trades are aggregated to the security level, and the dependent variable is the change in the number of shares held by a particular fund type from quarter $t - 1$ to quarter t , scaled by the number of shares outstanding in basis points. Negative ESG news are collected from RepRisk ESG risk incidents and non-ESG related news are collected from Ravenpack. We define a news event concerning a stock as severe if the stock's three-day cumulative market-adjusted abnormal return (CAR) is ranked in the bottom quintile in a given quarter. The independent variables include *Severe ESG Negative News*, *Non-severe ESG Negative News*, *Severe Non-ESG News*, and *Non-severe Non-ESG News*, all measured as natural logarithm of the number of news. All regression specifications control for stock characteristics including the natural logarithm of market capitalization, book-to-market, past stock performance, and Amihud illiquidity, measured as of the quarter before the news event. We also report the differences in coefficients between severe ESG negative news and severe non-ESG news and the corresponding significance levels under F-test. Standard errors are clustered at the fund level in Panel A, and at the stock level in Panel B.

Panel A: Fund-security level regressions			
Dept Var = NetTrade			
	ESG Funds		Non-ESG Funds
	Committed	Other	Funds
	(1)	(2)	(3)
Severe ESG Negative News	0.002 (0.13)	-0.013** (-2.22)	-0.004 (-1.15)
Non-severe ESG Negative News	0.013 (0.63)	0.003 (0.77)	-0.005** (-2.29)
Severe Non-ESG Negative News	0.018 (1.30)	-0.008 (-1.29)	-0.008*** (-3.19)
Non-severe Non-ESG News	-0.015 (-0.87)	0.007 (1.45)	0.013*** (5.30)
Severe ESG - Severe Non-ESG	-0.016	-0.005	0.003
FE	Fund-Time	Fund-Time	Fund-Time
Controls	Y	Y	Y
N	118535	368318	1257162
Adjusted R-squared	0.090	0.033	0.040
Panel B: Security level regressions			
Dept Var = Δ shares by fund type / shares outstanding			
	ESG Funds		Non-ESG Funds
	Committed	Other	Funds
	(1)	(2)	(3)
Severe ESG Negative News	3.655** (1.96)	-4.532** (-1.96)	-0.370 (-0.32)
Non-severe ESG Negative News	-0.029 (-0.03)	1.208 (1.01)	-0.135 (-0.22)
Severe Non-ESG Negative News	0.252 (0.35)	-2.549*** (-2.89)	-2.306*** (-4.96)
Non-severe Non-ESG News	0.692 (1.01)	4.032*** (4.78)	2.580*** (5.82)
Severe ESG - Severe Non-ESG	3.403*	-1.983	1.936
FE	Time	Time	Time
Controls	Y	Y	Y
N	21902	21902	22091
Adjusted R-squared	0.173	0.179	0.166

t-statistics in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 5
Voting against ISS recommendations

This table examines the likelihood of fund voting against ISS recommendation. The sample includes ESG agenda items with a positive historical passing rate. The dependent variable is a dummy variable that equals one if a fund votes against ISS recommendation. The independent variables include ESG fund type dummies. The regression also controls a set of firm characteristics, such as the natural logarithm of firm size, book-to-market, return-to-assets, leverage, and past-year returns, and a set of fund characteristics, such as fund size, expense ratio, turnover ratio, the fund's ownership of the firm, and firm weight in the fund's portfolio. It also includes agenda item fixed effects, firm's industry fixed effects, and year fixed effects. Columns (1) and (2) examine E&S proposals, and columns (3) and (4) examine governance proposals. The odd (even) columns include all (ESG) funds. Committed and other ESG funds are classified using LL measure in Panel A and PST measure in Panel B. Standard errors are clustered at the fund level.

Panel A: LL Classification				
	Dept Variable = $\mathbf{1}_{\text{fund vote against ISS}}$			
	E&S Proposals		Governance Proposals	
	(1)	(2)	(3)	(4)
Committed ESG Fund	0.031*	0.059***	0.014	0.042*
	(1.88)	(2.75)	(0.89)	(1.95)
Other ESG Fund	-0.032**		-0.022	
	(-2.07)		(-1.25)	
Fund Expense Ratio	-1.488	-0.631	-1.102	-4.102
	(-0.49)	(-0.17)	(-0.37)	(-0.96)
Fund Turnover Ratio	-0.005	0.007	0.027***	0.028*
	(-0.61)	(0.59)	(2.62)	(1.90)
Log(TNA)	0.019***	0.006	0.029***	0.018*
	(3.92)	(0.93)	(5.12)	(1.84)
Fund Ownership of Firm	0.025**	0.049***	0.013	0.045**
	(2.15)	(2.68)	(1.26)	(2.32)
Firm Weight of Fund	-0.192	-0.736**	0.353	-0.262
	(-0.84)	(-1.99)	(1.25)	(-0.72)
Sample	All Funds	ESG Funds	All Funds	ESG Funds
Firm Controls	Y	Y	Y	Y
AgendaItem FE	Y	Y	Y	Y
Industry FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
N	26043	8202	149449	47638
Adjusted R-squared	0.224	0.185	0.116	0.089

Panel B: PST Classification				
	Dept Variable = $\mathbf{1}_{\text{fund vote against ISS}}$			
	E&S Proposals		Governance Proposals	
	(1)	(2)	(3)	(4)
Committed ESG Fund	0.025*	0.048**	0.004	0.021
	(1.77)	(2.46)	(0.21)	(0.89)
Other ESG Fund	-0.032**		-0.020	
	(-1.98)		(-1.08)	
Sample	All Funds	ESG Funds	All Funds	ESG Funds
Firm and Fund Controls	Y	Y	Y	Y
AgendaItem FE	Y	Y	Y	Y
Industry FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
N	26043	8202	149449	47638
Adjusted R-squared	0.224	0.184	0.116	0.088

t-statistics in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 6
One-size-fits-all voting

This table examines funds' tendency to vote in a one-size-fits-all manner. The sample includes ESG agenda items with a positive historical passing rate. For each fund, agenda item, and year pair, we calculate the absolute difference in the number of proposals the fund votes for and against the agenda item, scaled by the total number of proposals, during the following five-year period. The higher the measure is, the more likely the fund votes in a one-size-fits-all manner. We then regress this measure on ESG fund type dummies based on LL classification, and a set of fund characteristics. Columns (1) and (2) examine E&S proposals, and columns (3) and (4) examine governance proposals. The odd (even) columns include all (ESG) funds.

	Dept Var = $\left \frac{\#Vote\ For - \#Vote\ Against}{\#Proposals} \right $			
	E&S Proposals		Governance Proposals	
	(1)	(2)	(3)	(4)
Committed ESG Fund	-0.034*** (-3.14)	-0.032*** (-2.60)	-0.021*** (-3.48)	-0.015** (-2.16)
Other ESG Fund	-0.009 (-1.26)		-0.010** (-2.32)	
Expense Ratio	-0.802 (-0.78)	6.595*** (3.21)	-5.532*** (-8.91)	-5.019*** (-4.52)
Turnover Ratio	0.003 (0.65)	-0.005 (-0.68)	0.016*** (5.78)	0.016*** (3.17)
Log(TNA)	0.023*** (12.70)	0.025*** (7.91)	0.000 (0.27)	-0.007*** (-3.66)
Sample	All Funds	ESG Funds	All Funds	ESG Funds
N	10362	3450	25984	8682
Adjusted R-squared	0.021	0.020	0.005	0.004

t-statistics in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 7
E&S Questions in Earnings Calls

This table examines whether committed families are more likely to ask questions regarding E&S issues during earnings calls. In columns (1) and (2), the dependent variable is a dummy variable that is equal to 1 if a family asks an E&S question during an earnings call, and 0 if it asks no ES question or no question at all. In columns (3) and (4), the dependent variable is the frequency of E&S keywords in a question normalized by the total number of words in the question. The independent variables include a dummy variable indicating committed ESG families based on LL classification, a dummy indicator that is equal to one if the firm is held by ESG funds of the family, prior quarter analyst earnings dispersion, absolute value of prior quarter stock returns, firm size, book-to-market ratio, and standardized unexpected earnings as of the prior quarter end. We employ two alternative sampling criterion. Under sampling criteria 1, we limit the analyses to those family-firm pairs where the fund family has asked questions about the firm at least once in the past one-year period. If the family does not ask any questions during the current earnings call, the dependent variables are set to zero. Under sampling criteria 2, we zoom in on a set of conference calls where both committed and other ESG families have each asked at least one question during the call. Models 1 and 3 control for firm fixed effects and quarter fixed effects, and standard errors are clustered at the firm level. Models 2 and 4 control for earnings call fixed effects, and standard errors are clustered at the earnings call level.

	(1)	(2)	(3)	(4)
	E&S Question	E&S Question	intensity	intensity
Committed ESG Family	0.025** (2.16)	0.035* (1.91)	0.007 (1.08)	0.021** (2.09)
ESG Fund Holding	0.026* (1.86)	0.047* (1.86)	-0.001 (-0.09)	0.004 (0.34)
Disp	-0.011 (-1.05)		-0.005 (-1.39)	
Abs Ret	-0.059 (-1.53)		-0.033 (-1.62)	
Firm Size	-0.018 (-1.37)		-0.004 (-0.57)	
Book-to-market	0.032 (0.62)		-0.006 (-0.44)	
SUE	-0.347** (-2.45)		-0.001 (-0.05)	
Sampling Criteria	1	2	1	2
Firm FE	Y	N	Y	N
Quarter FE	Y	N	Y	N
Earnings Call Fixed Effects	N	Y	N	Y
N	3846	978	3846	978

t-statistics in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 8
Changes in ESG risk index following severe ESG risk incidents

This table examines how changes in the RepRisk Risk Index (RRI) following severe ESG risk incidents are related to trading by committed versus other ESG funds. The dependent variables are changes of RRI, in percent, from quarter t to quarter $t+k$, where k ranges from one quarter to four quarters. The independent variables include indicator variables *Committed ESG Buy*, *Committed ESG Sell*, *Other ESG Buy* and *Other ESG Sell*. We classify a stock as subject to intensive buy (sell) by committed ESG funds if the stock is in the top (bottom) quintile among committed ESG funds' trading of all stocks during quarter t . *Other ESG Buy* and *Other ESG Sell* are defined analogously. Committed and other ESG funds are classified based on LL measure. Control variables include the logarithm of market capitalization, book-to-market, and stock returns during quarter t . All regressions include quarter fixed effects. Standard errors are clustered at the stock level.

	$\Delta RRI_{t,t+1}$	$\Delta RRI_{t,t+2}$	$\Delta RRI_{t,t+3}$	$\Delta RRI_{t,t+4}$
	(1)	(2)	(3)	(4)
Committed ESG Buy	-2.109* (-1.67)	-4.045*** (-3.01)	-3.631** (-2.17)	-1.554 (-0.86)
Committed ESG Sell	-1.312 (-1.13)	-2.342* (-1.67)	-3.366* (-1.95)	-2.289 (-1.16)
Other ESG Buy	-2.171* (-1.75)	-0.807 (-0.61)	-0.493 (-0.30)	2.051 (1.07)
Other ESG Sell	-1.547 (-1.35)	1.080 (0.73)	1.882 (1.13)	3.709* (1.86)
Firm Size	2.910*** (12.28)	4.886*** (16.77)	7.484*** (19.86)	8.523*** (18.54)
Book-to-Market	0.083 (0.07)	-1.266 (-0.89)	-0.235 (-0.13)	-0.110 (-0.05)
Stock Returns	-1.783 (-0.70)	-5.284* (-1.69)	-3.691 (-0.88)	-4.374 (-0.89)
Quarter FE	Y	Y	Y	Y
N	2215	2075	1998	1895
Adjusted R-squared	0.089	0.138	0.202	0.215

t-statistics in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 9
Real effects of investments by ESG funds

This table examines whether investments by ESG funds help improve portfolio firms' ESG performance using the introduction of the Morningstar Sustainability Rating as an exogenous flow shock to ESG funds. The unit of observation is at the stock-year level. The dependent variables include the natural logarithm of the RepRisk Risk Index (columns 1-4) and the natural logarithm of a firm's on-site release from EPA emission data (column 5-8). For each stock held by ESG funds as of the last quarter of 2015, we calculate *Committed (Other) ESG Overweight* as the weight in committed (other) ESG funds' aggregate portfolio relative to its market portfolio weight, following Doshi et al. (2015). The dummy variable *High Committed (Other) ESG Overweight* is equal to one if the stock is ranked in the top quintile by the overweight measure. The dummy variable *Post* is equal to one for years after 2015, and zero if otherwise. We also include a set of year dummies to examine the pre-trend. All regressions control for the logarithm of market capitalization, book-to-market, 12-month returns during the year, firm and time fixed effects. Standard errors are clustered at the firm level.

	Dept var = log(Annual RRI)				Dept var = log(Emissions)			
	LL Classification		PST Classification		LL Classification		PST Classification	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
High Committed ESG Overweight X Post	-0.206*		-0.243**		-0.195*		-0.182*	
	(-1.81)		(-2.18)		(-1.94)		(-1.88)	
High Other ESG Overweight X Post	-0.113		-0.0513		-0.001		0.003	
	(-1.08)		(-0.51)		(-0.01)		(0.03)	
High Committed ESG Overweight X Year 2013		0.019		-0.0534		-0.161		-0.120
		(0.19)		(-0.54)		(-0.90)		(-0.74)
High Committed ESG Overweight X Year 2014		-0.095		-0.204		-0.160		-0.105
		(-0.70)		(-1.57)		(-0.90)		(-0.65)
High Committed ESG Overweight X Year 2015		-0.278*		-0.381**		-0.331*		-0.265
		(-1.75)		(-2.56)		(-1.86)		(-1.63)
High Committed ESG Overweight X Year 2016		-0.353**		-0.426***		-0.458**		-0.478***
		(-2.20)		(-2.80)		(-2.56)		(-2.94)
High Committed ESG Overweight X Year 2017		-0.334**		-0.453***		-0.153		-0.210
		(-2.05)		(-2.87)		(-0.85)		(-1.27)
High Committed ESG Overweight X Year 2018		-0.268		-0.376**		-0.470***		-0.214
		(-1.60)		(-2.36)		(-2.58)		(-1.29)
Controls	Y	Y	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y
Time FE	Y	Y	Y	Y	Y	Y	Y	Y
N	5113	5113	5778	5778	2311	2311	2524	2524
Adjusted R-squared	0.493	0.493	0.489	0.490	0.961	0.961	0.960	0.960

t-statistics in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 10**DGTW characteristic-adjusted abnormal returns of ESG funds**

This table analyzes the DGTW (1997) characteristic-adjusted abnormal returns of fund portfolios. In columns (1) and (2), the dependent variables are fund-level weighted DGTW (1997) characteristic-adjusted abnormal returns over the next year. In column (3) and (4), the dependent variables are weighted abnormal returns of high ESG holdings and other holdings, respectively. The independent variables are ESG fund type dummies based on LL classification, expense ratio, turnover ratio, the natural logarithm of total net assets, industry-concentration index (ICI), active share, past-year return and flow volatility, and past-year performance. All regressions include time fixed effects. Standard errors are clustered at the fund level.

	(1) All Stocks	(2) All Stocks	(3) High ESG Stocks	(4) Others Stocks
Committed ESG Fund	0.769*** (4.58)	0.084 (0.74)	0.306** (2.00)	0.038 (0.29)
Other ESG Fund	0.682*** (5.80)			
Expense Ratio	-0.001 (-0.00)	-0.158 (-0.74)	-0.611** (-2.22)	0.029 (0.11)
Turnover Ratio	0.229* (1.82)	0.585*** (4.07)	0.284 (1.64)	0.667*** (3.61)
Log(TNA)	0.134*** (3.37)	0.142*** (4.38)	0.088** (2.01)	0.179*** (4.76)
ICI	0.105 (0.12)	1.015 (1.31)	2.788*** (3.09)	0.241 (0.27)
Active Share	-1.324** (-2.38)	-2.020*** (-4.40)	-6.411*** (-10.30)	0.482 (0.94)
Flow Volatility	0.392 (0.26)	-1.556 (-0.99)	-2.669 (-1.40)	0.083 (0.04)
Return Volatility	0.226* (1.92)	29.64** (2.58)	-2.835 (-0.21)	50.52*** (4.01)
Past Year Return	8.026*** (7.77)	3.578*** (2.95)	-0.021 (-0.01)	5.277*** (3.92)
Sample	All Funds	ESG Funds	ESG Funds	ESG Funds
Time FE	Y	Y	Y	Y
N	29055	9866	9866	9866
Adjusted R-squared	0.039	0.042	0.059	0.082

t-statistics in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 11
Flows to ESG funds

This table examines net flows into ESG funds, after controlling for fund performance and characteristics. We regress a fund's quarterly net flows, in percentage, on dummy variables indicating committed and other ESG funds based on LL measure, respectively. Regressions are estimated separately for two subperiods, before and after year 2016. The independent variables include fund performance measured by past three-year net-of-expense returns (columns 1 and 3) or Carhart four-factor alphas (columns 2 and 4), expense ratio, turnover ratio, the natural logarithm of the fund's total net assets, the natural logarithm of fund age, total quarterly flows into a fund's style category, and quarterly fund flows, all measured as of the prior quarter. All regressions include style and time fixed effects. Standard errors are clustered at the fund level.

	Dept Var = Flow _{t+1}			
	(1)	(2)	(3)	(4)
Committed ESG Fund	-0.062 (-0.26)	-0.261 (-1.12)	0.554* (1.94)	0.604** (2.10)
Other ESG Fund	0.356 (0.77)	0.199 (0.43)	0.572* (1.94)	0.575** (1.98)
Performance	7.771*** (7.45)	14.05*** (6.25)	8.376*** (9.35)	11.95*** (4.87)
Expense Ratio	-0.787* (-1.92)	-0.692* (-1.70)	-1.429*** (-4.20)	-1.226*** (-3.57)
Turnover Ratio	1.521** (2.15)	1.702** (2.38)	0.810* (1.79)	0.891* (1.90)
Log(TNA)	-0.524*** (-4.36)	-0.567*** (-4.78)	-0.377*** (-4.99)	-0.375*** (-5.04)
Log(Fund Age)	-0.847*** (-4.55)	-0.368** (-2.20)	-1.157*** (-5.38)	-0.485** (-2.35)
Style Flow	-0.117** (-2.09)	-0.128** (-2.29)	0.000 (0.11)	0.000 (0.33)
Flow	0.418*** (15.82)	0.399*** (14.91)	0.374*** (12.99)	0.364*** (12.68)
Sample	Pre-2016	Pre-2016	Post-2016	Post-2016
Performance measure	Return	FF4	Return	FF4
Style FE	Y	Y	Y	Y
Time FE	Y	Y	Y	Y
N	16903	16903	17735	17735
Adjusted R-squared	0.083	0.087	0.091	0.093

t-statistics in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Internet Appendix

Figure A1

Histogram of the fraction of committed ESG funds in ESG families

This figure plots the histogram of the fraction of committed ESG funds in ESG families. A fund is defined as an ESG fund if its asset-based ESG score is ranked in the top tercile in a quarter. Within ESG funds, a fund is classified as a committed (other) ESG fund if its *Incentive to Engage* measure is in the above-median (below-median) group. A fund family is classified as an ESG family if the fraction of its ESG funds by total assets is ranked in the top tercile in a quarter. Lastly, within an ESG family, we calculate the fraction of committed ESG funds relative to all ESG funds based on total net assets and plot the histogram.

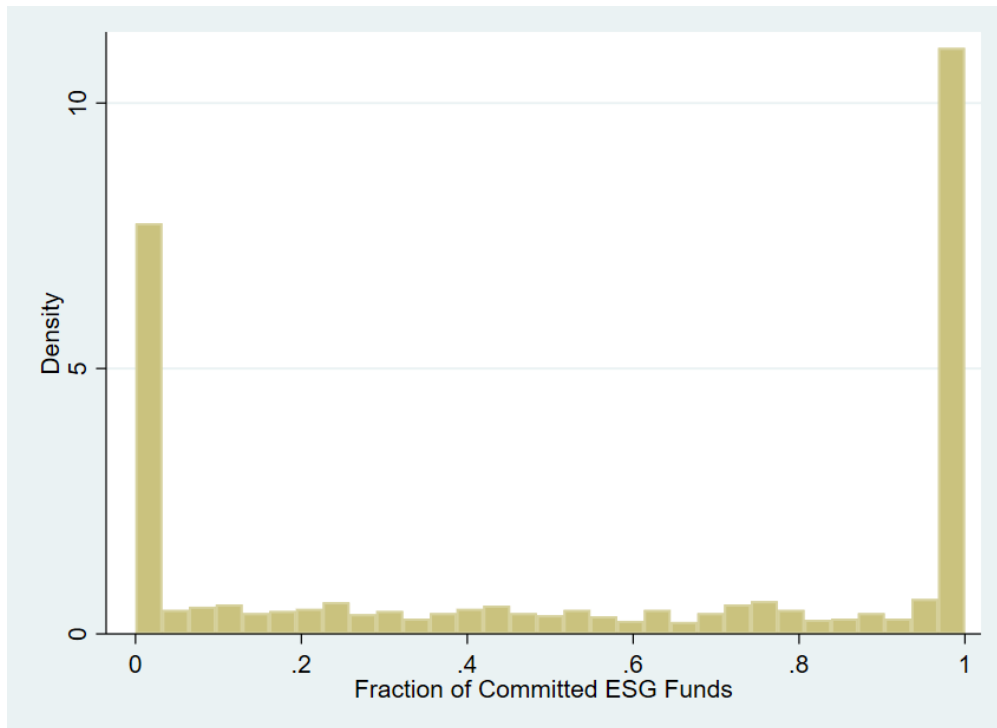


Figure A2

ESG score distribution across brown and non-brown industries

This figure plots the MSCI ESG score distribution across brown and non-brown industries. Brown industries are defined as the ten lowest-ranked industries according to the MSCI environmental scores of individual firms within an industry as in Pastor et al. (2021).

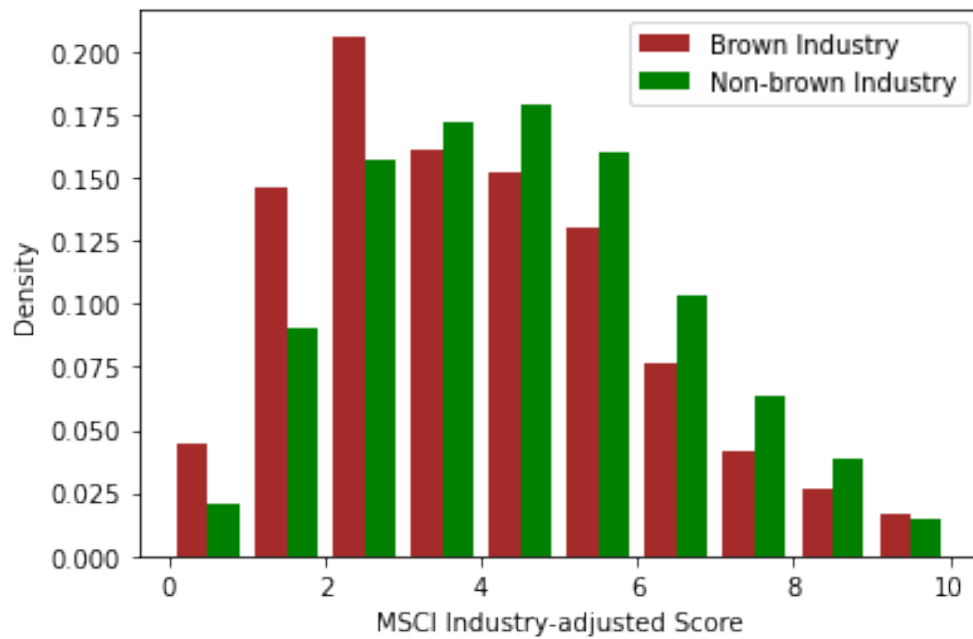


Table A1
Fund trading following ESG risk incidents (PST Classification)

This table examines how funds trade stocks experiencing negative ESG news. Committed and other ESG funds are classified using PST measure. In Panel A, the regressions are estimated at fund-security level with fund-time fixed effects, and the dependent variable $Net\ Trades_{i,j,t}$ is the dollar amount of fund i 's trading of stock j from quarter $t - 1$ to quarter t , scaled by the fund's portfolio value in quarter $t - 1$, expressed in percentage. In Panel B, fund trades are aggregated to the security level, and the dependent variable is the change in the number of shares held by a particular fund type from quarter $t - 1$ to quarter t , scaled by the number of shares outstanding in basis points. Negative ESG news are collected from RepRisk ESG risk incidents and non-ESG related news are collected from Ravenpack. We define a news event concerning a stock as severe if the stock's three-day cumulative market-adjusted abnormal return (CAR) is ranked in the bottom quintile in a given quarter. The independent variables include *Severe ESG Negative News*, *Other ESG Negative News*, *Severe Non-ESG News*, and *Other Non-ESG News*, all measured as natural logarithm of the number of news. All regression specifications control for stock characteristics including the natural logarithm of market capitalization, book-to-market, past stock performance, and Amihud illiquidity, measured as of the quarter before the news event. We also report the differences in coefficients between severe ESG negative news and severe non-ESG news and the corresponding significance levels under F-test. Standard errors are clustered at the fund level in Panel A, and at the stock level in Panel B.

Panel A: Fund-security level regressions			
Dept Var = NetTrade			
	ESG Funds		Non-ESG Funds
	Committed	Other	Funds
	(1)	(2)	(3)
Severe ESG Negative News	-0.003 (-0.23)	-0.011* (-1.83)	-0.004 (-1.15)
Other ESG Negative News	0.015 (0.90)	0.000 (0.00)	-0.005** (-2.29)
Severe Non-ESG Negative News	0.029*** (3.75)	-0.017*** (-3.97)	-0.008*** (-3.19)
Other Non-ESG News	-0.013 (-1.13)	0.009* (1.91)	0.013*** (5.30)
Severe ESG - Severe Non-ESG	-0.032***	0.006	0.003
FE	Fund-Time	Fund-Time	Fund-Time
Controls	Y	Y	Y
N	158391	328462	1257162
Adjusted R-squared	0.079	0.038	0.040

Panel B: Security level regressions			
Dept Var = Δ shares by fund type / shares outstanding			
	ESG Funds		Non-ESG Funds
	Committed	Other	Funds
	(1)	(2)	(3)
Severe ESG Negative News	3.133* (1.65)	-3.944* (-1.84)	-0.370 (-0.32)
Other ESG Negative News	-0.255 (-0.26)	1.475 (1.35)	-0.135 (-0.22)
Severe Non-ESG Negative News	1.035 (1.31)	-3.370*** (-4.15)	-2.306*** (-4.96)
Other Non-ESG News	0.789 (1.06)	3.805*** (5.05)	2.580*** (5.82)
Severe ESG - Severe Non-ESG	2.098	-0.574	1.936
FE	Time	Time	Time
Controls	Y	Y	Y
N	22091	22091	22091
Adjusted R-squared	0.165	0.186	0.166

t-statistics in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table A2**Fund trading in response to poor firm performance of high ESG versus other holdings**

This table examines whether funds' trading responses to poor past performance differ across fund types, and between high ESG and other stocks. The dependent variable $Net\ Trades_{ijt}$ is the dollar amount of fund i 's trading of stock j from quarter $t - 1$ to quarter t , scaled by the fund's portfolio value in quarter $t - 1$, expressed in percentage. The dummy variable $Poor\ Firm\ Perf$ is equal to one if a stock is ranked in the bottom quintile by either prior-quarter earnings surprise (Panel A) or three-month stock returns (Panel B), and zero otherwise. The dummy variable $High\ ESG\ Stock$ is equal to one if a stock's MSCI ESG score is ranked in the top three deciles during the quarter, and zero otherwise. We then regress $NetTrade$ on $Poor\ Firm\ Perf$, $High\ ESG\ Stock$, and their interaction term on a subsample of each fund type. All regressions control for the natural logarithm of the stock's market capitalization, book-to-market, stock returns, and Amihud illiquidity measure in quarter $t - 1$, and include $fund \times time$ fixed effects. Standard errors are clustered at the fund level.

Panel A: Poor firm performance measured as prior quarter earnings surprise

	Dept Var = NetTrade				
	LL Classification		PST Classification		Non-ESG Funds
	Committed ESG Funds	Other ESG Funds	Committed ESG Funds	Other ESG Funds	
(1)	(2)	(3)	(4)	(5)	
Poor Firm Perf	-0.008*	-0.008***	-0.007**	-0.009***	-0.008***
	(-1.87)	(-5.14)	(-2.10)	(-4.98)	(-6.97)
High ESG Stock X Poor Firm Perf	0.011*	0.001	0.012**	-0.001	-0.001
	(1.71)	(0.41)	(2.46)	(-0.43)	(-0.42)
Fund X Time FE	Y	Y	Y	Y	Y
Stock Control	Y	Y	Y	Y	Y
N	206240	665744	285743	586241	2367859
Adjusted R-squared	0.059	0.030	0.054	0.035	0.036

Panel B: Poor firm performance measured as 3-month lagged return

	Dept Var = NetTrade				
	LL Classification		PST Classification		Non-ESG Funds
	Committed ESG Funds	Other ESG Funds	Committed ESG Funds	Other ESG Funds	
(1)	(2)	(3)	(4)	(5)	
Poor Firm Perf	-0.008	-0.014***	-0.002	-0.018***	-0.007***
	(-1.36)	(-6.05)	(-0.54)	(-6.69)	(-4.90)
High ESG Stock X Poor Firm Perf	0.022***	-0.002	0.013**	-0.001	-0.005***
	(2.96)	(-0.78)	(2.41)	(-0.31)	(-3.16)
Fund X Time FE	Y	Y	Y	Y	Y
Stock Control	Y	Y	Y	Y	Y
N	214441	697641	299887	612195	2561766
Adjusted R-squared	0.058	0.030	0.053	0.035	0.035

t-statistics in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table A3
One-size-fits-all voting (PST classification)

This table examines funds' tendency to vote in a one-size-fits-all manner. The sample includes ESG agenda items with a positive historical passing rate. For each fund, agenda item, and year pair, we calculate the absolute difference in the number of proposals the fund votes for and against the agenda item, scaled by the total number of proposals, during the following five-year period. The higher the measure is, the more likely the fund votes in a one-size-fits-all manner. We then regress this measure on ESG fund type dummies based on PST classification, and a set of fund characteristics. Columns (1) and (2) examine E&S proposals, and columns (3) and (4) examine governance proposals.

	Dept Var = $\left \frac{\#Vote\ For - \#Vote\ Against}{\#Proposals} \right $			
	E&S Proposals		Governance Proposals	
	(1)	(2)	(3)	(4)
Committed ESG Fund	-0.010 (-0.82)	0.006 (0.42)	-0.022*** (-3.72)	-0.017** (-2.47)
Other ESG Fund	-0.023*** (-2.99)		-0.010** (-2.12)	
Expense Ratio	-2.014* (-1.90)	5.153** (2.42)	-5.515*** (-8.88)	-4.954*** (-4.46)
Turnover Ratio	0.007 (1.54)	-0.000 (-0.00)	0.016*** (5.78)	0.016*** (3.20)
Log(TNA)	0.025*** (13.32)	0.029*** (8.20)	0.000 (0.26)	-0.007*** (-3.67)
Sample	All Funds	ESG Funds	All Funds	ESG Funds
N	10362	3450	25984	8682
Adjusted R-squared	0.025	0.022	0.006	0.005

t-statistics in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table A4
E&S Questions in Earnings Calls (PST classification)

This table examines whether committed families are more likely to ask questions regarding E&S issues during earnings calls. In columns (1) and (2), the dependent variable is a dummy variable that is equal to 1 if a family asks an E&S question during an earnings call, and 0 if it asks no ES question or no question at all. In columns (3) and (4), the dependent variable is the frequency of E&S keywords in a question normalized by the total number of words in the question. The independent variables include a dummy variable indicating committed ESG families based on PST classification, a dummy indicator that is equal to one if the firm is held by ESG funds of the family, prior quarter analyst earnings dispersion, absolute value of prior quarter stock returns, firm size, book-to-market ratio, and standardized unexpected earnings as of the prior quarter end. We employ two alternative sampling criterion. Under sampling criteria 1, we limit the analyses to those family-firm pairs where the fund family has asked questions about the firm at least once in the past one-year period. If the family does not ask any questions during the current earnings call, the dependent variables are set to zero. Under sampling criteria 2, we zoom in on a set of conference calls where both committed and other ESG families have each asked at least one question during the call. Models 1 and 3 control for firm fixed effects and quarter fixed effects, and standard errors are clustered at the firm level. Models 2 and 4 control for earnings call fixed effects, and standard errors are clustered at the earnings call level.

	(1)	(2)	(3)	(4)
	E&S Question	E&S Question	intensity	intensity
Committed ESG Family	0.021* (1.71)	0.046** (2.11)	0.004 (0.26)	0.016* (1.77)
ESG Fund Holding	0.010 (0.94)	0.043* (1.70)	0.001 (0.29)	0.003 (0.18)
Disp	-0.014 (-0.23)		-0.011 (-0.43)	
Abs Ret	-0.022 (-1.44)		0.005 (0.80)	
Firm Size	-0.023 (-0.54)		-0.002 (-0.20)	
Book-to-market	-0.170 (-1.33)		0.013 (0.40)	
SUE	0.019 (1.31)		-0.000 (-0.01)	
Sampling Criteria	1	2	1	2
Firm FE	Y	N	Y	N
Quarter FE	Y	N	Y	N
Earnings Call Fixed Effects	N	Y	N	Y
N	3846	978	3846	978

t-statistics in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table A5
Changes in ESG risk index following severe ESG risk incidents (PST classification)

This table examines how changes in the RepRisk Risk Index (RRI) following severe ESG risk incidents are related to trading by committed versus other ESG funds. The dependent variables are changes of RRI, in percent, from quarter t to quarter $t+k$, where k ranges from one quarter to four quarters. The independent variables include indicator variables *Committed ESG Buy*, *Committed ESG Sell*, *Other ESG Buy* and *Other ESG Sell*. We classify a stock as subject to intensive buy (sell) by committed ESG funds if the stock is in the top (bottom) quintile among committed ESG funds' trading of all stocks during quarter t . *Other ESG Buy* and *Other ESG Sell* are defined analogously. Committed and other ESG funds are classified based on PST measure. Control variables include the logarithm of market capitalization, book-to-market, and stock returns during quarter t . All regressions include quarter fixed effects. Standard errors are clustered at the stock level.

	$\Delta RRI_{t,t+1}$	$\Delta RRI_{t,t+2}$	$\Delta RRI_{t,t+3}$	$\Delta RRI_{t,t+4}$
	(1)	(2)	(3)	(4)
Committed ESG Buy	-4.841*** (-3.97)	-3.610** (-2.55)	-4.021** (-2.16)	-2.314 (-1.16)
Committed ESG Sell	-3.727*** (-3.29)	-2.584* (-1.77)	-1.867 (-1.06)	-1.435 (-0.74)
Other ESG Buy	-0.654 (-0.46)	-1.685 (-1.20)	0.389 (0.25)	1.936 (1.03)
Other ESG Sell	-0.240 (-0.19)	0.864 (0.58)	2.565 (1.46)	3.458* (1.77)
Firm Size	2.789*** (12.03)	4.732*** (16.42)	7.263*** (19.54)	8.412*** (18.66)
Book-to-Market	-0.180 (-0.15)	-1.405 (-1.02)	-0.332 (-0.18)	-0.533 (-0.26)
Stock Returns	-1.896 (-0.76)	-4.817 (-1.55)	-3.714 (-0.89)	-4.678 (-0.97)
Quarter FE	Y	Y	Y	Y
N	2236	2095	2018	1915
Adjusted R-squared	0.097	0.145	0.209	0.225

t-statistics in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table A6**Real effects of investments by ESG funds on high ESG versus other stocks**

This table examines whether the effect of committed funds' investments on firms' ESG performance varies across high ESG versus other stocks. We repeat the analysis in Table 8 separately for high ESG versus other stocks. The dependent variables include the natural logarithm of the RepRisk Risk Index (Panel A) and the natural logarithm of a firm's on-site release from EPA emission data (Panel B). For each stock held by ESG funds as of the last quarter of 2015, we calculate *Committed (Other) ESG Overweight* as the weight in committed (other) ESG funds' aggregate portfolio relative to its market portfolio weight, following Doshi et al. (2015). The dummy variable *High Committed (Other) ESG Overweight* is equal to one if the stock is ranked in the top quintile by the overweight measure. The dummy variable *Post* is equal to one for years after 2015, and zero if otherwise. All regressions control for the logarithm of market capitalization, book-to-market, 12-month returns during the year, firm and time fixed effects. Standard errors are clustered at the firm level.

Panel A: Real effects measured as Annual RRI

	Dept var = log(Annual RRI)			
	LL Classification		PST Classification	
	High ESG Stocks (1)	Other Stocks (2)	High ESG Stocks (3)	Other Stocks (4)
High Committed ESG Overweight X Post	-0.398** (-2.20)	-0.206 (-1.26)	-0.499*** (-2.67)	-0.109 (-0.74)
High Other ESG Overweight X Post	-0.108 (-0.55)	-0.024 (-0.18)	0.0153 (0.08)	0.135 (1.03)
Controls	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y
Time FE	Y	Y	Y	Y
N	1525	3588	1638	4140
Adjusted R-squared	0.528	0.480	0.517	0.478

Panel B: Real effects measured as Emissions

	Dept var = log(Emissions)			
	LL Classification		PST Classification	
	High ESG Stocks (1)	Other Stocks (2)	High ESG Stocks (3)	Other Stocks (4)
High Committed ESG Overweight X Post	-0.256* (-1.66)	0.037 (0.24)	-0.164 (-1.09)	0.174 (1.15)
High Other ESG Overweight X Post	0.072 (0.47)	-0.017 (-0.11)	0.051 (0.34)	-0.190 (-1.25)
Controls	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y
Time FE	Y	Y	Y	Y
N	928	1383	984	1540
Adjusted R-squared	0.959	0.961	0.961	0.958

t-statistics in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table A7
DGTW-adjusted performance and flows of ESG funds (PST classification)

This table shows the robustness of results in Table 10 and Table 11, using PST measure to classify ESG funds into committed and other funds.

Panel A: DGTW-adjusted Performance				
	(1)	(2)	(3)	(4)
	All	All	High ESG	Others
	Stocks	Stocks	Stocks	Stocks
Committed ESG Fund	0.826*** (5.16)	0.263** (2.32)	0.297* (1.95)	0.115 (0.89)
Other ESG Fund	0.625*** (4.83)			
Sample	All Funds	ESG Funds	ESG Funds	ESG Funds
Fund Controls	Y	Y	Y	Y
Time FE	Y	Y	Y	Y
N	29055	9866	9866	9866
Adjusted R-squared	0.039	0.043	0.083	0.059

Panel B: Fund Flows in Quarter t+1				
	(1)	(2)	(3)	(4)
Committed ESG Fund	0.398 (0.85)	0.138 (0.29)	0.489* (1.74)	0.437* (1.80)
Other ESG Fund	-0.0966 (-0.44)	-0.199 (-0.92)	0.643** (2.00)	0.749** (2.50)
Sample	Pre-2016	Pre-2016	Post-2016	Post-2016
Performance measure	Return	FF4	Return	FF4
Fund Controls	Y	Y	Y	Y
Style FE	Y	Y	Y	Y
Time FE	Y	Y	Y	Y
N	16903	16903	17735	17735
Adjusted R-squared	0.081	0.085	0.086	0.089

t-statistics in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

about ECGI

The European Corporate Governance Institute has been established to improve *corporate governance through fostering independent scientific research and related activities*.

The ECGI will produce and disseminate high quality research while remaining close to the concerns and interests of corporate, financial and public policy makers. It will draw on the expertise of scholars from numerous countries and bring together a critical mass of expertise and interest to bear on this important subject.

The views expressed in this working paper are those of the authors, not those of the ECGI or its members.

ECGI Working Paper Series in Finance

Editorial Board

Editor	Mike Burkart, Professor of Finance, London School of Economics and Political Science
Consulting Editors	Renée Adams, Professor of Finance, University of Oxford Franklin Allen, Nippon Life Professor of Finance, Professor of Economics, The Wharton School of the University of Pennsylvania Julian Franks, Professor of Finance, London Business School Mireia Giné, Associate Professor, IESE Business School Marco Pagano, Professor of Economics, Facoltà di Economia Università di Napoli Federico II
Editorial Assistant	Asif Malik, Working Paper Series Manager

Electronic Access to the Working Paper Series

The full set of ECGI working papers can be accessed through the Institute's Web-site (www.ecgi.global/content/working-papers) or SSRN:

Finance Paper Series	http://www.ssrn.com/link/ECGI-Fin.html
-----------------------------	---

Law Paper Series	http://www.ssrn.com/link/ECGI-Law.html
-------------------------	---