

Catering through transparency:
Voluntary ESG disclosure by asset managers and fund flows*

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Abstract

Our paper finds that, by using a standardized disclosure framework, clients are able to identify investors with higher levels of ESG integration, thereby alleviating informational asymmetries within the responsible investment landscape. We show this by examining institutional investor's voluntary disclosure about their ESG practices. After joining the Principles for Responsible Investing (PRI), the world's largest responsible investment network, investors are obliged to file an annual ESG report, which is assessed and scored by the PRI. Clients allocate more assets toward institutions that receive higher scores on the reporting framework. This effect is particularly strong when the voluntary disclosure is confirmed by ESG ratings verified by Morningstar.

JEL Classifications: G23, G4, M41.

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1 Introduction

Environmental, Social, and Governance (ESG) reporting is receiving attention from both policymakers (EU, 2019) and practitioners (Krueger, Sautner, and Starks, 2020). The reasoning is that an efficient disclosure regime enables participants in the financial markets to correctly price risks and opportunities arising from sustainability concerns, such as human rights, gender diversity, or climate change. Recently, some progress has been made towards improving the reporting environment, with more and more countries adopting mandatory ESG disclosure rules for corporations.¹ For example, in the U.K., publicly listed companies have to disclose their CO₂ emissions, while many more do so voluntarily. Also, U.S. policymakers are debating whether to oblige companies to disclose their exposure to climate-related risks as part of the Climate Risk Disclosure Act of 2019.

A growing strand of literature studies the effects of ESG disclosure of *corporations* (Christensen, Hail, and Leuz, 2019). Corporate disclosure plays a role in enabling efficient financial markets, e.g., by decreasing informational asymmetries between market participants (Jensen and Meckling, 1976).² However, to date there is almost no evidence on the ESG disclosure practices of *institutional investors*. This is surprising because the investor-client relation is subject to similar information asymmetries as the corporation-shareholder relation (Bebchuk, Cohen, and Hirst, 2017). We take a first step towards filling this gap by addressing the following questions: Do fund families disclose information about their ESG practices and processes? If so, do responsible asset owners move assets to fund families that self-report superior ESG practices? And do these fund families live up to their promises? Finally, how does the voluntary ESG disclosure of investors interact with verified measures of ESG

¹For an overview of these rules see the Carrots & Sticks 2020 report, available at <https://www.carrotsandsticks.net/media/zirbzabv/carrots-and-sticks-2020-interactive.pdf>.

²Recent empirical studies confirm that mandatory corporate ESG disclosure, not only improves the firm's informational environment (Krueger, Sautner, Yongjun Tang, and Zhong, 2021), but also increases firm-level innovation and the environmental performance of firms (Jouvenot and Krueger, 2020; Gibbons, 2020), even for those firms that were already disclosing ESG information voluntarily (Grewal, 2021). On the other hand, there is evidence that ESG disclosure increases the disagreement among ESG ratings (Christensen et al., 2019).

performance, such as Morningstar’s sustainability ratings or “Globes”?

A prior, it is not clear whether investors’ voluntary ESG disclosure leads to higher flows from responsible clients. On the one hand, investor disclosure can alleviate the informational asymmetry problem that responsible clients face when they search for an investment manager with better ESG practices. In this view, voluntary disclosure could be an important tool for responsible financial intermediaries to signal better ESG practices. On the other hand, market participants may discount voluntary disclosure when it is difficult to verify it (Spence, 1973). These concerns are highlighted by previous evidence that institutional investors have high incentives to “greenwash”, meaning to commit to responsible initiatives, but not implementing their promises (Gibson, Glossner, Krueger, Matos, and Steffen, 2021). Differentiating between these hypotheses is important because institutional investors are in the unique position of being able to influence the behavior of corporations, nudging them towards improving their environmental and social performance (Akey and Appel, 2019; Dimson, Karakaş, and Li, 2015, 2020; Dyck, Lins, Roth, and Wagner, 2018). Directing assets towards institutions that have leading sustainability practices is a necessary step towards achieving a smooth transition to a low-carbon, more equal, and in general more sustainable economy.

This paper aims to fill this gap in the literature by examining how voluntary but standardized ESG disclosure of mutual fund families impacts fund flows. We exploit a unique institutional setting, where asset managers commit to adopt ESG practices in their organization by voluntarily joining the Principles for Responsible Investments (PRI).³ Importantly, as part of their commitment, starting from 2014, all signatories must fill-in a yearly survey called the “Reporting & Assessment (R&A)” framework. Signatories report on their approach to integrate sustainability issues in their investment process, including but not limited to stock selection and investor engagement, compensation of executives, appointment of portfolio managers, and organizational ESG resources. In total, the survey covers

³To date, over 3,000 institutional investors, representing nearly 60% of the global private capital market space have joined the PRI (and are so-called “*signatories*”).

over 200 indicators among 12 different modules. These survey responses are then assessed by the PRI and given scores from a maximum of A+ to a minimum of E. Higher scores are given to institutions with better ESG practices. These scores are private and shared voluntarily by the institutions themselves. Signatories generally see receiving high scores as a good outcome and are well known for advertising publicly via press releases, in their annual statements, on their websites, and via social media, when they receive high PRI scores.

The Reporting & Assessment framework offers three unique advantages: First, the survey provides ESG investor disclosure on a comprehensive set of institutional investors given that the PRI is the largest investor initiative in the world and its signatories manage over US-\$ 100 trillion assets in total.⁴ Second, the survey is standardized and provides assessments that are directly comparable across institutions. This lays in stark contrast to the existing sustainability reports that cover different information for every institution. Third, every signatory of the PRI is required to fill-in the survey, even when they have dismal ESG practices, which alleviates selection bias concerns.⁵ Taken together, these features enable us to run a comprehensive study of the effects of institutional investors' disclosure practices.

We start by testing if mutual fund investors allocate more asset toward institutions that join the PRI. It is likely that merely joining is not a strong enough signal to elicit a positive response from investors. While signatories commit to uphold the PRI principles, e.g., to incorporate ESG issues into investment analysis and ownership policies, this commitment is not directly enforced by the PRI and can be seen by market participants as cheap talk (Gibson et al., 2021). Indeed, in a difference-in-differences (DiD) setting we find that joining the PRI alone does not boost fund inflow by a significant amount.

We next examine if fund investors allocate more assets toward institutions that – in addition to joining the PRI – disclose superior ESG practices in the Reporting & Assessment framework, i.e., when the signatory receives a high assessment score by the PRI. Our findings

⁴See <https://www.unpri.org/pri/about-the-pri>.

⁵It is important to note that while every signatory is required to fill-in the survey, the decision to commit to the PRI initiative is voluntary. We discuss this below in detail.

indicate that this is indeed the case. After controlling for fund characteristics like size and performance, as well as fund-family and time fixed effects, obtaining an average score of A or greater in the framework relates to monthly flows that are 23 basis points (bp) higher compared to funds of institutions with no rating or that are not signatories. This is an economically important boost that translates in an average annual inflow of 15 USD million per signatory. Crucially, this holds even when we control for the funds' portfolio ESG footprints, suggesting that the better flows stem from the *disclosure* of better ESG practices rather than from differences in allocation strategies. This effect is concentrated in the institutional share classes, pointing out that only these types of investors value the additional disclosure. This is not surprising, since retail investors are usually influenced by more easy-to-access information like the Morningstar ESG rating of a fund (Hartzmark and Sussman, 2019) or by classification as “socially conscious” investment (Riedl and Smeets, 2017).⁶ Institutional investors on the other hand are more likely to take into account and react to additional disclosures (Iliev, Kalodimos, and Lowry, 2020).

One potential concern is that, while every PRI signatory has to report on their ESG practices since 2014, joining the PRI is a voluntary decision by the institutional investor. Our main specification is designed with this concern in mind and includes fund family fixed effects to account for time-fixed differences in the institutions' ESG practices. Put differently, we estimate the difference in flows that an investor receives after having obtained high R&A scores to the difference in flows that the control group (signatories with no R&A scores and non-PRI) receives. To account for unobserved heterogeneity as much as possible, we further control for style-times-time fixed effects and time-varying fund-level controls.

For better identification, we next exploit the fact that the Reporting & Assessment framework is mandatory for PRI signatories but was only introduced in 2014 and announced one year earlier. In this tighter specification, we restrict the sample to funds that joined the PRI before 2013, that is, before the R&A framework was introduced, and compare those

⁶We test the interaction between investor ESG disclosure and these alternative ESG measures later.

to signatories that never joined the PRI in a difference-in-difference setting. Funds that joined before 2013 were not aware that joining the PRI will be related to extensive ESG reporting, which alleviates the selection problem. The effect of obtaining a high R&A score is, if anything, even stronger in this specification. In our most conservative test, we include fund and category-by-month fixed effects. This essentially compares the flows for the same fund before the R&A was introduced with the flows after the fund starts receiving the first batch of scores, evaluated against the flows of investors that are not part of the PRI initiative. Signatories that joined PRI before 2013, experience the strongest boost in flows of 40bp per month from having an average assessment score of A or above.

Our second main result studies the interplay between the information contained in the self-disclosed Reporting & Assessment score and the sustainability rating (ESG “Globes”) that a mutual fund receives from Morningstar. Investors may treat these two ESG information as substitutes, even though the R&A score has a much broader scope than the Morningstar ESG Globes, which are based on asset allocation choices alone. Alternatively, investors might only reward funds that have a strong performance on both scales, treating the two attributes as complements. This would support the “confirmation hypothesis” (Ball, Jayaraman, and Shivakumar, 2012), i.e., voluntary disclosure becomes more credible once it is “confirmed” by additional disclosure that is externally verified.

We find evidence supporting the complements hypothesis: Mutual funds of signatories that have both a high R&A score *and* the highest number of “Globes” receive an extra boost in flows of 39bp per month (6.3% of a standard deviation) from institutional share classes. This is almost twice the effect of receiving the high R&A score alone. Moreover, having a positive assessment from PRI does not mitigate the negative effect of receiving a poor Globe rating.

Are the higher flows that high-scoring PRI signatories receive warranted? That is, do fund families with better R&A scores actually have better ESG practices? In the last section of our paper, we run preliminary tests aimed at answering these questions. First, we examine

whether better R&A scores correlate with more capital allocated towards companies with better ESG performance. Our findings suggest that this seems to be the case: Funds that have an average R&A score of A or better have a Morningstar portfolio ESG score that is 0.36 larger than that of the other funds (5% of a standard deviation). Moreover, it seems that filing the Reporting & Assessment itself correlates with an improvement in the ESG score, but only after the Morningstar fund sustainability score became publicly available in 2016. Second, we examine mutual funds' voting but find no significant differences between funds with high and low R&A scores. Funds of institutions that receive high assessment scores are not more likely to vote in favor of environmental and social proposals, nor do they change their behavior after they start receiving assessment scores. We caution against putting excessive weight on these results however, as these tests are run only with US-domiciled funds for which Morningstar provides voting information.

Taken together, our findings document the value of disclosing information about superior ESG practices by investment managers. As this information is not readily available, e.g., as a label in the Morningstar web portal, and not as widely processed as annual reports, only sophisticated, institutional investors react to such disclosure. Far from existing in a vacuum, the disclosure of holistic information is particularly powerful in attracting fund inflows when combined with a strong and verifiable sustainability rating from Morningstar. This speaks to the complementarity of both voluntary investor disclosure and mandatory third-party ratings as well as holistic and specific ESG measures. Finally, the assessment ratings themselves appear to correlate with a better sustainability footprint of mutual funds. It seems that, at least to some extent, PRI signatories that receive a high assessment score indeed implemented better ESG practices.

Our paper primarily contributes to the literature on the role of non-financial disclosure. A number of papers have already analyzed the implications of such disclosure *at the corporate level*. For instance, [Dhaliwal, Li, Tsang, and Yang \(2011\)](#) show that voluntary ESG corporate disclosure reduces firms' cost of capital. When looking at the financial market

reaction, [Grewal, Riedl, and Serafeim \(2019\)](#) and [Griffin, Lont, and Sun \(2017\)](#) find that there is a negative abnormal return following non-financial corporate disclosures, less so if the disclosure is better. [Jouvenot and Krueger \(2020\)](#) shows that mandating the disclosure of greenhouse-gas emissions improves firms' climate performance, even for those firms that were already disclosing this information voluntarily ([Grewal, 2021](#)). Our paper adds by providing evidence on the non-financial ESG disclosure *at the institutional investor level*. We demonstrate that investor ESG disclosure can attract responsible flows from mutual fund investors, and that it correlates with better portfolio fund scores. This implies that investor ESG disclosure is a viable signal for better ESG practices and helps to reduce ESG-related information asymmetries between institutional investors and their clients.

We also contribute to the growing number of papers that investigate signatories of the Principles for Responsible Investing. [Gibson et al. \(2021\)](#) ask whether PRI signatories engage in “greenwashing” and show that, at least outside of the US, signatories appear to have better ESG portfolio scores. [Humphrey and Li \(2021\)](#) argues that PRI signatories reduce the emissions of their portfolios. [Kim and Yoon \(2020\)](#) find that funds by PRI signatories domiciled in the US do not exhibit better ESG performance. [Liang, Sun, and Teo \(2020\)](#) look at hedge funds that committed to the PRI and find that these underperform non-signatories. In contrast to these papers, we have obtained access to the full Reporting & Assessment dataset from PRI, which enables us to study the effect of ESG investor disclosure on fund flows. We contribute by looking beyond joining PRI as a signal of ESG commitments. What matters to fund investors seems not to be joining by itself, but rather whether institutions report better ESG practices and receive better R&A assessment scores.

The remainder of the paper is structured as follows. Section 2 provides more details on the institutional setting. Section 3 describes the data. Section 4 shows the main results of the paper and Section 5 concludes.

2 Institutional setting

In 2006, a group of large institutional investors was invited by Kofi Annan, the then UN Secretary-General, to form the Principles of Responsible Investments (PRI). Institutions that sign the Principles for Responsible Investment commit to including environmental, social, and governance factors into their investment decisions and ownership processes. In 2020, over 3,000 institutional investors representing over 100 trillion US dollars were active signatories of the Principles for Responsible Investment (PRI).

To become a signatory, institutional investors have to complete an application and are obliged to pay an annual fee relative to the organization’s size.⁷

Becoming a PRI signatory offers several advantages to institutional investors that seek to advance their ESG integration capabilities. For instance, PRI brings signatories together via their coordinated engagements of firms (Dimson et al., 2020). PRI disseminates informational resources on how to incorporate ESG for investment practices (e.g. listed equity, fixed income and private equity) and provides up to date guidance on topical ESG issues, such as climate, biodiversity, taxes and diversity, equity and inclusion.

Beyond the services provided by PRI, there are also duties that signatories have when joining the network. Starting from 2014, one of the most extensive ones is a commitment to yearly report the “activities and progress towards implementing the Principles [of Responsible Investing]” (PRI, 2020). Mandatory reporting is intended to ensure 1) accountability of the PRI and its signatories, 2) a standardized transparency tool for signatories reporting, and 3) that signatories receive feedback from which to learn and develop.

Signatories have a one-year grace period. In other words, the first reporting cycle is voluntary. Signatories that fail to report two years after joining are delisted and no longer part of the PRI. The reporting framework opens on the 6th of January of each year and signatories have until the 31st of March to complete the report. This report consists of several

⁷Larger organizations pay higher fees, but these fees are relatively minor. The largest fee band of 13,943£ or 19,000\$ is for investment managers with over 50\$ billion US dollars of assets under management.

parts or “modules”, documenting the responsible investing practices of institutions across their organization. The main modules are 1) Strategy & Governance 2) Listed Equity 3) Active Ownership and 4) Asset Manager Selection, Appointment and Monitoring. Within each module there are several types of questions: Mandatory to report and disclose, mandatory to report and voluntary to disclose, and voluntary to report and disclose. The first type of questions are published as part of the investors’ transparency reports on the PRI website. The second type are published only with the signatory’s consent while for the last type the signatory can opt not to answer.⁸

PRI staff then rates all the various modules of the reporting framework. Depending on their answers in the survey, signatories receive a score that can take values from “A+” to “E”. In July of each each year, investors will receive their assessment reports. Figure 1 below shows one such example. While these scores are private, some signatories choose to publish them. PRI staff have informed us that high-scoring entities are likely to publicly disclose their scorecard. We also find that the eVestment database, one of the largest data providers for institutional investment fund products in the U.S., shows institutional-level PRI scores for those signatories that reported their scores to eVestment.

We are granted full access from PRI to the Reporting & Assessment survey as well as the scores that the signatories received from 2014 to 2019.

⁸As reported in PRI’s website, through the reporting process, signatories can 1) evaluate their responsible investing (RI) progress against an industry-standard framework 2) receive ongoing feedback and tools for improvement 3) benchmark their performance against peers 4) strengthen internal processes and build ESG capacity 5) summarize activities for staff, clients, shareholders and regulators. For more information on the survey please consult the [PRI website](#).

Figure 1: Example of Reporting & Assessment Scorecard



3 Data

3.1 Mutual fund information

We start our data collection with the full list of signatories and the date when they joined the PRI. We then obtain survivorship-bias-free data (in USD) from Morningstar for all open-end equity and fixed income mutual funds that are incorporated in countries with at least one signatory. Our sample spans from January 2011 to December 2019.

Mutual funds typically issue several share classes to target different types of investors (e.g., retail and institutional clients) or geographies. However, the underlying portfolios as well as the fund management are the same across share classes. For this reason we conduct our tests at the fund level. When we aggregate data from the share class level to the fund level, we compute the returns and volatilities as the value-weighted average across different share classes. The assets under management (AUM) of a fund are the sum of the assets in the different share classes. The fund age is retrieved from the largest share class (Ceccarelli, Ramelli, and Wagner, 2020).

We define funds as “Institutional” when more than 50% of assets stem from institu-

tional share classes.⁹ We define the remaining funds as “Retail”. Following [Sirri and Tufano \(1998\)](#), flows are computed as the monthly growth of assets under management net of reinvested returns. To ensure the robustness of our analysis, we trim flows at the 1st and 99th percentiles.

We compute the return volatility as the standard deviation of returns using a 12-month rolling window. For each fund, we also collect information on the age, global category (capturing the investment style), Morningstar’s overall rating (the Morningstar “Stars”, on a 1-5 scale, with 5 to indicate top financial performers), whether the fund is classified as “socially conscious”,¹⁰ and its exposure to controversial firms as well as the overall portfolio sustainability score and ESG ratings (the Morningstar “Globes”, on a 1-5 scale, with 5 to indicate top sustainability performers).

To account for the impact that Morningstar “Stars” have on fund flows ([Del Guercio and Tkac, 2008](#)), we define the indicators Stars upgrade and Stars downgrade. These variables take the value of one if the fund experienced an up- or downgrade in “Star” rating from the previous month. Similarly, to account for the impact of the Morningstar “Globes” ([Ammann, Bauer, Fischer, and Müller, 2019](#); [Hartzmark and Sussman, 2019](#)), we define the indicators $\Delta 1$ Globe and $\Delta 5$ Globes. These variables indicate funds that enter the two extreme sustainability categories (1 Globe and 5 Globes), considering the observations with continuing missing sustainability ratings as no change.¹¹

Our sample consists of 4,300 fund families with more than 53,000 funds. [Table 1](#) below shows summary statistics for the sample at the fund-month level.

– [Table 1](#) –

⁹Morningstar classifies as institutional the share classes that meet one of the following criteria: have the word “institutional” in the name; have a minimum initial purchase of USD 100,000 or more; specifically address institutional investors or those purchasing on a fiduciary basis, as stated in the fund prospectus.

¹⁰Morningstar classifies as socially conscious any fund that identifies itself as investing according to some non-financial criteria, for instance by excluding certain sectors from the investable universe, or by aiming at selectively investing in good-performing companies in terms of ESG criteria.

¹¹This approach also allows us to run our tests before March 2016, when Morningstar first introduced the sustainability globes. This is a crucial aspect since most funds joined PRI well before that date.

Almost half of our sample eventually joins the PRI with 60% of the observations coming from the period after joining (“Post × PRI”). About 17% of funds are classified as institutional and 9% are classified as “socially conscious”.

3.2 PRI information

In the second step of our data collection, we match each fund family from Morningstar to the list of PRI members. For each fund family in our dataset, we manually check for a correspondence among PRI signatories.¹² For each member we have from PRI the date of joining as well as the Reporting & Assessment scores between 2014, the first year the scores were available, and 2019. We aggregate the scores of the various modules and define $\bar{\text{R\&A}}$ as the average score across all available modules. Aggregation is an important step, since only signatories that receive an overall positive assessment are likely to disclose their scores.

Not all signatories fill out every module of the reporting framework, since they might not have enough exposure to a certain asset class like private equity or infrastructure investments. To account for this, we define an additional variable $\bar{\text{R\&A}}^{restr}$, which is restricted to the four modules filled out by approx. 90% of signatories: Strategy & Governance, Listed Equity Screening, Integration, and Active Ownership.

The Strategy & Governance module is the most holistic part of the framework and covers the signatories’ responsible investing policy. For example, one question asks how frequently objectives for responsible investments are set and reviewed. If the signatory reviews those at least once a year, PRI awards the maximum score for this question. The Screening, Integration, and Active Ownership are more specific modules and provide detailed information on the signatory’s investment process. For example, one question asks the percentage of assets under management for which screening strategies are applied or which type of engagements (individual, collaborative, or through service providers) the signatory

¹²This approach is more labor-intensive than matching signatories to funds but ensures a high quality match. This is because the name of a fund does not always contain the name of the signatory. For example, the fund “SWuK Renten” is matched with the signatory “Universal-Investment”. Trying to match the latter to the list of funds, would have resulted in classifying “SWuK Renten” as a non-PRI fund.

undertakes.

– Table 2 –

Table 2 shows summary statistics of the PRI measures. The average assessment score is 4.22, corresponding to a score slightly above B. When we look at the restricted score, this number increases slightly to 4.61, or a score close to an A. To make interpretation of our results simpler, we define several dummies that identify signatories with an average score of A or greater ($\mathbb{1}_{R\&A \geq A}$), one greater than B but smaller than A ($\mathbb{1}_{R\&A \in [B;A]}$), and one smaller than B ($\mathbb{1}_{R\&A < B}$). 27% of the sample falls in the top category, 34% is in the middle category, and 39% are in the worst category.

4 Results

4.1 Mutual fund investors value positive ESG disclosure

4.1.1 Joining the PRI

This section asks whether mutual fund investors value the disclosure of ESG information by asset managers. First, we examine if merely joining the Principles for Responsible Investing (PRI) is a strong enough signal to elicit a response from investors. When joining the PRI, asset managers commit to applying several principles to “better align investors with [the] broader objectives of society” (PRI, 2020). However, these principles should only be applied if consistent with the signatory’s fiduciary duties. Moreover, they are not actively enforced by the PRI. In other words, the signal emitted by joining is not costly to the emitter and therefore not credible (Spence, 1973). Given that investors have high incentives to signal responsible investing even if they do not implement it (Gibson et al., 2021), it seems unlikely that investors can distinguish between “serious” PRI signatories and those that join only to get the “label” (Daske, Hail, Leuz, and Verdi, 2013).

We start by running the Difference-in-Differences (DID) regression below around the joining date of PRI signatories.

$$Flow_{i,t} = \alpha + \beta_1 Post_t \times PRI_i + \gamma' \mathbf{X}_{i,t-1} + \delta_t + \eta_i + \epsilon_{i,t} \quad (1)$$

The main explanatory variable is the difference-in-difference interaction term $Post_t \times PRI_i$. PRI_i identifies funds of asset managers that joined the PRI until the end of the sample. $Post_t$ is an indicator variable equal to 1 for the months after the asset manager became a signatory, and 0 for all prior months. $\mathbf{X}_{i,t-1}$ is a vector of time-varying lagged fund-level controls that, based on previous literature, may influence flows to funds of PRI signatories in a differential manner. These are monthly returns in the previous month, the previous year, and two years prior, the logarithm of assets under management, return volatility, the logarithm of fund's age, the fund's entrance or exit in the two extreme sustainability rating (Globes) categories, and changes of Morningstar's overall assessment of the fund (Stars).¹³ δ_t represents month fixed effects and η_i fund-family fixed effects. The $Post_t$ and PRI_i indicators are absorbed by the month and fund-family fixed effects respectively. $\epsilon_{i,t}$ is the error term. Standard errors are clustered along both month and fund-family to account for cross-sectional dependence between observations.

- Table 3 -

Table 3 above shows the regressions results. We find no significant effect of joining the PRI on fund flows, neither in the full sample, nor the institutional, or retail subsamples. We confirm that this is also the case when we add the month, fund, and/or category-by-month fixed effects in Appendix Table A2.¹⁴

¹³We use changes rather than the absolute values because, as also noted in [Hartzmark and Sussman \(2019\)](#), if these rating systems are in equilibrium – e.g., existing investors have already sorted in low and high-sustainability funds according to their preferences, after an initial phase of reallocation – there is no reason to expect a continued flows-effect of ratings without further changes.

¹⁴[Kim and Yoon \(2020\)](#) find that US funds receive a significant boost in flows after joining the PRI. Our empirical setting is quite different from theirs, as we focus on an international sample and include a series of time-varying fund-level controls.

Our first set of results suggests that merely joining PRI is not a strong enough signal to warrant an investor response. One reason for this might be that investors are not able to distinguish between signatories that take the PRI principles to heart and implement them, and signatories that merely join to obtain the PRI label. Therefore, they pool all signatories in the latter category.

4.1.2 Receiving positive assessment scores

In our second battery of tests, we look at the yearly scores received by signatories that fill out the Reporting & Assessment (R&A) framework. We examine if mutual fund investors allocate more assets towards signatories that receive a high overall assessment score, e.g., an average score of “A” or higher. We do not expect investors to shun away from low-scoring signatories as these will likely not disclose their scorecards. We test this formally by running Regression 2 below.

$$Flow_{i,t} = \alpha + \beta_1 \mathbb{1}R\&A_{i,t-1} \geq A + \beta_2 \mathbb{1}R\&A_{i,t-1} \in [B; A) + \beta_3 \mathbb{1}R\&A_{i,t-1} < B + \gamma' \mathbf{X}_{i,t-1} + \delta_t + \eta_i + \epsilon_{i,t} \quad (2)$$

The main explanatory variable, $\mathbb{1}R\&A_{i,t-1} \geq A$, captures the differential inflow of funds that high-scoring signatories receive, compared to funds that have no score. Similarly, $\mathbb{1}R\&A_{i,t-1} \in [B; A)$ and $\mathbb{1}R\&A_{i,t-1} < B$ capture the differential inflow of funds with a medium and a low assessment scores. $\mathbf{X}_{i,t-1}$, δ_t , and η_i are the same fund-level controls and fixed effects from Regression (1). $\epsilon_{i,t}$ is the error term and standard errors are double clustered along months and fund families.

- Table 4 -

Table 4 shows the regression results. Our main finding in column (3) shows that institutional mutual fund investors allocate more assets towards funds that receive a high score. Compared to funds without a score, having an average R&A score of A or larger correlates

to flows that are 23 basis points (bp), or 4% of a standard deviation, larger. This is an economically important effect, corresponding to about twice the effect from a one standard deviation increase in past month’s returns.¹⁵ In column (4), we include category-by-month fixed effects to account for changing tastes for investment strategies over time. The positive flow effect of having a high average R&A score remains robust, albeit slightly smaller. These results point out that institutional mutual fund investors attach a positive value to good ESG disclosure by asset managers.

By contrast, we find no such effect among retail investors or in the full sample (columns (1), (2), (5), and (6)). This points out that only institutional investors value the asset managers’ disclosure contained in the R&A framework. This is consistent with prior literature that documents how institutional mutual fund investors perform better monitoring (Evans and Fahlenbrach, 2012). Moreover, since PRI is an initiative mainly organized for institutional investors, it is to be expected that the R&A framework will have higher visibility among these investors.

4.1.3 Robustness tests

One concern in our setting is that by comparing funds of PRI signatories to funds of asset managers that are not signatories, we may be subject to a selection bias if ESG leading institutions predominantly join the PRI in the first place. Therefore, investors might not react to the positive disclosure embedded in the assessment scores but to some underlying characteristic of the asset manager. We consider this to be unlikely, as our specification in Table 3 includes fund family, month, and category fixed effects and a full set of controls. Nevertheless, in Appendix Table A3 we repeat our analysis using only funds that are PRI signatories. Our main inference remains unchanged.

Another concern could be that by taking into account modules filled out by a small fraction of signatories, we introduce a bias in the analysis. To make sure that this is not the

¹⁵A one standard deviation increase in monthly returns yields $3.45 \times 0.03 = 0.10$ percentage points (or 10bp) increase in flows.

case, in Appendix Table A4 we redefine the explanatory variables to cover only the modules that are available for the approx. 90% of signatories. Again, our findings remain unchanged.

To further alleviate concerns about omitted variable bias, we perform two additional tests: We include fund-level fixed effects in Appendix Table A5 and control for the continuous level of the funds' "Star" ratings (Del Guercio and Tkac, 2008) in Appendix Table A6. In both of these tests, our main result remains robust. Importantly, the magnitude of the coefficient of interest is very stable across the entire battery of robustness tests.

4.1.4 Identification

Despite our tight specification and robustness tests, we cannot completely rule out non-causal explanations. The main concern is that if asset managers knew that joining the PRI entails disclosing information about their ESG practices, only those asset managers might choose to become signatories that ex-ante were ESG leaders.

To help with identification, we exploit the introduction of the Reporting & Assessment framework in 2014. PRI announced that it planned to introduce the survey in 2013. Thus, funds that became signatories *before 2013* did not know about the upcoming reporting requirement. This means that we can effectively treat the introduction of the R&A as an exogenous event for asset managers that became signatories in 2012 or earlier.

- Table 5 -

In Table 5 we make use of this by running Regression (2) on a restricted sample of funds that joined the PRI before 2013 and those that never join. The effect of receiving a high average assessment score is even stronger in this setting. We find a boost of 17bp in the overall sample (column (1)) which is mainly concentrated in the institutional asset classes, where the boost is 40bp (column (3)). The latter coefficient is economically significant, corresponding to 6.4% of a standard deviation. These findings remain robust when controlling for category-by-month fixed effects in columns (2) and (4). We find only a marginally significant effect of receiving a high \varnothing R&A score for retail share classes.

In Appendix Table A7 we confirm that this effect is robust to a battery of additional tests. First, we restrict the sample to only PRI funds that joined before 2013 and do not keep non-PRI funds in the sample to further eliminate any selection bias (Panel A). Second, we consider a subset of R&A modules to account for any misrepresentation of funds that submit more assessment modules (Panel B). Third, we include fund fixed effects to capture unobservable time invariant fund-level omitted variables (Panel C). Fourth, we control for the continuous measure of Morningstar’s performance “Stars” (Panel D).

Taken together, the results in this section suggest that mutual fund investors value the *positive* disclosure of ESG information by asset managers. This effect is concentrated only in institutional asset classes, consistent with institutional investors being better monitors. Moreover, a number of tests support a causal interpretation.

4.2 The interplay between the voluntary Reporting & Assessment framework and the verified ESG classification

Ball et al. (2012) demonstrate the “confirmation hypothesis”: verified and voluntary disclosure are complements because through verification of outcomes the voluntarily disclosed information becomes more credible. In our setting, asset managers’ decision to disclose the assessment scores is a voluntary one and the disclosed information itself is not verified.¹⁶ Therefore, if the “confirmation hypothesis” applies to our setting, having an external verification will make the voluntary disclosure more informative.

To our knowledge there is no standardized and verified ESG disclosure framework for asset managers, with the exception of French institutional investors (Mésonnier and Nguyen, 2020). However, we can make use of the ESG portfolio ratings (“Globes”) that were introduced by Morningstar in March 2016 (Hartzmark and Sussman, 2019). Obtaining the maximum

¹⁶Conveniently for us, once the voluntary decision to become a signatory is made, the decision to report is no longer voluntary. The fact that assessment scores are private deters delisting of poorly performing signatories. In the spirit of Verrecchia (1983), while there is no cost of disclosing information per se, filling out the survey is costly and can be a reason why some asset managers will choose not to become signatories in the first place.

number of Globes is an external certification by Morningstar that a mutual fund’s ESG portfolio footprint is within the best 10% of funds in its investment strategy. Therefore, we expect funds of asset managers that obtain a high average assessment score *and* also have the highest number of ESG Globes will receive a particularly high reward from investors. In other words, the R&A score and the ESG Globes are complements.

Another type of voluntary disclosure present of the Morningstar platform is funds’ self-classification as “socially conscious”. Different from the ESG Globes, this information is self-reported by fund managers and does not represent an additional verification of a fund’s commitment to ESG.¹⁷ Thus, we expect that the R&A scores and the socially conscious designation are *not* complements, but rather substitutes.

- Table 6 -

Table 6 tabulates the relative frequency of funds by average R&A score and ESG Globes (Panel A) and socially conscious designation (Panel B). Interestingly, it is far from uncommon for funds of signatories that received a high average R&A score to receive only one ESG Globe: About 21% of 1 Globe funds had a high assessment score. This figure is even higher (46%) when we consider only funds that receive an assessment score in the first place. Somewhat reassuringly, funds of signatories with a high assessment score are over-represented in the 5 Globes category. 27% of funds that receive the highest ESG rating also have an average assessment score of A or higher. This figure is between 10 and 15% for funds with a lower assessment score. This leads us to conclude that the scores and the Globes capture different information.

The picture that Panel B depicts on socially conscious funds is somewhat different. Among conventional funds, the R&A scores are very much evenly distributed. However, funds of high-scoring signatories are almost twice as likely to be “socially conscious” than funds with a medium or low assessment scores.

¹⁷In the context of bond mutual funds, there is even evidence of fund managers actively miss-reporting their holdings to improve their risk-return profile (Chen, Cohen, and Gurun, 2021).

In Table 7 we formally test whether ESG Globes and assessment scores are complements or substitutes. To do this, we interact the main explanatory variable, $\emptyset R\&A \geq A$, with dummies for funds that receive 5 Globes and 1 Globe respectively.

- Table 7 -

The interaction between $\emptyset R\&A \geq A$ and 5 Globes captures the additional boost in flows that funds of $\emptyset R\&A \geq A$ signatories receive when also having the highest portfolio ESG rating. We find a positive interaction effect in the full sample (columns (1) and (2)): Funds having both a high ESG rating and a high assessment score receive an additional boost in flows of 20bp. The effect is even stronger for the institutional funds where the interaction coefficient measures 42bp, almost twice the effect of having only a high assessment score. This is an economically sizable effect corresponding to a monthly boost in flows of 63bp (21bp + 42bp) or 10% of a standard deviation.

Does positive self-disclosure serve as a substitute for negative verified disclosure? In other words, can funds that receive only one ESG Globe recover part of the outflows by having a good assessment score? Our findings suggest that this is not the case: Funds that receive only a single Globe, and experience an outflow of about 16bp in the full sample, do not gain from receiving a high R&A score as well.

The coefficient of $\emptyset R\&A \geq A$ captures the boost in flows that high-scoring funds receive, compared to funds that have no score *and* have either no ESG rating or one that is between two and four Globes. In columns (3) and (4) we find that this coefficient is positive, significant, and very similar in magnitude to our previous results. Therefore, we can confirm our baseline result that institutional mutual fund investors value positive ESG disclosure by asset managers.

It could be the case that the by including only the extreme Globe categories (1 and 5) we are leaving out important variation that might help explain our results. In Appendix Table A8 we include a model that is interacted with the full set of Globes. Our main finding

remains robust.¹⁸

Taken together, these findings support the confirmation hypothesis that verified information (in our case the ESG Globes) complements voluntarily disclosed information (the assessment scores) by making the latter more credible. The other way around does not work: Positive voluntary disclosure does not “make up” for negative but verified information.

In Table 8 we test whether the “socially conscious” designation and the assessment scores are complements or substitutes. To do this we interact the main explanatory variable, $\emptyset R\&A \geq A$, with dummies for funds that are classified by Morningstar as “socially conscious”.

- Table 8 -

In columns (1) and (2) we find a positive interaction effect between our two main variable of interests. This suggests that for the average investor, having both a socially conscious designation and a high assessment score is particularly appealing. However, when we split the sample between institutional and retail clients, we find that this holds only for retail clients (columns (5) and (6)). This is surprising, as we do not expect these investors to be aware of the assessment scores in the first place. A possible explanation is that high scoring signatories market socially conscious funds more aggressively, as they see it as in line with their corporate strategy. One example for this would be Robeco SAM.¹⁹

In contrast, for institutional investors, the interaction coefficient is insignificant. This means that while institutional investors like both socially conscious and high-assessment-score funds, they do not see these designations as complementary. This is rational, as effectively, the socially conscious designation is meant to be a holistic assessment of a funds’

¹⁸Interestingly, after its introduction, receiving even a small number of Globes is seen negatively by investors. This suggests that from the mutual fund managers’ perspective, no rating is better than a bad rating.

¹⁹Robeco SAM is a high-scoring signatory that offers a large number of socially conscious funds. In its homepage, Robeco claims to incorporate ESG concerns in 58 out of its 61 investment strategies. It is thus likely that through a marketing effort, such funds are simply better able to attract flows from retail investors that are particularly concerned about investing sustainably.

strategy geared towards sustainability. This is similar to what the Reporting & Assessment framework tries to capture at the asset manager level.

4.3 Are Reporting & Assessment scores cheap talk?

In the previous sections of the paper, we have shown that institutional mutual fund investors value positive ESG disclosure by asset managers, especially when this is verified by funds receiving a high ESG portfolio rating. In this section, we first ask if the boost in flows that these funds receive is warranted, that is, if asset managers live up to their promises by allocating their assets towards more sustainable firms or being more favorable towards environmental and social proxy votes. Second, we look at changes in ESG portfolio footprint and voting behavior of mutual funds. These tests speak to the “real effects” of ESG disclosure for asset managers ([Eugster and Wagner, 2020](#); [Kanodia and Sapra, 2016](#)).

4.3.1 Portfolio exposure

To test whether the R&A scores are “cheap talk”, we start by running regressions of the funds’ portfolio ESG Scores and the percentage of AUM in low and high controversy firms on the assessment scores indicators. Both these measures come directly from Morningstar. ESG scores are available from 2012 to September 2019, when the methodology for computing them changed. Controversy exposures are at the moment only available for US funds from 2016 to 2019. [Table 9](#) shows the results of these regressions.

- [Table 9](#) -

Panel A starts by comparing the levels. In column (1), we find a positive and significant relationship between having a high R&A score and the portfolio ESG score of funds. On average, funds with a higher assessment score also have a larger exposure to sustainable firms. While the economic magnitude of the coefficient is relatively small (5% of a standard deviation of ESG scores), this result suggests that the assessment scores are not cheap talk.

We find no significant differences for the controversy scores, which could be due to either our tests being underpowered or to fund managers not taking these factors into account when deciding how to allocate their assets.

Panel B looks at changes in ESG scores by introducing fund-family fixed effects in the regressions. The idea behind this test is to examine whether signatories changed their ESG practices after disclosing them to the PRI and receiving assessment scores on it, relative to non-PRI signatories. Learning from peers, for example, may be one mechanism through which signatories may change their ESG practices. Interestingly, in column (1), we find that fund managers do not improve their ESG score after receiving the assessment score. It is important to note that Morningstar back-filled portfolio ESG information after introducing the ESG Globes in March 2016. Before that date, the ESG exposure of funds was completely nontransparent for mutual fund investors, and potentially even to some fund managers.

To account for this, we introduce the dummy “Post Globes” in column (2) that captures the period after March 2016. After the information became easily available to investors, mutual fund managers of high-assessment-score asset managers started to improve their ESG ratings. This is consistent with existing evidence showing that transparency enhances the ESG performance of funds ([Ceccarelli et al., 2020](#)).

Concerning the exposure to controversial firms, we find a marginally significant change for funds with a high assessment score. These funds are less exposed to moderate, high, and severe controversy risk firms while having higher exposures to firms with no or a low controversy risk.

4.3.2 Proxy voting

Besides allocating funds towards more sustainable firms, fund managers can also vote in favor of environmental and social issues during the annual shareholder meetings. One potential strategy to improve the sustainability performance of firms would be to remain invested in “laggards” and engage with them ([Broccardo, Hart, and Zingales, 2020](#)). Hence, if asset

managers are not engaging in cheap talk, we expect that signatories with a high assessment score will be more supportive of environmental and social resolutions.

To test this, we obtain proxy voting data from Morningstar for the sample of US mutual funds. We compute the percentage of votes supporting Climate Change, Environment, and Other E&S (Environmental & Social) as the number of votes in support divided by the number of votes reported in Morningstar. The data is available only for US domiciled funds.

Table 10 shows regressions of the percentage of votes cast in favor of environmental and social resolutions on the indicators for the assessment score dummies. Panel A reports regressions of levels and Panel B reports regressions of changes.

- Table 10 -

In Panel A, we find no significant differences in voting behavior between mutual funds of PRI signatories that receive a high assessment score and those that have no score. However, the coefficient on all Environmental & Social votes in column (1) is positive and economically large: High R&A funds vote in favor of E&S resolutions 7.2 percentage points (22% of a standard deviation) more than other funds. The overall picture is the same when we look at changes in Panel B. Most coefficients are insignificant, albeit positive, leading us to believe that our tests are under-powered.

5 Conclusion

This paper demonstrates that the ESG disclosure of asset managers can have real consequences. Mutual funds that self-disclose superior ESG practices receive more assets from their institutional clients. These effects are made possible by a mandatory and standardized reporting framework that the PRI assesses. Our results highlight that market participants are using this framework to guide their capital allocation decisions towards investment managers with superior ESG practices. We also provide evidence that ESG investor disclosure

and externally verified information (e.g. by Morningstar) are complementary information, where the latter helps to validate the former.

Preliminary findings suggest that the information contained in the Reporting & Assessment framework reflects, at least to some extent, real investment practices like portfolio allocation strategies and proxy voting. Not only that, but after signatories start receiving assessment scores, they improve their real ESG commitments, e.g., by allocating more funds to more companies with better sustainability scores. Future tests will explain this relationship better.

As investment managers and asset owners continue developing their ESG integration practices, it remains to be seen how future disclosure will need to adapt to these changing investment landscapes. ESG factors and other content related to non-financial reporting are difficult to standardize and therefore are expected to continuously adjust as the market develops. Therefore, this will require a continuous re-evaluation of standards, frameworks, and client-level sophistication, which can change in along with investor preferences. All these developments can influence optimal disclosure frameworks.

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Tables

Table 1: Summary statistics of the fund sample

This table shows summary statistics of the sample variables related to the all mutual funds, both those that become PRI signatories and those that do not. The sample is at the fund-month level and covers the period from 2011 to 2019. We include all funds from countries with at least one signatory as of 2019. Mutual fund data is from Morningstar. PRI membership comes directly from the PRI. PRI is an indicator for funds that (eventually) join the PRI. Post is an indicator for the period after a fund becomes signatory. All variables are defined in Appendix Table A1.

	N	min	p25	mean	p50	p75	max	sd
PRI	3,244,621	0.00	0.00	0.60	1.00	1.00	1.00	0.49
Post × PRI	3,244,621	0.00	0.00	0.49	0.00	1.00	1.00	0.50
Flows	3,244,621	-27.39	-1.55	0.22	-0.20	0.87	57.00	6.22
Log assets _{t-1}	3,244,621	1.20	16.78	18.10	18.16	19.50	27.33	2.12
%AUM Inst	3,244,621	0.00	0.00	0.18	0.00	0.12	1.00	0.34
Institutional fund	3,244,621	0.00	0.00	0.17	0.00	0.00	1.00	0.38
Return _{t-1}	3,155,603	-9.61	-1.44	0.52	0.53	2.57	10.58	3.45
Return _{t-12;t-1}	2,948,106	-46.58	-2.65	5.52	4.42	13.32	92.31	12.33
Return _{t-24;t-13}	2,561,260	-46.58	-1.94	6.43	5.41	14.55	92.31	12.66
Stdev. ret _{t-1}	3,199,384	0.33	2.38	3.77	3.49	4.86	11.82	1.96
Log Fund age _{t-1}	3,177,669	0.04	1.47	2.06	2.16	2.72	3.53	0.82
Stars _{t-1}	2,193,257	1.00	2.00	3.10	3.00	4.00	5.00	1.07
Stars upgrade	2,168,377	0.00	0.00	0.07	0.00	0.00	1.00	0.25
Stars downgrade	2,168,377	0.00	0.00	0.07	0.00	0.00	1.00	0.25
Socially conscious	3,244,621	0.00	0.00	0.09	0.00	0.00	1.00	0.29
ESG Globes	591,445	1.00	2.00	3.04	3.00	4.00	5.00	1.11
Δ5Globes	3,244,621	0.00	0.00	0.00	0.00	0.00	1.00	0.07
Δ1Globes	3,244,621	0.00	0.00	0.00	0.00	0.00	1.00	0.07

Table 2: Summary statistics of the PRI Reporting & Assessment framework

This table shows summary statistics for PRI signatory funds that reported their ESG practices to the PRI and received an Reporting & Assessment (R&A) score. The sample is at the fund-year level and covers the period from 2014, when the R&A framework was introduced, to 2019. R&A scores information comes from the PRI. The score variables takes a value of 1 for the lowest score, E, and a value of 6 for the highest score, A+. The various modules that constitute the average scores are listed separately, SAM stands “Selection, Appointment, and Monitoring processes”. All variables are defined in Appendix Table A1.

	N	min	p25	mean	p50	p75	max	sd
$\emptyset R\&A_Score_{t-1}$	106,185	1.25	3.50	4.22	4.25	5.00	6.00	0.95
$\emptyset R\&A_Score_restricted_{t-1}$	106,185	1.25	4.00	4.61	4.75	5.25	6.00	0.86
$\emptyset R\&A_{t-1} \geq A$	106,185	0.00	0.00	0.27	0.00	1.00	1.00	0.44
$\emptyset R\&A_{t-1} \in [B; A)$	106,185	0.00	0.00	0.34	0.00	1.00	1.00	0.47
$\emptyset R\&A_{t-1} < B$	106,185	0.00	0.00	0.39	0.00	1.00	1.00	0.49
Strategy & Governance	106,185	2.00	5.00	5.08	5.00	6.00	6.00	0.84
SAM - Listed Equity	41,332	1.00	1.00	2.74	2.00	4.00	6.00	1.52
SAM - Fixed Income	20,111	1.00	1.00	2.39	1.00	4.00	6.00	1.77
Listed Equity - Screening	89,726	1.00	4.00	4.64	5.00	5.00	6.00	1.06
Listed Equity - Integration	97,432	1.00	4.00	4.53	5.00	5.00	6.00	1.00
Active Ownership	103,063	1.00	4.00	4.22	4.00	5.00	6.00	1.09
Private Equity	19,680	1.00	1.00	2.07	2.00	2.00	6.00	1.21
Direct Property	31,753	1.00	1.00	3.18	4.00	5.00	6.00	1.68
Direct Infrastructure	14,830	1.00	2.00	3.17	2.00	5.00	6.00	1.78

Table 3: Joining the PRI and fund flows

This table shows Difference-in-Differences (DID) regressions of flows on an indicator for funds that join the PRI interacted with a dummy for the period after the fund became a signatory (Post). All regressions control for lagged fund characteristics, fund-family fixed effects, and either month or category-by-month fixed effects. The direct effect of the dummy Post is absorbed by the time fixed effects. The sample includes all funds from countries with a least one PRI signatory and spans from 2011 to 2019. Singleton observations are dropped. t-statistics, based on robust standard errors double clustered at the fund-family and month level, are reported in parentheses. ***, **, and * indicate that the parameter estimate is significantly different from zero at the 1%, 5%, and 10% level, respectively. All variables are defined as in Appendix Table A1.

Dep. variable:	All funds		Institutional		Retail	
	(1) Flows	(2) Flows	(3) Flows	(4) Flows	(5) Flows	(6) Flows
Post × PRI	-0.05 (-0.88)	-0.02 (-0.32)	0.02 (0.17)	0.06 (0.57)	-0.08 (-1.15)	-0.03 (-0.56)
Return _{t-1}	0.06*** (5.72)	0.11*** (10.09)	0.03** (2.46)	0.09*** (5.76)	0.06*** (6.09)	0.11*** (9.99)
Return _{t-12;t-1}	0.04*** (17.07)	0.06*** (20.55)	0.03*** (9.69)	0.06*** (11.46)	0.04*** (16.80)	0.06*** (20.12)
Return _{t-24;t-13}	0.01*** (6.00)	0.02*** (10.62)	0.01*** (4.30)	0.03*** (8.97)	0.01*** (5.78)	0.01*** (8.75)
Stdev. ret _{t-1}	-0.14*** (-8.99)	-0.10*** (-5.91)	-0.15*** (-7.84)	-0.09*** (-3.18)	-0.14*** (-8.18)	-0.10*** (-5.50)
Log assets _{t-1}	0.04*** (4.55)	0.04*** (4.85)	0.01 (0.87)	0.01 (0.68)	0.04*** (4.16)	0.04*** (4.52)
Log Fund age _{t-1}	-0.56*** (-19.44)	-0.56*** (-20.30)	-0.65*** (-11.91)	-0.62*** (-12.09)	-0.52*** (-16.84)	-0.53*** (-17.76)
Stars upgrade	0.02 (1.01)	-0.02 (-1.47)	0.00 (0.03)	-0.06 (-1.65)	0.02 (1.10)	-0.02 (-0.95)
Stars downgrade	-0.10*** (-5.10)	-0.04** (-2.07)	-0.11*** (-2.62)	-0.03 (-0.81)	-0.09*** (-4.79)	-0.03* (-1.95)
Δ5Globes	-0.01 (-0.13)	0.01 (0.26)	0.04 (0.29)	0.06 (0.42)	-0.02 (-0.36)	-0.01 (-0.17)
Δ1Globes	-0.17** (-2.41)	-0.15** (-2.17)	-0.25 (-1.42)	-0.21 (-1.17)	-0.13* (-1.91)	-0.12* (-1.77)
Constant	0.60*** (3.48)	0.24 (1.40)	1.33*** (3.82)	0.76** (2.28)	0.50*** (2.76)	0.18 (1.01)
Observations	1,865,535	1,865,535	367,838	367,838	1,497,229	1,497,229
R-squared	0.03	0.05	0.04	0.06	0.03	0.05
Fund-Family FE	Yes	Yes	Yes	Yes	Yes	Yes
Category-Month FE	No	Yes	No	Yes	No	Yes
Month FE	Yes	No	Yes	No	Yes	No

Table 4: R&A ratings and fund flows

This table shows regressions of flows on indicator variables for several cutoffs of the average Reporting & Assessment (\emptyset R&A) scores of PRI signatories. These are respectively an average score of A or greater; greater than B but less than A; and smaller than B. These indicators are set to zero for months when no ratings are available or the fund is not a PRI signatory. All regressions control for lagged fund characteristics, fund-family fixed effects, and either month or category-by-month fixed effects. The sample includes all funds from countries with a least one PRI signatory and spans from 2011 to 2019. Singleton observations are dropped. t-statistics, based on robust standard errors clustered at the fund-family and month level, are reported in parentheses. ***, **, and * indicate that the parameter estimate is significantly different from zero at the 1%, 5%, and 10% level, respectively. All variables are defined as in Appendix Table A1.

Dep. variable:	All funds		Institutional		Retail	
	(1) Flows	(2) Flows	(3) Flows	(4) Flows	(5) Flows	(6) Flows
\emptyset R&A $_{t-1} \geq A$	0.07 (1.30)	0.06 (1.12)	0.23** (2.50)	0.20** (2.31)	0.03 (0.64)	0.01 (0.34)
\emptyset R&A $_{t-1} \in [B; A)$	0.01 (0.18)	-0.03 (-0.64)	0.03 (0.32)	0.01 (0.10)	-0.00 (-0.05)	-0.05 (-1.17)
\emptyset R&A $_{t-1} < B$	0.00 (0.04)	-0.01 (-0.18)	0.03 (0.25)	0.04 (0.34)	-0.01 (-0.22)	-0.02 (-0.54)
Return $_{t-1}$	0.06*** (5.72)	0.11*** (10.08)	0.03** (2.46)	0.09*** (5.76)	0.06*** (6.77)	0.11*** (12.71)
Return $_{t-12;t-1}$	0.04*** (17.07)	0.06*** (20.55)	0.03*** (9.66)	0.06*** (11.42)	0.04*** (18.76)	0.06*** (22.04)
Return $_{t-24;t-13}$	0.01*** (6.02)	0.02*** (10.64)	0.01*** (4.29)	0.03*** (8.97)	0.01*** (6.13)	0.01*** (10.23)
Stdev. ret $_{t-1}$	-0.14*** (-8.97)	-0.10*** (-5.90)	-0.15*** (-7.82)	-0.09*** (-3.16)	-0.14*** (-9.54)	-0.10*** (-6.45)
Log assets $_{t-1}$	0.04*** (4.54)	0.04*** (4.84)	0.01 (0.87)	0.01 (0.68)	0.04*** (5.83)	0.04*** (6.28)
Log Fund age $_{t-1}$	-0.56*** (-19.43)	-0.56*** (-20.29)	-0.64*** (-11.88)	-0.62*** (-12.02)	-0.52*** (-20.56)	-0.53*** (-21.91)
Stars upgrade	0.02 (1.01)	-0.02 (-1.47)	0.00 (0.05)	-0.06 (-1.65)	0.02 (1.13)	-0.02 (-0.95)
Stars downgrade	-0.10*** (-5.10)	-0.04** (-2.07)	-0.11** (-2.61)	-0.03 (-0.80)	-0.09*** (-4.76)	-0.03* (-1.94)
Δ 5Globes	-0.01 (-0.12)	0.01 (0.26)	0.04 (0.29)	0.06 (0.42)	-0.02 (-0.36)	-0.01 (-0.16)
Δ 1Globes	-0.16** (-2.39)	-0.15** (-2.16)	-0.25 (-1.40)	-0.20 (-1.16)	-0.12* (-1.84)	-0.12* (-1.71)
Constant	0.56*** (3.32)	0.22 (1.34)	1.29*** (3.86)	0.75** (2.34)	0.46*** (3.57)	0.17 (1.26)
Observations	1,865,535	1,865,535	367,838	367,838	1,497,229	1,497,229
R-squared	0.03	0.05	0.04	0.06	0.03	0.05
Fund-Family FE	Yes	Yes	Yes	Yes	Yes	Yes
Category-Month FE	No	Yes	No	Yes	No	Yes
Month FE	Yes	No	Yes	No	Yes	No

Table 5: R&A ratings and fund flows - Identification based on the introduction of the R&A framework in 2014

This table shows regressions of flows on an indicator variable for several cutoffs of the average Reporting & Assessment (\emptyset R&A) scores of PRI signatories. The sample covers only signatories that either join before 2013, when submitting an R&A report became mandatory, or funds that do *not* file such report. These indicators are set to zero for months when no ratings are available or the fund is not a PRI signatory. All regressions control for lagged fund characteristics, fund-family fixed effects, and either month or category-by-month fixed effects. The sample includes all funds from countries with a least one PRI signatory and spans from 2011 to 2019. Singleton observations are dropped. t-statistics, based on robust standard errors clustered at the fund-family and month level, are reported in parentheses. ***, **, and * indicate that the parameter estimate is significantly different from zero at the 1%, 5%, and 10% level, respectively. All variables are defined as in Appendix Table A1.

Dep. variable:	All funds		Institutional		Retail	
	(1) Flows	(2) Flows	(3) Flows	(4) Flows	(5) Flows	(6) Flows
\emptyset R&A $_{t-1} \geq A$	0.17*** (2.77)	0.15** (2.44)	0.40*** (3.47)	0.32*** (2.86)	0.12* (1.87)	0.11 (1.61)
\emptyset R&A $_{t-1} \in [B; A)$	0.07 (1.14)	0.01 (0.20)	0.19 (1.61)	0.12 (1.05)	0.04 (0.67)	-0.02 (-0.25)
\emptyset R&A $_{t-1} < B$	0.09 (1.18)	0.05 (0.78)	0.18 (1.03)	0.14 (0.83)	0.07 (0.97)	0.04 (0.55)
Observations	1,473,631	1,473,631	283,977	283,977	1,189,269	1,189,269
R-squared	0.03	0.05	0.04	0.07	0.03	0.05
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Fund-Family FE	Yes	Yes	Yes	Yes	Yes	Yes
Category-Month FE	No	Yes	No	Yes	No	Yes
Month FE	Yes	No	Yes	No	Yes	No

Table 6: R&A ratings, Morningstar’s ESG globes, and socially conscious designation

This table shows the absolute frequencies of funds along cutoffs of the average Reporting & Assessment (\emptyset R&A) scores of PRI signatories. The frequencies are reported separately along the Morningstar sustainability “Globes” ratings (Panel A) and the “socially conscious” designation (Panel B).

Panel A: Morningstar sustainability ratings (“Globes”)

\emptyset R&A	0 (Missing)	1	2	3	4	5	Total
$\geq A$	205,548	10,964	31,688	57,696	36,561	17,345	359,802
$\in [B; A)$	243,922	6,641	20,208	33,354	20,953	9,869	334,947
$< B$	267,122	6,300	15,804	25,188	15,423	6,701	336,538
0 (Missing)	1,936,584	28,948	63,483	93,724	60,786	29,809	2,213,334
Total	2,653,176	52,853	131,183	209,962	133,723	63,724	3,244,621
% \emptyset R&A $\geq A$	7.75%	20.74%	24.16%	27.48%	27.34%	27.22 %	11.09%

Panel B: Socially conscious funds

\emptyset R&A	Conventional	Socially conscious	Total
$\geq A$	297,475	62,327	359,802
$\in [B; A)$	296,396	38,551	334,947
$< B$	305,986	30,552	336,538
0 (Missing)	2,044,795	168,539	2,213,334
Total	2,944,652	299,969	3,244,621
% \emptyset R&A $\geq A$	10.10%	20.78%	11.09%

Table 7: R&A ratings and Morningstar's ESG globes

This table shows regressions of flows on an indicator variable for funds with a high average R&A score of A or greater and its interaction with an indicator for funds with five and one Morningstar ESG Globes respectively. The regressions control for funds having an \emptyset R&A score greater than B but less than A and for funds with a score smaller than B. The \emptyset R&A and Globes indicators are set to zero for months when no ratings are available or the fund is not a PRI signatory. All regressions control for lagged fund characteristics, fund-family fixed effects, and either month or category-by-month fixed effects. The sample includes all funds from countries with a least one PRI signatory and spans from 2011 to 2019. Singleton observations are dropped. t-statistics, based on robust standard errors clustered at the fund-family and month level, are reported in parentheses. ***, **, and * indicate that the parameter estimate is significantly different from zero at the 1%, 5%, and 10% level, respectively. All variables are defined as in Appendix Table A1.

Dep. variable:	All funds		Institutional		Retail	
	(1) Flows	(2) Flows	(3) Flows	(4) Flows	(5) Flows	(6) Flows
\emptyset R&A $_{t-1} \geq A \times 5$ Globes	0.20** (2.35)	0.23*** (2.75)	0.42** (2.58)	0.39** (2.35)	0.15 (1.62)	0.20** (2.14)
5 Globes	-0.01 (-0.13)	0.02 (0.44)	0.05 (0.45)	0.11 (1.10)	-0.03 (-0.53)	-0.02 (-0.39)
\emptyset R&A $_{t-1} \geq A \times 1$ Globe	-0.05 (-0.50)	-0.06 (-0.61)	-0.04 (-0.19)	-0.02 (-0.09)	-0.04 (-0.37)	-0.06 (-0.52)
1 Globe	-0.16*** (-2.82)	-0.11** (-2.04)	-0.21* (-1.71)	-0.10 (-0.80)	-0.14** (-2.39)	-0.11* (-1.94)
\emptyset R&A $_{t-1} \geq A$	0.06 (1.16)	0.05 (0.95)	0.21** (2.30)	0.19** (2.10)	0.02 (0.33)	0.01 (0.09)
\emptyset R&A $_{t-1} \in [B; A)$	0.01 (0.18)	-0.03 (-0.64)	0.03 (0.33)	0.01 (0.11)	-0.00 (-0.04)	-0.05 (-0.91)
\emptyset R&A $_{t-1} < B$	0.00 (0.04)	-0.01 (-0.19)	0.03 (0.25)	0.04 (0.35)	-0.01 (-0.16)	-0.02 (-0.43)
Constant	0.56*** (3.34)	0.23 (1.34)	1.30*** (3.89)	0.75** (2.36)	0.46** (2.57)	0.17 (0.95)
Observations	1,865,535	1,865,535	367,838	367,838	1,497,229	1,497,229
R-squared	0.03	0.05	0.04	0.06	0.03	0.05
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Fund-Family FE	Yes	Yes	Yes	Yes	Yes	Yes
Category-Month FE	No	Yes	No	Yes	No	Yes
Month FE	Yes	No	Yes	No	Yes	No

Table 8: R&A ratings and socially conscious funds

This table shows regressions of flows on an indicator variable for funds with a high average R&A score of A or greater and its interaction with an indicator for socially conscious funds. The regressions control for funds having an \emptyset R&A score greater than B but less than A and for funds with a score smaller than B. The \emptyset R&A indicators are set to zero for months when no ratings are available or the fund is not a PRI signatory. All regressions control for lagged fund characteristics, fund-family fixed effects, and either month or category-by-month fixed effects. The sample includes all funds from countries with a least one PRI signatory and spans from 2011 to 2019. Singleton observations are dropped. t-statistics, based on robust standard errors clustered at the fund-family and month level, are reported in parentheses. ***, **, and * indicate that the parameter estimate is significantly different from zero at the 1%, 5%, and 10% level, respectively. All variables are defined as in Appendix Table A1.

	All funds		Institutional		Retail	
	(1) Flows	(2) Flows	(3) Flows	(4) Flows	(5) Flows	(6) Flows
Dep. variable:						
\emptyset R&A $_{t-1} \geq A \times$ Soc. cons.	0.25*** (3.27)	0.23*** (3.07)	0.09 (0.69)	0.11 (0.98)	0.30*** (3.59)	0.27*** (3.29)
Soc. cons.	0.22*** (5.06)	0.23*** (5.25)	0.22** (2.32)	0.23** (2.54)	0.23*** (4.87)	0.24*** (5.10)
\emptyset R&A $_{t-1} \geq A$	0.02 (0.41)	0.01 (0.26)	0.21** (2.20)	0.18* (1.94)	-0.02 (-0.38)	-0.03 (-0.55)
\emptyset R&A $_{t-1} \in [B; A)$	0.00 (0.09)	-0.03 (-0.74)	0.02 (0.28)	0.00 (0.05)	-0.01 (-0.11)	-0.05 (-0.99)
\emptyset R&A $_{t-1} < B$	-0.00 (-0.04)	-0.01 (-0.25)	0.03 (0.23)	0.04 (0.33)	-0.01 (-0.26)	-0.03 (-0.51)
Constant	0.55*** (3.26)	0.21 (1.23)	1.29*** (3.84)	0.74** (2.32)	0.45** (2.49)	0.15 (0.82)
Observations	1,865,535	1,865,535	367,838	367,838	1,497,229	1,497,229
R-squared	0.03	0.05	0.04	0.06	0.03	0.05
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Fund-Family FE	Yes	Yes	Yes	Yes	Yes	Yes
Category-Month FE	No	Yes	No	Yes	No	Yes
Month FE	Yes	No	Yes	No	Yes	No

Table 9: Are R&A ratings cheap talk? - Asset allocation

This table shows regressions of fund’s ESG portfolio score (model (1)) and controversy score (models (2) to (5)) on indicator variables for several cutoffs of the average Reporting & Assessment (\emptyset R&A) scores of PRI signatories. These are respectively an average score of A or greater; greater than B but less than A; and one smaller than B. These indicators are set to zero for months when no ratings are available or the fund is not a PRI signatory. Panel B show the interaction between the \emptyset R&A dummies and an indicator for the time period after March 2016, when the ESG Globes were launched (“Post Globes”). In Panel A, all regressions control for lagged fund characteristics and category-by-month fixed effects. In Panel B, all regressions also control for fund-family fixed effects. The sample includes all funds from countries with a least one PRI signatory and spans from 2012 to September 2019. The controversy score is available only for US funds. Singleton observations are dropped. t-statistics, based on robust standard errors clustered at the fund-family and month level, are reported in parentheses. ***, **, and * indicate that the parameter estimate is significantly different from zero at the 1%, 5%, and 10% level, respectively. All variables are defined as in Appendix Table A1.

Panel A: Regressions of levels

Dep. var:	ESG Score	%AUM in Firms with Controversy Score:			
	(1)	(2) Zero & Low	(3) Moderate	(4) Significant	(5) High & Severe
\emptyset R&A $_{t-1} \geq A$	0.36*** (3.74)	-0.36 (-0.68)	-0.26 (-0.75)	0.47 (0.86)	0.17 (0.78)
\emptyset R&A $_{t-1} \in [B; A)$	0.30*** (3.43)	-0.92 (-1.45)	0.23 (0.68)	0.62 (1.11)	0.14 (0.54)
\emptyset R&A $_{t-1} < B$	0.08 (1.02)	-0.18 (-0.38)	0.02 (0.05)	0.08 (0.28)	0.11 (0.50)
Constant	50.90*** (142.61)	42.26*** (21.36)	25.97*** (19.06)	22.87*** (16.00)	6.25*** (6.25)
Observations	652,124	96,067	96,067	96,067	96,067
R-squared	0.72	0.81	0.53	0.69	0.58
Controls	Yes	Yes	Yes	Yes	Yes
Fund-Family FE	No	No	No	No	No
Category-Month FE	Yes	Yes	Yes	Yes	Yes

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Panel B: Regressions of changes

Dep. var:	ESG Score		%AUM in Firms with Controversy Score:			
	(1)	(2)	(3) Zero & Low	(4) Moderate	(5) Significant	(6) High & Severe
$\emptyset R\&A_{t-1} \geq A$	0.05 (0.87)	-0.12 (-1.24)	0.91* (2.00)	-0.46* (-1.77)	-0.21 (-0.47)	-0.44** (-2.62)
$\emptyset R\&A_{t-1} \geq A \times \text{Post Globes}$		0.21** (2.01)				
$\emptyset R\&A_{t-1} \in [B; A)$	0.04 (0.76)	-0.14** (-2.24)	0.55 (1.36)	-0.23 (-0.95)	-0.17 (-0.48)	-0.37* (-1.82)
$\emptyset R\&A_{t-1} \in [B; A) \times \text{Post Globes}$		0.25*** (3.17)				
$\emptyset R\&A_{t-1} < B$	-0.04 (-0.82)	-0.11** (-2.19)	0.40 (0.94)	-0.04 (-0.17)	-0.20 (-0.55)	-0.24 (-1.21)
$\emptyset R\&A_{t-1} < B \times \text{Post Globes}$		0.13* (1.98)				
Constant	50.64*** (165.66)	50.63*** (165.51)	36.40*** (14.98)	26.01*** (13.58)	25.84*** (15.30)	9.21*** (8.05)
Observations	652,124	652,124	96,056	96,056	96,056	96,056
R-squared	0.78	0.78	0.84	0.61	0.73	0.65
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Fund-Family FE	Yes	Yes	Yes	Yes	Yes	Yes
Category-Month FE	Yes	Yes	Yes	Yes	Yes	Yes

Table 10: Are R&A ratings cheap talk? - Proxy Voting

This table shows regressions of fund's percentage of votes cast in support of E&S proposals on indicator variables for several cutoffs of the average Reporting & Assessment (\emptyset R&A) scores of PRI signatories. These are respectively an average score of A or greater; greater than B but less than A; and one smaller than B. These indicators are set to zero for months when no ratings are available or the fund is not a PRI signatory. In Panel A, all regressions control for lagged fund characteristics and category-by-month fixed effects. In Panel B, all regressions also control for fund-family fixed effects. The sample includes all US-funds and spans from 2016 to 2019. Singleton observations are dropped. t-statistics, based on robust standard errors clustered at the fund-family and month level, are reported in parentheses. ***, **, and * indicate that the parameter estimate is significantly different from zero at the 1%, 5%, and 10% level, respectively. All variables are defined as in Appendix Table A1.

Panel A: Regressions of levels

Dep. var:	%Votes supporting proposals:			
	(1) All E&S	(2) Climate change	(3) Environment	(4) Other E&S
\emptyset R&A $_{t-1} \geq A$	7.17 (1.29)	6.66 (1.05)	9.17 (1.41)	-2.42 (-0.52)
\emptyset R&A $_{t-1} \in [B; A)$	2.50 (0.47)	2.02 (0.33)	1.23 (0.19)	-1.05 (-0.27)
\emptyset R&A $_{t-1} < B$	4.58 (0.84)	5.76 (0.92)	3.43 (0.50)	-2.40 (-0.46)
Constant	124.10*** (10.10)	129.60*** (9.33)	136.95*** (9.09)	85.53*** (6.90)
Observations	65,969	58,717	42,821	20,504
R-squared	0.10	0.10	0.09	0.13
Controls	Yes	Yes	Yes	Yes
Fund-Family FE	No	No	No	No
Category-Month FE	Yes	Yes	Yes	Yes

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Dep. var:	%Votes supporting proposals:			
	(1) All E&S	(2) Climate change	(3) Environment	(4) Other E&S
$\emptyset R \& A_{t-1} \geq A$	2.80 (1.27)	2.94 (1.36)	4.18 (1.11)	-1.22 (-0.31)
$\emptyset R \& A_{t-1} \in [B; A)$	3.39* (1.79)	2.50 (1.29)	4.96 (1.46)	0.09 (0.03)
$\emptyset R \& A_{t-1} < B$	3.56* (1.88)	4.55** (2.11)	6.48 (1.58)	-6.20* (-1.86)
Constant	42.31*** (6.58)	41.24*** (5.86)	53.44*** (5.06)	26.69*** (3.03)
Observations	65,969	58,717	42,821	20,504
R-squared	0.59	0.60	0.56	0.49
Controls	Yes	Yes	Yes	Yes
Fund-Family FE	Yes	Yes	Yes	Yes
Category-Month FE	Yes	Yes	Yes	Yes

Appendix Tables

Table A1: Variable definitions

Panel A: Fund-level variables

$\Delta 5$ Globes	Indicator for the month when a fund switches in the five sustainability globes category.
$\Delta 1$ Globe	Indicator for the month when a fund switches in the one sustainability globe category.
5 Globes	Indicator for funds that have five sustainability globes.
1 Globe	Indicator for funds that have one sustainability globe.
Flows	The inflow of funds, net of returns, that a fund receives during a month in % of assets under management.
Institutional	Dummy for funds that have 50% or more of assets under management from institutional asset classes.
Log assets	The natural logarithm of the assets under management of a fund.
Log fund age	The natural logarithm of the number of years that passed from the incorporation date of the fund.
Post Globes	Indicator for the period after March 2016, when Morningstar introduced the ESG Globes.
Return_{t-1}	Return in the previous month.
$\text{Return}_{t-12;t-1}$	Return in the previous year.
$\text{Return}_{t-24;t-13}$	Return two years ago.
Socially conscious (Soc. cons.)	Indicator variable for funds that are classified by Morningstar as “socially conscious”.
Stars downgrade	Indicator for the month when a fund loses one star.
Stars upgrade	Indicator for the month when a fund receives one additional star.
Stdev. ret	Standard deviation of monthly returns over the past twelve months.

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Panel B: PRI Reporting and Assessment Variables

PRI	Indicator for funds that eventually join the PRI.
Post \times PRI	Indicator for the time period after a fund becomes a PRI signatory.
\emptyset R&A_Score	Average of the scores received by a fund across all Reporting and Assessment modules.
\emptyset R&A_Score_restricted	Average of the scores received by a fund across a subset of Reporting and Assessment modules: Strategy and Governance, Listed Equity - Screening, Listed Equity - Integration, and Active Ownership.
\emptyset R&A $_{t-1} \geq A$	Indicator variable for funds that have an average score of A or greater across all modules.
\emptyset R&A $_{t-1} \in [B; A)$	Indicator variable for funds that have an average score of B or greater, but smaller than A across all modules.
\emptyset R&A $_{t-1} < B$	Indicator variable for funds that have an average score smaller than B across all modules.

Table A2: Robustness test for Joining the PRI

This table shows Difference-in-Differences (DID) regressions of flows on an indicator for funds that join the PRI interacted with a dummy for the period after the fund became a signatory (Post). All regressions control for lagged fund characteristics. Columns (1), (4), and (7) include fund-family and month fixed effects. (2), (5), and (8) include fund and month fixed effects. (3), (6), and (9) include fund and category-month fixed effects. The direct effect of the dummy Post is absorbed by the time fixed effects. The sample includes all funds from countries with a least one PRI signatory and spans from 2011 to 2019. Singleton observations are dropped. t-statistics, based on robust standard errors clustered at the fund-family and month level, are reported in parentheses. ***, **, and * indicate that the parameter estimate is significantly different from zero at the 1%, 5%, and 10% level, respectively. All variables are defined as in Appendix Table ??.

	All funds			Institutional			Retail		
	(1) Flows	(2) Flows	(3) Flows	(4) Flows	(5) Flows	(6) Flows	(7) Flows	(8) Flows	(9) Flows
Post × PRI	-0.05 (-0.89)	-0.03 (-0.55)	-0.00 (-0.03)	0.02 (0.18)	0.07 (0.64)	0.09 (0.97)	-0.08 (-1.16)	-0.06 (-0.85)	-0.02 (-0.37)
Constant	0.60*** (3.51)	9.35*** (12.54)	9.28*** (12.32)	1.33*** (3.84)	12.51*** (12.07)	12.05*** (11.63)	0.51*** (2.80)	9.58*** (10.65)	9.75*** (10.52)
Observations	1,865,112	1,865,112	1,865,112	367,696	367,696	367,696	1,496,802	1,496,802	1,496,802
R-squared	0.03	0.10	0.11	0.04	0.11	0.13	0.03	0.11	0.12
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fund-Family FE	Yes	No	No	Yes	No	No	Yes	No	No
Fund FE	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
CategoryXMonth FE	No	No	Yes	No	No	Yes	No	No	Yes
Month FE	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No

Table A3: Robustness test for R&A Ratings and fund flows - Only PRI funds

This table shows regressions of flows on an indicator variable for several cutoffs of the average Reporting & Assessment (\emptyset R&A) scores of PRI signatories. These are respectively an average score of A or greater; greater than B but less than A; and one smaller than B. All regressions control for lagged fund characteristics and fund-family fixed effects. The odd columns also include moth fixed effects. The even ones control for category-by-month fixed effects instead. The sample includes only PRI signatories and spans from 2014 to 2019. Singleton observations are dropped. t-statistics, based on robust standard errors clustered at the fund-family and month level, are reported in parentheses. ***, **, and * indicate that the parameter estimate is significantly different from zero at the 1%, 5%, and 10% level, respectively. All variables are defined as in Appendix Table A1.

	All funds		Institutional		Retail	
	(1) Flows	(2) Flows	(3) Flows	(4) Flows	(5) Flows	(6) Flows
\emptyset R&A $_{t-1} \geq A$	0.03 (0.60)	0.00 (0.10)	0.23** (2.10)	0.25** (2.56)	0.01 (0.20)	0.01 (0.27)
\emptyset R&A $_{t-1} \in [B; A)$	-0.04 (-1.00)	-0.08** (-2.08)	-0.01 (-0.14)	0.01 (0.08)	-0.02 (-0.53)	-0.05 (-1.29)
Observations	728,961	728,961	206,098	206,098	752,840	752,840
R-squared	0.02	0.05	0.04	0.07	0.03	0.05
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Fund-Family FE	Yes	No	Yes	No	Yes	No
Category-Month FE	No	Yes	No	Yes	No	Yes
Month FE	Yes	Yes	Yes	Yes	Yes	Yes

Table A4: Robustness test for R&A Ratings and fund flows - Subset of R&A modules

This table shows regressions of flows on an indicator variable for several cutoffs of the average Reporting & Assessment ($\emptyset R\&A^{restr.}$) scores of PRI signatories, using only a subset of modules (Strategy & Governance, Listed Equity Screening, Listed Equity Integration, and Active Ownership). These are respectively an average score of A or greater; greater than B but less than A; and one smaller than B. These indicators are set to zero for months when no ratings are available or the fund is not a PRI signatory. All regressions control for lagged fund characteristics and fund-family fixed effects. The odd columns also include month fixed effects. The even ones control for category-by-month fixed effects instead. The sample includes all funds from countries with a least one PRI signatory and spans from 2011 to 2019. Singleton observations are dropped. t-statistics, based on robust standard errors clustered at the fund-family and month level, are reported in parentheses. ***, **, and * indicate that the parameter estimate is significantly different from zero at the 1%, 5%, and 10% level, respectively. All variables are defined as in Appendix Table A1.

	All funds		Institutional		Retail	
	(1) Flows	(2) Flows	(3) Flows	(4) Flows	(5) Flows	(6) Flows
$\emptyset R\&A_{t-1}^{restr.} \geq A$	0.06 (1.28)	0.05 (0.93)	0.24** (2.48)	0.21** (2.32)	0.02 (0.32)	-0.00 (-0.06)
$\emptyset R\&A_{t-1}^{restr.} \in [B; A)$	0.02 (0.34)	-0.02 (-0.40)	-0.05 (-0.54)	-0.05 (-0.56)	0.03 (0.59)	-0.01 (-0.26)
$\emptyset R\&A_{t-1}^{restr.} < B$	-0.03 (-0.48)	-0.06 (-1.03)	-0.01 (-0.08)	-0.05 (-0.31)	-0.03 (-0.54)	-0.07 (-1.18)
Observations	1,865,535	1,865,535	367,838	367,838	1,497,229	1,497,229
R-squared	0.03	0.05	0.04	0.06	0.03	0.05
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Fund-Family FE	Yes	Yes	Yes	Yes	Yes	Yes
Category-Month FE	No	Yes	No	Yes	No	Yes
Month FE	Yes	Yes	Yes	Yes	Yes	Yes

Table A5: Robustness test for R&A Ratings and fund flows - Fund FEs

This table shows regressions of flows on an indicator variable for several cutoffs of the average Reporting & Assessment (\emptyset R&A) scores of PRI signatories. These are respectively an average score of A or greater; greater than B but less than A; and one smaller than B. These indicators are set to zero for months when no ratings are available or the fund is not a PRI signatory. All regressions control for lagged fund characteristics, and fund fixed effects. The odd columns also include moth fixed effects. The even ones control for category-by-month fixed effects instead. The sample includes all funds from countries with a least one PRI signatory and spans from 2011 to 2019. Singleton observations are dropped. t-statistics, based on robust standard errors clustered at the fund-family and month level, are reported in parentheses. ***, **, and * indicate that the parameter estimate is significantly different from zero at the 1%, 5%, and 10% level, respectively. All variables are defined as in Appendix Table A1.

	All funds		Institutional		Retail	
	(1) Flows	(2) Flows	(3) Flows	(4) Flows	(5) Flows	(6) Flows
\emptyset R&A $_{t-1} \geq A$	0.10** (2.45)	0.09** (2.18)	0.29*** (3.83)	0.25*** (3.36)	0.06 (1.39)	0.05 (1.21)
\emptyset R&A $_{t-1} \in [B; A)$	0.01 (0.41)	-0.02 (-0.60)	0.07 (0.93)	0.06 (0.77)	0.01 (0.17)	-0.03 (-0.85)
\emptyset R&A $_{t-1} < B$	0.03 (0.69)	0.02 (0.47)	0.08 (1.01)	0.07 (0.98)	0.02 (0.42)	0.01 (0.22)
Observations	1,865,112	1,865,112	367,696	367,696	1,496,802	1,496,802
R-squared	0.10	0.11	0.11	0.13	0.11	0.12
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Fund FE	Yes	Yes	Yes	Yes	Yes	Yes
Category-Month FE	No	Yes	No	Yes	No	Yes
Month FE	Yes	Yes	Yes	Yes	Yes	Yes

Table A6: Robustness test for R&A Ratings and fund flows - Controlling for performance “Stars”

This table shows regressions of flows on an indicator variable for several cutoffs of the average Reporting & Assessment (\emptyset R&A) scores of PRI signatories. These are respectively an average score of A or greater; greater than B but less than A; and one smaller than B. These indicators are set to zero for months when no ratings are available or the fund is not a PRI signatory. All regressions control for lagged fund characteristics – including performance “Stars” – and fund-family fixed effects. The odd columns also include moth fixed effects. The even ones control for category-by-month fixed effects instead. The sample includes all funds from countries with a least one PRI signatory and spans from 2011 to 2019. Singleton observations are dropped. t-statistics, based on robust standard errors clustered at the fund-family and month level, are reported in parentheses. ***, **, and * indicate that the parameter estimate is significantly different from zero at the 1%, 5%, and 10% level, respectively. All variables are defined as in Appendix Table A1.

	All funds		Institutional		Retail	
	(1) Flows	(2) Flows	(3) Flows	(4) Flows	(5) Flows	(6) Flows
\emptyset R&A $_{t-1} \geq A$	0.05 (0.89)	0.04 (0.75)	0.22** (2.51)	0.20** (2.41)	0.03 (0.52)	0.03 (0.42)
\emptyset R&A $_{t-1} \in [B; A)$	-0.01 (-0.15)	-0.04 (-0.97)	0.01 (0.18)	0.00 (0.04)	-0.01 (-0.28)	-0.05 (-1.10)
\emptyset R&A $_{t-1} < B$	-0.00 (-0.10)	-0.02 (-0.34)	0.02 (0.16)	0.03 (0.27)	0.01 (0.16)	0.00 (0.01)
Stars $_{t-1}$	0.41*** (25.76)	0.40*** (25.29)	0.57*** (14.72)	0.55*** (14.89)	0.46*** (23.65)	0.46*** (24.01)
Observations	1,883,481	1,883,481	371,101	371,101	1,511,500	1,511,500
R-squared	0.04	0.05	0.05	0.07	0.11	0.12
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Fund-Family FE	Yes	Yes	Yes	Yes	Yes	Yes
Category-Month FE	No	Yes	No	Yes	No	Yes
Month FE	Yes	Yes	Yes	Yes	Yes	Yes

Table A7: Robustness test for R&A Ratings - Identification Test

This table shows regressions of flows on an indicator variable for several cutoffs of the average Reporting & Assessment (\emptyset R&A) scores of PRI signatories. These are respectively an average score of A or greater; greater than B but less than A; and one smaller than B. The sample covers only signatories that either join before 2013, when submitting an R&A report became mandatory, or funds that do *not* file such report. These indicators are set to zero for months when no ratings are available or the fund is not a PRI signatory. All regressions control for lagged fund characteristics. Panel A drops also funds that are not PRI members. Panel B computes the cutoffs of the R&A framework using the restricted sample of modules. Panel C adds fund fixed effects instead of fund-family fixed effects. Panel D controls for the performance “Stars”. The odd columns also include moth fixed effects. The even ones control for category-by-month fixed effects instead. The sample includes all funds from countries with a least one PRI signatory and spans from 2011 to 2019. Singleton observations are dropped. t-statistics, based on robust standard errors clustered at the fund-family and month level, are reported in parentheses. ***, **, and * indicate that the parameter estimate is significantly different from zero at the 1%, 5%, and 10% level, respectively. All variables are defined as in Appendix Table A1.

Panel A: Only PRI funds

	All funds		Institutional		Retail	
	(1) Flows	(2) Flows	(3) Flows	(4) Flows	(5) Flows	(6) Flows
\emptyset R&A $_{t-1} \geq A$	0.06 (0.93)	0.03 (0.47)	0.28* (1.97)	0.35** (2.58)	0.05 (0.80)	0.06 (1.02)
\emptyset R&A $_{t-1} \in [B; A)$	-0.04 (-0.73)	-0.08* (-1.68)	0.01 (0.05)	0.08 (0.64)	-0.01 (-0.26)	-0.04 (-0.78)
Observations	541,291	541,291	159,455	159,455	581,715	581,715
R-squared	0.02	0.04	0.04	0.07	0.03	0.05
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Fund-Family FE	Yes	No	Yes	No	Yes	No
Category-Month FE	No	Yes	No	Yes	No	Yes
Month FE	Yes	Yes	Yes	Yes	Yes	Yes

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Panel B: Subset of R&A modules

	All funds		Institutional		Retail	
	(1) Flows	(2) Flows	(3) Flows	(4) Flows	(5) Flows	(6) Flows
$\emptyset R\&A_{t-1}^{restr.} \geq A$	0.03 (0.31)	-0.02 (-0.17)	0.39*** (3.37)	0.32*** (2.85)	0.10 (1.50)	0.07 (1.15)
$\emptyset R\&A_{t-1}^{restr.} \in [B; A)$	-0.06 (-0.57)	-0.12 (-1.20)	0.09 (0.73)	0.05 (0.46)	0.09 (1.39)	0.03 (0.48)
$\emptyset R\&A_{t-1}^{restr.} < B$	-0.16 (-1.42)	-0.17 (-1.54)	0.12 (0.46)	-0.01 (-0.04)	-0.04 (-0.49)	-0.06 (-0.84)
Observations	706,880	706,880	283,977	283,977	1,189,269	1,189,269
R-squared	0.02	0.04	0.04	0.07	0.03	0.05
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Fund-Family FE	Yes	No	Yes	No	Yes	No
Category-Month FE	No	Yes	No	Yes	No	Yes
Month FE	Yes	Yes	Yes	Yes	Yes	Yes

Panel C: Fund FEs

Dep. variable:	All funds		Institutional		Retail	
	(1) Flows	(2) Flows	(3) Flows	(4) Flows	(5) Flows	(6) Flows
$\emptyset R\&A_{t-1} \geq A$	0.21*** (3.26)	0.19*** (3.11)	0.53*** (4.08)	0.45*** (3.77)	0.17** (2.46)	0.15** (2.33)
$\emptyset R\&A_{t-1} \in [B; A)$	0.11* (1.74)	0.05 (0.95)	0.30** (2.44)	0.25** (2.21)	0.08 (1.27)	0.03 (0.48)
$\emptyset R\&A_{t-1} < B$	0.13* (1.73)	0.10 (1.51)	0.32* (1.73)	0.28 (1.62)	0.10 (1.43)	0.08 (1.19)
Observations	1,473,279	1,473,279	283,864	283,864	1,188,916	1,188,916
R-squared	0.10	0.11	0.10	0.13	0.10	0.12
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Fund FE	Yes	Yes	Yes	Yes	Yes	Yes
CategoryXMonth FE	No	Yes	No	Yes	No	Yes
Month FE	Yes	No	Yes	No	Yes	No

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Panel D: Controlling for performance “Stars”

	All funds		Institutional		Retail	
	(1) Flows	(2) Flows	(3) Flows	(4) Flows	(5) Flows	(6) Flows
$\emptyset R \& A_{t-1} \geq A$	0.15** (2.41)	0.13** (2.15)	0.36*** (3.40)	0.30*** (2.85)	0.14** (2.09)	0.13* (1.96)
$\emptyset R \& A_{t-1} \in [B; A)$	0.05 (0.78)	-0.01 (-0.11)	0.14 (1.30)	0.09 (0.84)	0.06 (0.90)	0.01 (0.11)
$\emptyset R \& A_{t-1} < B$	0.06 (0.83)	0.03 (0.46)	0.11 (0.68)	0.08 (0.50)	0.08 (1.12)	0.06 (0.92)
Stars _{t-1}	0.40*** (23.92)	0.38*** (23.64)	0.57*** (14.11)	0.54*** (14.08)	0.45*** (22.18)	0.44*** (22.35)
Observations	1,488,055	1,488,055	286,543	286,543	1,200,797	1,200,797
R-squared	0.04	0.05	0.04	0.07	0.11	0.12
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Fund-Family FE	Yes	Yes	Yes	Yes	Yes	Yes
Category-Month FE	No	Yes	No	Yes	No	Yes
Month FE	Yes	Yes	Yes	Yes	Yes	Yes

Table A8: Robustness test for R&A and ESG “Globes” ratings are complements

This table shows regressions of flows on an indicator variable for funds with a high average R&A score of A or greater and its interactions with indicators for the number of Morningstar ESG Globes. The \emptyset R&A and Globes indicators are set to zero for months when no ratings are available or the fund is not a PRI signatory. The reference category is missing (0) Globes. All regressions control for lagged fund characteristics, and fund-family fixed effects. The odd columns also include moth fixed effects. The even ones control for category-by-month fixed effects instead. The sample includes all funds from countries with a least one PRI signatory and spans from 2011 to 2019. Singleton observations are dropped. t-statistics, based on robust standard errors clustered at the fund-family and month level, are reported in parentheses. ***, **, and * indicate that the parameter estimate is significantly different from zero at the 1%, 5%, and 10% level, respectively. All variables are defined as in Appendix Table A1.

Dep. variable:	All funds		Institutional		Retail	
	(1) Flows	(2) Flows	(3) Flows	(4) Flows	(5) Flows	(6) Flows
\emptyset R&A $_{t-1} \geq A \times 5$ Globes	0.16* (1.68)	0.21** (2.21)	0.41** (2.33)	0.42** (2.31)	0.11 (1.05)	0.17 (1.63)
\emptyset R&A $_{t-1} \geq A \times 4$ Globes	0.01 (0.19)	0.04 (0.60)	0.18 (1.40)	0.22* (1.73)	-0.04 (-0.55)	-0.01 (-0.22)
\emptyset R&A $_{t-1} \geq A \times 3$ Globes	-0.04 (-0.64)	-0.01 (-0.19)	-0.01 (-0.09)	0.02 (0.18)	-0.05 (-0.78)	-0.02 (-0.34)
\emptyset R&A $_{t-1} \geq A \times 2$ Globes	-0.17*** (-2.64)	-0.12** (-2.02)	-0.09 (-0.70)	-0.01 (-0.09)	-0.18*** (-2.63)	-0.15** (-2.21)
\emptyset R&A $_{t-1} \geq A \times 1$ Globe	-0.09 (-0.86)	-0.08 (-0.78)	-0.04 (-0.22)	0.01 (0.04)	-0.08 (-0.75)	-0.09 (-0.77)
5 Globes	-0.09 (-1.39)	-0.04 (-0.80)	-0.13 (-1.04)	0.03 (0.20)	-0.08 (-1.29)	-0.08 (-1.41)
4 Globes	-0.12** (-2.16)	-0.06 (-1.37)	-0.30*** (-3.58)	-0.10 (-1.17)	-0.07 (-1.21)	-0.05 (-1.17)
3 Globes	-0.18*** (-4.08)	-0.12*** (-3.53)	-0.36*** (-5.35)	-0.15* (-1.93)	-0.13*** (-2.67)	-0.12*** (-3.25)
2 Globes	-0.15*** (-2.93)	-0.10*** (-2.63)	-0.32*** (-3.86)	-0.12 (-1.34)	-0.10* (-1.79)	-0.10** (-2.41)
1 Globe	-0.25*** (-3.87)	-0.18*** (-3.03)	-0.39*** (-3.08)	-0.18 (-1.43)	-0.19*** (-2.97)	-0.17*** (-2.83)
\emptyset R&A $_{t-1} \geq A$	0.10* (1.70)	0.07 (1.23)	0.22** (2.40)	0.17* (1.89)	0.06 (0.97)	0.03 (0.56)
\emptyset R&A $_{t-1} \in [B; A)$	0.01 (0.32)	-0.02 (-0.53)	0.04 (0.51)	0.02 (0.20)	0.00 (0.04)	-0.04 (-0.82)
\emptyset R&A $_{t-1} < B$	0.01 (0.15)	-0.01 (-0.11)	0.04 (0.37)	0.05 (0.39)	-0.00 (-0.09)	-0.02 (-0.35)
Constant	0.53*** (3.15)	0.23 (1.37)	1.26*** (3.82)	0.77** (2.42)	0.44** (2.42)	0.17 (0.96)
Observations	1,865,535	1,865,535	367,838	367,838	1,497,229	1,497,229
R-squared	0.03	0.05	0.04	0.06	0.03	0.05
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Fund-Family FE	Yes	Yes	Yes	Yes	Yes	Yes
Category-Month FE	No	Yes	No	Yes	No	Yes
Month FE	Yes	No	Yes	No	Yes	No