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# Coordinated Engagements

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**Abstract:** We study coordinated engagements by a prominent international network of long-term shareholders cooperating to influence firms on environmental and social issues. We find leadership is decisive in collaborative engagements: a two-tier engagement strategy, combining lead investors with supporting investors, is effective in successfully achieving engagement goals, and is followed by improved target performance and increased investor fund flows. An investor is more likely to lead collaboration when it has higher stakes in and exposure to the target, formal engagement processes, and broader participation in collaborative initiatives. Success rates are elevated when lead investors have superior information and a credible reputation.

**JEL classification**: G15, G23, G32, G34, G39.

**Keywords**: Engagement; dialogue; collaboration; coordination; leadership; corporate social responsibility (CSR); environmental, social, and governance (ESG); socially responsible investing (SRI); sustainability.

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## Conflict of interest disclosure statement

Elroy Dimson

I have nothing to disclose.

Oğuzhan Karakaş

I have nothing to disclose.

Xi Li

I have nothing to disclose.

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Inaugural Webinar on Impact & Engagement, International Center for Pension Management Discussion Forum in Toronto, International Symposium in Finance at Kissamos in Crete, Invesco Lecture at the Dorchester, Invesco Summit at Cambridge Judge Business School, Invesco Thanksgiving Conference in Vienna, Invesco Workshop in Atlanta, IWFSAS Conference at Cass Business School, Jesus College Conference on Climate Change and the Endowment, JM Keynes Fellowship Lectures 2023, Koç University Finance Day, London Business School Asset Management Conference, the 2019 London Private Equity Research Symposium, London Quant Group 2018 Autumn Seminar, London Stock Exchange Forum, Luxembourg Asset Management Summit, NatureAlpha TNFD Event in London, Newton Charity Seminar in London, Newton Responsible Investment Dinner in New York, NFF Seminar on Sustainable Finance in Oslo, Norsif Active Ownership Seminar in Oslo, PRI-CEAM Conference on Strategy and Tactics for Effective Engagement in Cambridge, Q Group Fall Seminar in La Jolla, RIETI Seminar–Frontiers in Corporate Governance Analysis, Sabancı University Hakan Orbay Research Award Seminar, Securities Finance Forum 2022, Sparrows Capital Conference on ESG Integration in London, CJBS Speaker Series on Critical Issues in Corporate Social Responsibility, Sustainable Finance Research Seminar at the University of Zurich, Sustainable Investing UK-India Partnership Forum 2019, Swedish House of Finance Conference on Sustainable Finance, Universität Hamburg–PRI Academic Network Conference, Universal Ownership and Systemic Risks Summit in Cambridge, the 11th Taiwan Symposium on Innovation Economics and Entrepreneurship, Trends Investment Summit Benelux in Brussels, Turkish Capital Markets Summit in Istanbul, University of Geneva ESG Seminar, Weinberg Center–ECGI Corporate Governance Symposium, Women in Governance Week in New York, Workshop in Corporate Finance and Governance in Madrid, and the World Investment Forum in Utah. Finally, we are grateful for support from the Brandes Institute Award, Cambridge Endowment for Research in Finance, Centre for Endowment Asset Management, FTSE Russell, Hakan Orbay Young Researcher Award, ICPM Research Award, Inquire Europe, Invesco Asset Management, JM Keynes Fellowship, London School of Economics, Newton Investment Management, Principles for Responsible Investment, Risk Institute at Ohio State, Sandra Dawson Research Impact Award, and the Vice-Chancellor's Impact Award. We take full responsibility for any errors in this study.

# Coordinated Engagements

The importance of environmental and social (E&S) issues has grown significantly in the investment world, with pressures increasingly global (Bowley and Hill, 2024; Dimson, Karakaş, and Li, 2015; Krüger, Sautner, and Starks, 2020). Given the complexity of addressing E&S challenges, market participants have launched numerous initiatives to pursue these goals collectively. Broccardo, Hart, and Zingales (2022) and Berk and van Binsbergen (2025) argue that "voice" (engagement) is more effective than "exit" (divestment) in pushing firms to act in a socially responsible manner. This paper examines the nature and benefits of coordinated, collaborative, and international efforts to influence investee companies on E&S issues. Specifically, we analyze the structure of engagement strategies, focusing on coalition formation and leadership, success rates, and financial outcomes of engagements by institutional investors who coordinate their efforts through the Collaboration Platform provided by the Principles for Responsible Investment (PRI). Founded in 2006 with the support of the United Nations, PRI is the world's largest network for investors committed to responsible ownership and sustainable returns.

Our dataset covers 31 PRI-coordinated engagement projects initiated between 2007 and 2015, involving 224 investment organizations (referred to as "collaborating investors"), including investment managers, asset owners, and service providers from 24 countries, collectively representing $23 trillion in assets under management (AUM) as of 2017. These projects target 960 publicly listed firms across 63 countries. An average engagement, which is typically conducted privately,[1] involves 26 investors (2 domestic and 24 foreign) and spans approximately two years.

The theoretical literature on the dynamics of coordinated shareholder engagements is limited. We thus develop our hypotheses based on the economics of leadership framework established by the seminal work of Hermalin (1998). In this informational theory of leadership,[2] Hermalin models coalition (team) dynamics in two scenarios: with and without a leader, where following a leader is

[1] Becht, Franks, and Wagner (2025) illustrate how private engagements by institutional investors yield valuable soft information.

[2] See Ahlquist and Levi (2011) and Hermalin (2013) for a broader review of related literature on leadership.

voluntary and the leader knows better about the coalition's productivity prospects. Congruent with the well-known free-rider problem endemic to teams as formulated by Holmstrom (1982), Hermalin finds that coalitions without a leader can only achieve a second-best outcome, even when information among members is symmetric. However, in the scenario where the coalition has a leader with superior information, a better outcome can be achieved when the leader credibly signals her information to the rest of the coalition by committing to a certain level of effort ("lead by example"). Thus, this model posits that coalitions with leaders would be more effective.

We empirically test this prediction in our setting, where PRI has externally imposed the structural decision on whether to have a leader on engaging investors in the coalition. Among the 31 PRI-coordinated engagement projects in our sample, 15 had leaders (labeled as a "two-tier" structure), while the rest did not (labeled as a "single-tier" structure). Using 1,077 engagements with success records that were objectively collected and timely logged by PRI, we find that leadership is decisive in collaborative engagements: having a two-tier engagement structure increases the success rate by 23%–31%, after controlling for target firm characteristics and coalition composition. This is an economically significant result, considering that the average success rate of engagements in our sample is 52.7%. We conduct additional analyses and rule out alternative explanations for the higher success rates in two-tier engagements, such as differences in target firm characteristics, engagement topics, and investor attributes. We also note that our results are unlikely to be driven by investor learning over time.

Among the 224 collaborating investors in our sample, only 90 had leadership experience. Compared to collaborating investors without such experience, the leaders are more likely to be investment managers, possibly reflecting the financial benefit of attracting fund flows by demonstrating leadership, an explanation that we explore further below. Our evidence confirms that leading a coordinated engagement is costly and time consuming: an investor is less likely to lead if it is already busy with leading other ongoing PRI projects. Leaders also tend to have formal internal engagement processes and frequently participate in other collaborative initiatives, indicating stronger infrastructure for dialogue and interest in cooperative initiatives. Such traits

send credible signals about their ability to lead in E&S engagements, aligning with the concept of "leading by example" through costly effort in Hermalin (1998). Moreover, consistent with the idea that leaders possess superior information, they are more likely to be from the same country as the target firm. Leaders further demonstrate greater "skin in the game" by holding larger stakes and having greater exposure to the target firm, helping to mitigate free-rider concerns.

We next explore the mechanisms through which leadership could help an engagement team achieve success, focusing on two key channels: information and reputation. Regarding the information channel, Hermalin (1998) argues that leaders can increase value by having superior knowledge about the actions to be taken. Therefore, we expect that engagements led by leaders with an informational advantage are more likely to succeed, especially when the information environment of the target firms is opaque. Consistent with this conjecture, we find that within the sample of two-tier engagements, the success rate is considerably higher when the leader is from the same country as the target firm, especially in countries with opaque information environments.

Regarding the reputation channel, Hermalin (2007) extends his initial model to allow for repeated interactions between the leader and the followers, finding that to induce others to follow, a leader can establish a reputation for being credible. Such a reputation is particularly valuable when leaders and followers are more confident that a higher-productivity state will occur. Pertinent to this point, Dyck et al. (2019) find that institutional investors increase firms' E&S performance particularly when originating from countries with strong social norms (i.e., stronger values and beliefs) toward E&S issues. Thus, we expect that engagements led by reputable leaders are more likely to succeed, especially when their reputation/influence is bolstered by such norms. Consistent with this, we find that two-tier engagements led by reputable leaders, particularly those from high social norm countries, are more likely to succeed. Our findings underscore the pivotal role of information and reputation as two key channels through which leadership enhances engagement success.

To further assess the engagement outcomes, we compare the financial and accounting performance of target firms around the time of engagements. We find that firms targeted through two-tier engagements experience an average increase of 4.7% in annual abnormal buy-and-hold stock

returns (ABHRs) and 0.9% in annual return on assets (ROAs) in the first two years following engagement initiation (i.e., the typical engagement period), relative to the pre-engagement levels. By the third year (i.e., one year after the typical engagement period concludes), these increases widen to 9.4% and 2.3%, respectively, and are even more pronounced when we focus on successful two-tier engagements. In contrast, firms targeted through single-tier engagements show no significant changes in ABHRs or ROAs. These results chime with the findings in Dimson, Karakaş, and Li (2015) who report positive abnormal returns and improved ROAs following successful E&S engagements. We conduct additional analyses to evaluate alternative explanations, such as superior stock-picking skills by PRI or the investor group, as well as mean reversion in the financial performance of target firms, concluding they are unlikely to drive our results. Overall, our findings indicate that coordinated engagements enhance value for shareholders and target firms, particularly when guided by a lead investor and/or when the engagement is successful.

The collaborative engagements in our sample share some similarities with "wolf-pack activism," where institutional blockholders (typically hedge funds) allegedly coordinate their interventions *implicitly* with target firms. In Brav, Dasgupta, and Mathews' (2019) model, wolf-pack members, as delegated portfolio managers, are incentivized to engage and take costly leadership roles to showcase their skills. This helps them attract investment flows and mitigates free-riding concerns. Although E&S engagements differ from hedge fund activism in both objectives and tactics (Dimson, Karakaş, and Li, 2015) and the engagements in our sample are *explicitly* coordinated by a third party (PRI), we expect such financial incentives to play a similar, if not more important, role in our context. Consistent with this, we find that collaborating investors—particularly investment managers, who face greater near-term financial pressures related to client retention and competition than asset owners—experience subsequent increases in fund flows following successful engagements. Among these investors, those with leadership experience enjoy an additional boost in fund flows in the following years.

Legal scholars continue to debate the extent to which E&S initiatives align with shareholder obligations, a discussion reviewed by Ferran and Schilling de Carvalho (2025). Likewise, investors

and managers differ in how they weigh non-financial performance measures, shaping their E&S decision-making. As Starks (2023) argues, the financial performance of E&S investments depends on whether the investment rationale aligns with a *values* or *value* perspective. The values-based approach, driven by non-pecuniary preferences, often employs exclusionary/divestment strategies, potentially constraining the investment universe and leading to a trade-off between E&S objectives and financial performance. In contrast, the value-based approach, centered on financial risk and return, suggests that E&S integration can enhance risk management and create return-generating opportunities, implying that such a trade-off is not necessarily inherent. Ultimately, whether E&S investing results in a trade-off remains an empirical question, with mixed evidence to date, as reviewed in Starks (2023).

PRI emphasizes sustainability as a core component of responsible investment and an integral aspect of fiduciary duty. Consistent with this view and the *value* perspective, our findings do not suggest that responsible investing compromises financial performance. The objectives of PRI's engagements are achieved in a substantial proportion of cases but there is no indication that these successes come at the expense of investment returns. In our sample, effective coordinated engagements on E&S issues do not entail a trade-off with investment performance. This aligns with Dimson, Karakaş, and Li (2015), who find that successful E&S engagements are associated with higher returns.

Since firm performance improves when engagements are successful, we infer that the activities coordinated by PRI contribute to shareholder value. Our evidence indicates that, for better outcomes, coordinated engagements should preferably be headed by a credible leader that is well suited informationally and reputationally to influence target companies.

Our paper is the first to examine the nature and impact of internationally coordinated engagements on E&S issues, particularly in the context of collaborative efforts. It complements existing evidence on the net benefits associated with investor alliances which tend to achieve higher success rates than solo initiatives. Examples are that group-sponsored shareholder proposals gain more traction (Gillan and Starks, 2000); teamwork with other investors or with broader stakeholders

elevates E&S success rates (Dimson, Karakaş, and Li, 2015); institutional governance engagements have superior outcomes through coalitions (Doidge, Dyck, Mahmudi, and Virani, 2019); engagements involving multiple investors have higher success rates (Becht, Franks, Grant, and Wagner, 2017; Kedia, Starks, and Wang, 2021); hedge fund campaigns benefit "wolf pack" organization (Wong, 2020). Participation in collaborative engagements also explains the positive link between institutional ownership and firms' E&S scores (Ceccarelli, Glossner, Homanen, and Schmidt, 2024). Note, however, that not all evidence is positive: Song and Szewczyk (2003) find limited effectiveness for implicit coordination via the Council of Institutional Investors' Focus List.

Our paper distinguishes itself from these studies by focusing on the collaboration structure of shareholder engagements and emphasizing the critical role of leadership in driving success. We highlight the significance of leaders' information and reputation as key determinants of engagement outcomes. We believe our study is the first to introduce and test the theoretical framework on leadership within the context of shareholder engagements.

Finally, our paper contributes by demonstrating that participation in engagements, when successful, and leadership of engagements positively influence an investor's future fund flows. This finding extends the existing research indicating positive fund flow reactions to ESG branding, whether through obtaining external sustainability ratings or joining ESG networks like the PRI (Hartzmark and Sussman, 2019; Gibson-Brandon, Glossner, Krueger, Matos, and Steffen, 2022; Kim and Yoon, 2023). Credibly demonstrating leadership in E&S engagements allows institutional investors to establish a competitive advantage and build a strong reputation in E&S. This approach effectively addresses prevalent concerns about greenwashing, namely misleading claims about E&S practices that stem from issues such as divergent ESG ratings and non-standardized assessment methodologies (de Freitas Netto, Sobral, Ribeiro, and Soares, 2020; Berg, Kölbel, and Rigobon, 2022).

# 1. Institutional Background and Data

## 1.1 PRI Collaboration Platform

The PRI Collaboration Platform aims to help PRI signatories work together on engagements with target companies. Although the Platform can also be used for direct signatory collaboration without PRI's involvement, this study focuses on engagements *explicitly* coordinated by the PRI Secretariat, where detailed records of the entire engagement process and outcomes were made accessible to us. In our Internet Appendix (Section IA.1) we provide additional details about PRI, the PRI Collaboration Platform, and the role of PRI Secretariat in coordinating collaborative engagements.

Collaborative engagements aim to leverage the resources, skills, and expertise of cooperating partners to gain an advantage by pooling resources and influence, as well as sharing research costs and risks among active owners. However, such efforts also face challenges and can be costly. First, there is the potential for the free-rider problem: costs may be borne by a small group of committed and resourceful institutions, while benefits can be shared by all. Additionally, competition among institutions complicates collaboration and requires careful consideration of incentives.[3] Coordination among many investors from diverse geographic and cultural backgrounds is particularly challenging and time-consuming. Furthermore, in some locations, notably the US, regulatory barriers may dissuade investors from acting as a "concert party."[4]

Having the PRI Secretariat as an explicit third-party coordinator can help investors leverage advantages and overcome the challenges of jointly pursuing shared objectives. PRI has a team of experts with deep knowledge of environmental and social issues who proactively identify problems and invite signatories to collaborate. PRI's active involvement in the engagement process

[3] Shared or congruent objectives may help collaborating shareholders rule out extreme or divergent E&S views (Ringe, 2022) and facilitate effective engagement (Kakhbod, Loginova, Malenko, and Malenko, 2023).

[4] In the UK, the Financial Conduct Authority has clarified in its code of conduct that conversations between investors do not constitute "acting in concert". Similarly, the European Securities and Markets Authority (ESMA) maintains a "White List" that includes activities not counted as acting in concert. ESMA is also contemplating making explicit references to coordination activities among institutions on ESG issues. Legal scholars view the White List as a promising initiative to alleviate obstacles to effective collaboration. In contrast, in the US, when two or more investors agree to act together to influence or control a company, they may be classified as a "group" under Section 13(d) of the Securities Exchange Act of 1934, In such cases, these investors are required to publicly disclose their coordinated actions. Therefore, the UK and EU are considered to have a more permissive regime for inter-shareholder dialogue regarding investee companies. Consistent with this view, Black and Coffee (1994) note that communication and coalition formation among institutional investors have long been more acceptable in the UK than in the US, resulting in lower coordination costs in the UK. For further discussions on acting in concert in the EU/UK and the US contexts, see McCahery, Sautner, and Starks (2016), Ringe (2022) and Mülbert and Sajnovits (2024).

mitigates free-rider problems by assuming the research, coordination, and monitoring costs. Additionally, PRI works with local supervisors and policymakers to facilitate effective action. For example, while anti-trust legislation does not primarily target collaborative engagement on ESG issues, some regulatory ambiguity and uncertainty exist. PRI and its signatories have worked to seek clarification on these matters.

### 1.2 PRI-coordinated engagement projects

Our dataset encompasses 31 PRI-coordinated engagement projects across four broad areas defined by PRI. The areas are Environmental, Social, Governance, and, reflecting the UN origins of PRI, work related to the UN Global Compact (UNGC) and to the UN's sustainable development goals (SDGs).[5] Engagement projects on Governance and the UNGC are inherently related to environmental and social issues, meaning all underlying engagement areas in our dataset are connected to E&S matters. Projects have a limited lifespan, and if the issues raised by a sequence of engagements persist or expand, a "Phase 1" project can be followed by a "Phase 2" continuation. **Table 1** summarizes these projects, with start date as early as January 2007 and end dates as late as December 2018. The mean (median) project duration is 795 (798) days.

In the early years of our sample period, from January 2007 to December 2009, all participating investors had equal responsibilities in PRI-coordinated projects, which we label as the "single-tier period". After several years of collaboration, in early 2010, PRI began experimenting with a new engagement strategy that identified one or more lead investors to drive initiatives, supported by a larger number of investors providing limited but diverse resources – this is known as a two-tier structure. This engagement framework helps alleviate free-rider and coordination problems. Three projects initiated in early 2010, including Anti-Corruption (Phase 1), Indigenous Rights, and Senior Gender Equality with Global Companies, adopted a two-tier structure. Although these projects had a two-tier framework, lead investors were identified without a predefined framework.

In mid-2012, PRI implemented the two-tier engagement structure more systematically, with all but one project initiated in or after June 2012 adopting this model. Responsibilities for lead and

[5] PRI as an institution helps bring the SDGs, which are set at the country level, into practice at the firm level through the collaboration of major investors.

supporting investors were clearly defined in a "Terms of Reference" document.[6] We label the period from January 2010 to May 2012 as the "experimental period", and the period from June 2012 onwards as the "two-tier period". Figure 1 illustrates the timeline of these three engagement periods. In all periods, the engagement structure was determined by the PRI Secretariat and exogenously imposed on the engagement team. Overall, 16 projects in our sample utilized a single-tier engagement structure, while 15 adopted a two-tier structure.

Appendix A provides two examples of engagement projects. The first example, the Carbon Disclosure Leadership Index: CDLI 2011, illustrates the process of a single-tier engagement, where there was no clear division of roles within the engagement team. Responsibilities were largely assumed voluntarily and on an ad hoc basis. The second example, Employee Relations, showcases a two-tier engagement where the division of roles between lead and supporting investors was clearly established from the outset.

### 1.3 The engagement data

The 31 projects in our sample consist of 1,654 unique engagements. We define an engagement as a sequence of dialogues and interactions with a specific target firm regarding a particular project. Initiation of the first engagement and conclusion of the last engagement activity are defined as the project's start and end dates. The number of target firms or engagements in each project ranges from 7 (Sudan Engagement) to 163 (COP6), with a mean of 53 and a median of 32. The target firms span various geographic regions, with an average project engaging target firms from 18 different countries. Investors can engage with different target firms within the same project, resulting in varying number of investors across engagements. Table 1 also reports the average number of investors involved in each project.

Success criteria differ across projects and target firms within each project. PRI maintains a record of objective targets for measuring success. For each project, the PRI Secretariat and engaging

[6] The exception is COP6, which was initiated in March 2014. In this project, engagements took the form of congratulatory letters sent to target companies, eliminating the need for a two-tier structure. Consequently, this project was excluded from most of our subsequent analyses due to the absence of success data.

investors develop an evaluation framework to assess engagement outcomes. This methodology varies across projects and is often based on research commissioned from third-party consultants. Many projects evaluate success by comparing scorecards prepared for each target firm in the pre- and post-engagement periods, covering areas such as policy and strategy, implementation, disclosure, and other material objectives. Success is recorded when there is an increase in the score during the post-engagement period compared to the pre-engagement period. Our engagement data was last updated in May 2019. At that time, the Palm Oil Growers project was still ongoing, so its progress was assessed using interim reports from mid-2016, which are included in the dataset.

Appendix B lists the success measures used for all engagement projects. Success was not assessed for three projects (COP2, COP6, and Palm Oil Buyers), leaving us with success records for 28 projects comprising 1,077 engagements. The success rate (untabulated) ranges from 0% (Forest Footprint Disclosure 2012) to 100% (Corporate Climate Lobbying). The 0% success rate in the former can be attributed to target firms lacking the data and information required by the reporting framework, while the 100% success rate in the latter stems from worldwide support for setting a limit of 2ºC on temperature rise by 2030 (see sdgs.un.org). Our sample has an average success rate of 52.7% (untabulated), comparable to the 45.2% success rate found for collaboratively undertaken E&S engagements, and significantly higher than the 2.8% success rate for individually undertaken E&S engagements in Dimson, Karakaş and Li (2015, Table 4).

For each engagement, we are also provided with information on all investors and their roles within the coalition. PRI also provides a separate list of 1,715 signatories in 2017, including details on their name, signature date, headquarter country, AUM, and type (asset owner, investment manager, or service provider). This information is self-reported by institutions upon becoming signatories on PRI's website and is regularly updated when there are changes (e.g., in AUM). We manually match investors in each engagement with the signatory list by name. In total, we have 224 unique engaging investors in our sample, of which 18 are absent from the signatory list due to delisting or acquisition by other institutions. For these 18 firms, we obtain missing information through internet searches, collecting details on their headquarter location, category, and AUM at the time

of delisting or acquisition. Consequently, the number of signatories in our final list has expanded to 1,733. We supplement the engagement data with information from PRI Reporting Framework surveys, submitted annually by PRI signatories between 2013 and 2018 via PRI's on-line reporting tools, containing detailed information on signatories' ESG incorporation strategies.[7]

The dataset used in this study has been carefully assembled through collaboration with PRI and has not been academically analyzed previously. It possesses at least six desirable attributes for research. First, engagements are logged onto a platform provided by and under the control of a third party. Second, each engagement involves a substantial number of investment institutions, enhancing the potential insights compared to studies focused on a single investor. Third, each engagement includes contributions from various types of institutions, including asset owners, investment managers, and service providers. Fourth, the dataset is truly global, incorporating investors from numerous countries and varying social norms, allowing us to examine the impact of location (reflecting access to information) and credibility (reflecting reputation). Fifth, the projects feature differing organizational structures, enabling us to explore the effects of appointing a leader, the value of local investors, and the influence of group dynamics. Finally, the dataset is granular, with detailed records for every engagement, including the start and completion dates, target firm identities, investor identities and roles, and engagement outcomes. We do not rely on scores or ratings from ESG advisory firms. To our knowledge, the PRI Collaboration Platform is the only source of global data that meets these criteria.

## 2. Engagement Processes

### 2.1 Attributes of target companies

In all PRI-coordinated engagements, the target firms are selected jointly by the PRI Secretariat and the engagement team. To analyze the characteristics of these target companies, we merge our dataset with WorldScope/Compustat Global and North America using ISINs and company names.

[7] The PRI Reporting Framework is a key tool PRI uses to foster transparency among its signatories. See Gibson-Brandon et al. (2022) for a further discussion of this dataset.

We require non-missing market capitalization data for the fiscal year preceding the start date of an engagement. This reduces our sample size from 1,729 engagements to 1,654. The target firms are domiciled in 63 countries across various regions, highlighting the wide geographic scope of collaborative engagements. More than three-quarters of engagements involve countries other than the US and the UK. PRI-coordinated engagements are primarily concentrated in the manufacturing sector, followed by infrastructure and wholesale/retail trade. This mirrors the industry distribution reported in Dimson, Karakaş, and Li (2015) for a single investor's ESG engagements with US firms. In Table IA.1, we provide summary statistics on the location and industrial classification of the engaged companies.

To examine which firms are likely to be targeted by coordinated engagements, we compare target companies with their country and industry peers.[8] **Table 2** reports the marginal effects from probit regressions on the likelihood of a firm being targeted, using both the full sample and the two-tier engagement subsample. We control for industry and year fixed effects, and cluster standard errors at the project level. All firm-level accounting variables are calculated for the fiscal year preceding the engagement's start date. Institutional ownership data is obtained from FactSet (matched by target firm ISIN) for the calendar quarter before the engagement's start date. Detailed variable definitions are included in Appendix C.

In Columns (1) and (2) of Table 2, we find that, compared to their peers, target firms tend to have higher market capitalization and a greater percentage of foreign sales, suggesting that PRI-coordinated engagements focus on large firms that face greater global scrutiny, as a leader's (strategic) commitment to corporate social responsibility (CSR) can influence other industry participants (Albuquerque and Cabral, 2023).[9] Target firms also exhibit lower stock returns and

[8] We create the pool of peer firms using the WorldScope/Compustat universe. Following Dimson, Karakaş, and Li (2015), we exclude all target companies from the pool and require both the target and control firms to have data on country of incorporation, industry, and market capitalization. Peer firms are drawn from the same country-year and industry (3-digit SIC). If fewer than three peer firms exist in the same country-year and 3-digit SIC, we relax the industry classification to 2-digit SIC. When there are more than ten peer firms for a particular target, we retain only the 10 closest in market capitalization. Since all target firms and peer firms are matched within each country, we do not include country-level variables in the regression analysis.

[9] The finding that target firms tend to be larger than peer firms, even after matching, aligns with Dimson, Karakaş, and Li (2015).

sales growth in the preceding year, indicating underperformance relative to peers before being targeted. Additionally, target firms hold less cash and have lower R&D expenditures, consistent with a strategy of targeting industry leaders that may have already invested in ESG and have less discretionary spending capacity. In terms of ownership, target firms have higher holdings by the engagement team and lead investors, indicating that investors engage with firms where they have substantial influence and "skin in the game".

In Columns (3) to (6) of Table 2, we repeat the analysis, adding Refinitiv (formerly Thomson Reuters Asset4) overall ESG rating and component ratings to the regressions.[10] The sample size drops due to data non-availability, but the coefficients on most firm-level variables remain qualitatively similar. Notably, we find that target firms tend to have better ESG performance compared to their peers, as reflected in both the overall ESG rating, and the individual E, S, and G ratings. This aligns with PRI's proactive approach of identifying potential issues within an industry or region, rather than reacting to problems as they arise.

### 2.2 Attributes of collaborating investors

*2.2.1 Signatory-level attributes: Collaborating investors*

Among the 1,733 PRI signatories in our sample, only 224 joined a coalition at least once during the sample period. We label them as "collaborating signatories" or "collaborating investors" and the remainder as "non-collaborating signatories/investors". These collaborating signatories include 87 asset owners, 121 investment managers, and 16 service providers.

In **Table 3**, Panel A, we report the marginal effects of signatory-level probit regression results on the likelihood of becoming a collaborating investor (Columns 1–3). This analysis compares the characteristics of collaborating investors with non-collaborating signatories and explores the

[10] We acknowledge that some of Refinitiv's historical ESG ratings data may have been revised in April 2020 when the methodology was updated (Berg, Fabisik, and Sautner (2021)). Our ESG rating data were downloaded from Refinitiv in September 2021, after this methodological change. We also have an older version of the data, downloaded from Thomson Reuters Asset4 in November 2017, prior to the methodology update. Our results remain consistent when using the older Asset4 data and are robust to replacing the Refinitiv overall ESG rating with the MSCI IVA (Intangible Value Assessment) weighted average key issue score (untabulated).

factors influencing the decision to participate in at least one coordinated engagement.[11] Since size data are unavailable for service providers, they are excluded from the analysis.

We find that signatories are more likely to be collaborating investors if they: (i) are founding members of PRI, (ii) joined PRI early, (iii) are asset owners, particularly public pension funds, (iv) actively participate in collaborative initiatives beyond PRI, (v) have formal processes to engage by internal staff, and (vi) originate from high social norm countries. The first two findings underscore the committed interest of early PRI signatories in addressing E&S issues through the PRI collaboration platform. The finding that public pension funds are more likely to collaborate aligns with the idea that these funds are often more involved in E&S engagements and impact investing due to political incentives (Kim, Wan, Wang, and Yang, 2019; Barber, Morse, and Yasuda, 2021). The fact that collaborating investors are more likely to have formal processes for engagement carried out by internal staff supports the idea that engagements, including collaborative efforts, require significant resources. Without these resources, signatories are less likely to participate in engagement activities. The observation that collaborating investors are more likely to originate from countries with high social aligns with the perspective that these investors have intrinsic interest in and strong influence over E&S issues (Dyck et al., 2019).

We observe an inverse U-shaped relation between signatory size (measured by AUM) and the likelihood of collaboration (Column 1 of Table 3, Panel A). In unreported analysis, we find similar results when using staff numbers as an alternative measure of signatory size. This may arise from two opposing effects: large signatories with sufficient resources and influence over the target firm may prefer to engage independently, while smaller signatories may lack the means to engage.

[11] Notably, non-collaborating investors can be categorized into two groups: those who do not engage at all, and those who engage independently. The former group typically consists of smaller signatories that often lack the requisite resources for effective engagement, while the latter group mainly includes larger asset managers with sufficient resources who prefer to engage alone—often to avoid conflicts of interest. Although our data does not allow us to distinguish between these two groups, the statistics reported in Table IA.3, Panel C suggest that non-collaborating investors are primarily driven by the former group. Specifically, only 26% of non-collaborating investors have a formal engagement process conducted by internal staff, and both their mean and median AUM are significantly smaller than those of collaborating investors. Furthermore, including the latter group in the non-collaborating sample likely biases our results against finding differences in investor attributes between collaborating and non-collaborating investor groups.

These opposing forces make collaboration particularly attractive for mid-sized signatories. Interestingly, we find that signatory size no longer matters once we control for the presence of a formal process to engage by internal staff and involvement in other collaborative initiatives (Column 2 of Table 3, Panel A). This confirms that signatory size reflects both the ability to engage and the willingness to collaborate.

Liang and Renneboog (2017) find that legal origin plays an important role in explaining firms' CSR activities. We find that signatories from German-origin countries are less likely to join coalitions compared to those from English-origin countries. This trend is partially attributed to Japanese signatories (classified under German-origin) being less inclined toward shareholder activism (Buchanan, Chai, and Deakin, 2012), which leads them to refrain from engagement.

*2.2.2 Engagement-specific factors: Collaborating investors*

We also examine the specific match between target firms and investors. To achieve this, we create a pool of candidates for each engagement. Although all PRI signatories could, in theory, join these engagements via the Collaboration Platform, only 224 have collaborated at least once during our sample period. Therefore, we limit the pool to these collaborating signatories, excluding service providers due to a lack of information on their shareholdings in the target firms. As a result, each engagement has 208 signatories as potential engaging investors, and we have created a balance sample of 344,032 observations at signatory-engagement level.

Columns (1) to (2) of Table 3, Panel B report the OLS regression results on a signatory's likelihood of joining an engagement, using the full sample. All regressions include signatory fixed effects and engagement fixed effects (target firm and time fixed effects are subsumed by engagement fixed effects).[12] We employ an OLS model to avoid the incidental parameters problem associated with non-linear models featuring multi-dimensional fixed effects (Greene, 2004). Since the dependent variable represents decisions made by individual signatories, we use two-way clustering

[12] The number of observations in these specifications is slightly lower than the full sample of 344,032 observations, due to the inclusion of fixed effects.

at both the signatory and project levels to adjust standard errors.

We find that if the target firm is domestic (i.e., located in the same country as the signatory), the likelihood of the signatory joining the engagement is 2.7% higher than when the target firm is foreign (Column 1 of Table 3, Panel B). This represents a significant increase, given that the sample mean is 12%. To distinguish whether this result is driven by geographic proximity or cultural similarity, we replace the domestic target indicator with two variables capturing geographic distance and cultural distance between the target and the signatory (Column 2 of Table 3, Panel B). Geographic distance is defined as zero when the target and signatory are located in the same country, one if they are in different countries within the same region, and two if they are in different regions. Cultural distance is measured as the Euclidean distance in two culture dimensions (traditional vs. secular/rational, and survival vs. self-expression orientations), both obtained from World Values Survey (WVS) and measured in the year before the engagement's start date. Detailed variable definitions are included in Appendix C.

Geographic distance plays a dominant role, while cultural distance has a limited effect. A signatory located in a different region from the target firm (geographic distance of two) is 3.4% less likely to join the engagement than one located in the same country as the target. We interpret this as local investors being more incentivized to engage in E&S issues, as they internalize the harm of poor practices and the reputational gain from local approval. Nearby investors also face lower costs (e.g., easier communication and information gathering) and exert greater influence over target firms due to their connections and social ties. These findings suggest that signatories exhibit a home bias in engagement decisions, aligning with the home bias observed in ESG engagements (Groen-Xu and Zeume, 2024) and impact investing (Barber, Morse, and Yasuda, 2021).

We also find that signatories who joined PRI before the project's initiation are 9.5% more likely to join an engagement.[13] This suggests that information sharing and processing between PRI and signatories are a key motivation for collaboration. Conversely, signatories with past or ongoing

[13] PRI may send engagement invitations to institutions who have not yet pledged as PRI signatories. In such cases, an institution may choose to join an engagement first and later become a signatory. However, this practice is uncommon; only 5% of institutions in our sample joined an engagement before becoming a signatory.

engagements are less likely to join a new one. We interpret the former as a "checking the box" effect, where some signatories, who wish to appear active, reduce their participation after prior engagement activity,[14] and the latter as a result of the significant costs and effort involved in ongoing engagements.

To assess whether financial incentives influence a signatory's decision to engage, we analyze its holdings and exposure to the target firm. A larger stake increases the credibility and strength of the investor's voice (Dimson, Karakaş, and Li, 2015), while greater exposure raises the investor's willingness to invest time and effort (Fich, Harford, and Tran, 2015; Kempf, Manconi, and Spalt, 2017). We manually match investors with institutions in FactSet using their name, headquarters country, and AUM to gather equity holdings data. We measure a signatory's stake in a target as the percentage of shareholdings and its exposure as the weight of those holdings in its portfolio. However, we do not find that a signatory's holdings in or exposure to a target affect its engagement decision, aligning with our earlier discussion of the "checking the box" approach to collaboration, which may be adopted by some signatories.

We repeat the above analysis for the subsample of single-tier engagements in Columns (3) and (4), of Table 3, Panel B. The results are consistent with the full sample. However, with a smaller sample size the coefficients on past and ongoing engagements lose significance, though their magnitudes remain comparable.

Overall, the findings in this section suggest that a signatory's decision to participate in the collaborative engagements is primarily driven by its intrinsic interest in E&S issues, along with considerations of costs and benefits.

[14] The "checking the box" effect aligns with studies documenting greenwashing among PRI signatories (Gibson-Brandon et al., 2022; Kim and Yoon, 2023). To address this concern, PRI strengthened its signatory accountability in 2018 and implemented minimum requirements for maintaining membership and demonstrating leadership activity in responsible investment (RI) for both existing and future signatories. These requirements include: (i) an investment policy that encompasses the institution's RI approach, covering more than 50% of AUM, (ii) designated internal or external staff responsible for implementing the RI policy, and (iii) senior-level commitment and accountability mechanisms for RI implementation. Signatories that fail to meet these criteria will be informed privately and, following unsuccessful engagement over a two-year period, will be delisted (unpri.org/signatories).

## 2.3 Attributes of leaders

*2.3.1 Signatory-level attributes: Leaders*

Among the 224 collaborating signatories in our sample, only 90 had leadership experience. These leaders include 24 asset owners, 61 investment managers, and 5 service providers. In Columns (4) and (5) of Table 3, Panel A, we report the probit regression results on the likelihood of a PRI signatory becoming a leader, conditioning on being a collaborating investor. This analysis compares the characteristics of collaborating investors that led at least one engagement with those who never took on a leadership role. We again exclude service providers from this analysis due to absence of data on AUM.

Our findings indicate that collaborating investors with a formal process for engagement by internal staff and those active in collaborative initiatives outside the PRI are more likely to assume leadership roles. This aligns with the concept of "leading by example" through costly effort, as discussed by Hermalin (1998). Interestingly, the coefficient on the asset owner indicator is negative and significant in Column (4) of Table 3, Panel A. A further breakdown of asset owner types into public pension funds, private pension funds, and other asset owners reveal that all three categories are less likely to lead compared to investment manager (Column 5 of Table 3, Panel A). The lower interest of asset owners in leading E&S engagements may be due to lesser financial pressure they face to attract external fund flows. We analyze fund flows as a key financial incentive for investors to collaborate and assume leadership roles in Section 3.4.

We no longer find that signatory size, home country legal origin, or social norms influence the likelihood of leading. We have already highlighted the higher costs associated with leading an engagement. Evidently, economic considerations outweigh intrinsic interest in decision-making, which we discuss further below.

*2.3.2 Engagement-specific factors: Leaders*

To explore the specific match between target firms and leaders, we examine the likelihood that a collaborating investor assumes a lead role in an engagement, while holding signatory-level attributes constant. Columns (5) and (6) of Table 3, Panel B report the OLS regression results for

two-tier engagements, controlling for engagement and signatory fixed effects. For each engagement, every participating collaborating investor is a potential candidate for the leadership role. This analysis focuses on the incremental incentives to lead, assuming the collaborating investor has already chosen to participate in the engagement. Notably, 75% of two-tier engagements have only one leader, with the average number of leads being 1.49 (untabulated).

We find that the most prominent factor influencing the decision to lead is the location of the target firm: a collaborating investor is 22% more likely to lead an engagement when the target firm is domestic compared to when it is foreign. Further analysis shows that both geographic proximity and cultural similarity matter. An investor from a different region than the target is 8.8% less likely to lead than one from the same country, while a foreign investor from a country with a cultural distance of one (e.g., the distance between the Netherlands and Sweden, or twice the distance between the UK and the US) is 9.2% less likely to lead than a domestic investor – these figures are striking given the sample mean of 6.1% (untabulated).

We provide three explanations for these findings. First, like the decision to collaborate, investors tend to exhibit home bias when leading engagements. Second, leading an engagement is much more costly than simply joining it: the lead investor must act as the point of contact, issue invitations, report back to PRI periodically, and commit significant time and resources to the engagement. Some engagements even require face-to-face meetings with the target firm's management. Geographic proximity and cultural similarity reduce costs and enhance efficiency in leading engagements. Also, consistent with the view that leading is costly and time-consuming, we find that leading other ongoing projects reduces the likelihood of leading another engagement by 3.5%. Third, domestic investors often possess superior information – such as local knowledge and access to social ties – compared to foreign investors, making it easier to convince followers (Hermalin, 1998).

Although the lead investor incurs considerable costs, the benefits of engagement, such as improved firm performance and stock price, are shared among all stakeholders. Free-rider problems may therefore discourage investors from taking the lead. We thus expect that financial incentives play

a more prominent role in the decision to lead than in decision to collaborate. Consistent with this notion, we find that a collaborating investor is more likely to lead an engagement if it has a higher stake in, and great exposure to, the target, i.e., more "skin in the game". In terms of economic significance, a one-standard-deviation increase in a signatory's holdings in the target (0.232) increases its likelihood of leading the engagement by 2.4% (Column (5) of Table 3, Panel B). Similarly, a one-standard-deviation increase in exposure to the target (0.209) raises the likelihood of leading by 1.6%. These findings are consistent with those of Lewellen and Lewellen (2022), which show that an institutional investor's financial incentive to engage depends on the size of its investment in the target firm and the weight of that investment in its portfolio. Our findings also suggest that leaders are unlikely to take a "checking the box" approach in collaborative engagements. Consistent with this, we do not find evidence that past leadership experience reduces signatories' inclination to lead in the future.

Overall, the findings suggest that a signatory's decision to lead a collaborative engagement is primarily driven by its considerations of costs and benefits, alongside financial motives.

**2.4 Attributes of supporting investors**

We also analyze the incentives for a signatory to join the coalition as a supporting investor after the lead is determined. Columns (7) and (8) of Table 3, Panel B report the OLS regression results for two-tier engagements, controlling for engagement and signatory fixed effects. In each engagement, all 204 collaborating investors, excluding the leader(s), are potential candidates. Since we control for engagement fixed effects, we cannot examine how leader attributes, which are constant within each engagement, influence the decision to support. However, we can investigate whether differences between the leader and the collaborating investor impact the decision to support, as these vary among collaborating investors within each engagement.

All coalition members, including supporting investors, are expected to contribute actively to the engagement, although the expectations for supporting investors are reduced. Consistent with this abridged role, we find that neither the holdings in nor exposure to the target firm influence the decision to support. The location of the target also does not affect supporting investors, likely

because they can rely on leaders for local expertise. We find that a signatory is less likely to join a coalition as a supporting investor if it already has past engagement experience or is busy with other projects. This is similar, and is likely a contributing factor, to the results reported in Columns (1) and (2) of Table 3.

Interestingly, we find that a collaborating signatory is more likely to support an engagement if the leader is from the same country as the signatory (Column 7 of Table 3, Panel B). Further analysis suggests that this is driven by cultural similarity between the lead and supporting signatories (Column 8 of Table 3, Panel B). This finding suggests that cultural similarity enhances communication and collaboration efficiency within a team.

Overall, the findings suggest that a signatory's decision to support a collaborative engagement is primarily driven by its perception of the leaders and its prior or ongoing commitments to engagements.

## 3. Engagement Outcomes

### 3.1 Two-tier structure and engagement outcomes

In this section, we examine the effect of a two-tier structure on engagement outcomes, using success records provided by PRI. We conduct the analysis at the engagement level, with success data available for 1,077 engagements across 28 projects. We model engagement success as a function of the engagement structure, the composition of the engagement team, and the characteristics of the target firm.

*3.1.1 Univariate analysis*

We report the results of our univariate analysis in Table IA.5 of the Internet Appendix to conserve space. We first we compare target firm characteristics across the two-tier and the single-tier engagement subsamples (Table IA.5, Panel A). We find that target firms in the two-tier engagement subsample tend to exhibit lower stock returns, return volatility, sales growth, R&D expenditures, and insider holdings, while showing higher dividend payouts, capital expenditures, long-term institutional holdings, and foreign sales. These firms also tend to have better ESG scores

across all dimensions and are from countries with stronger social norms. These findings highlight distinctive characteristics between the two subsamples, underscoring the importance of controlling for firm and country characteristics when analyzing the effect of the two-tier engagement structure on outcomes. We later match target firms in two subsamples on all firm- and country-level covariates.

We next compare engagement-level attributes across the two subsamples (Table IA.5, Panel B). The success rate in the two-tier engagement subsample is 72.6%, more than double that of the single-tier subsample (32.8%), despite the fact that collective equity holdings in target firms are comparable between the two subsamples (1.4% vs. 1.3%).[15] We also observe differences in team composition: although the size of the investor group (in terms of both the number of investors and total AUM) is larger in the single-tier subsample, investor groups in two-tier engagements tend to consist of investors with more resources, greater interest in E&S issues, and stronger motivations to drive E&S changes. For example, these groups include a higher proportion of investment managers, domestic investors, PRI founding signatories, and investors from countries with stronger social norms. Overall, these statistics suggest that, with clearly defined roles, a smaller but more motivated engagement team may be more effective in achieving desired changes.

*3.1.2 Multivariate analysis*

Table 4, Panel A reports the marginal effects from the probit regression on the likelihood of engagement success, controlling for target industry fixed effects to account for industry-specific factors. In these specifications, we do not include year fixed effects due to the high correlation between the two-tier engagement indicator and the year indicators, as discussed earlier. To account for correlated error terms within each project, we cluster standard errors at the project level.

To address the concern that inherent differences between the target firms in single-tier and two-tier engagements might drive differences in success rate, we match target firms in these two types

[15] The dollar value of equity holdings is higher in the two-tier engagement subsample due to the larger size of the target firms. On average, the investor group holds an aggregate share of 1.4% in target firms, with individual investors holding approximately 0.06%. This figure is consistent with prior research on ESG engagements. For instance, Dimson, Karakaş, and Li (2015, Table 5) report an average shareholding of 0.06% by a single asset manager in target firms.

of engagements. We use both the Entropy Balancing (on the first two moments) and the Propensity Score Matching (PSM) (with replacement at a 0.01 caliper) as separate methods to match on all target firm determinant variables listed in Table 2, Column (1). We also include target firms' country legal origins and social norms as additional matching variables, which were omitted in Table 2, Column (1) since target firms are matched with peer firms in the same country.[16]

Column (1) of Table 4, Panel A reports results for all engagements, while Columns (2) and (3) of Table 4, Panel A present findings from the entropy-balanced and propensity-score matched samples, respectively. Consistent with the hypothesis that a two-tier engagement structure leads to higher success rates, we find that having a two-tier structure increases the likelihood of success by 23-31%. This finding supports the idea that a tiered structure, where investors take on clearly defined roles and responsibilities, enhances the effectiveness of collaborative engagements.

Regarding engagement team characteristics, we observe several noteworthy patterns. Public pension funds and investors from high social norm countries significantly boost the success rate, aligning with the results in Table 3, Panel A, which shows that public pension funds and signatories from high social norm countries are more likely to participate in coordinate engagements. Interestingly, private pensions funds have a negative impact on success rates. This likely stems from their limited resources for engagement: only 45% of private pensions in our sample have internal staff dedicated to engagement, compared to 75% for public pensions (untabulated). We also find that a higher percentage of domestic investors in the team positively correlates with success. This is in line with the finding in Table 3, Panel B, that signatories are more likely to join coalitions when the target is domestic. The holdings in target firms by the investor group play a limited role in affecting engagement success, echoing the earlier finding in Table 3, Panel B, that a signatory's holdings in a target firm do not influence the decision to join a coalition. Overall, these results suggest that, beside having a two-tier structure, a team of domestic investors, public pension funds, or investors from high social norm countries can increase the likelihood of success.

[16] We successfully achieve balance across all covariates using both entropy-balancing and PSM methods (untabulated).

As for target firm characteristics, we find they generally play a limited role in influencing engagement success. However, success is more likely when the target firm is (i) larger in size, (ii) experiencing lower sales growth and stock returns, (iii) a higher proportion of equity held by long-term institutional investors, and (iv) is from a country with French legal origins (as compared to an English legal origin). These findings suggest that success is more likely among firms that are concerned about reputation (larger size) and performance issues, and have a shareholder base or country of origin that is more ESG-conscious (Dimson, Karakaş, and Li, 2015; Liang and Renneboog, 2017).

We also consider target firms' ESG ratings using Refinitiv overall ESG rating and component ratings. Since including these ratings reduces our sample size considerably, we conduct these analyses separately (see Table IA.6, Panel A). We find that higher overall ESG ratings are positively associated with the likelihood of success, suggesting that firms already leading in the ESG space are more receptive to shareholder-led ESG changes.

*3.1.3 Addressing endogeneity concerns: Engagement success*

We now address possible endogeneity issues in relation to the two-tier structure. A concern is that the higher success rate in two-tier engagements might be driven by the presence of lead investors who are inherently more effective at engagement. To address this, we conduct a counterfactual analysis using single-tier engagements. Among the participating investors in a single-tier engagement, we identify one or multiple "pseudo" leads – investors with attributes similar to actual leads in two-tier engagements but who do not assume the lead role. We then examine whether the presence of these pseudo leads is associated with a higher success rate in single-tier engagements.

We use two approaches to identify pseudo leads. In the first, we apply the determinant model for becoming a lead investor, as used in Column (5) of Table 3, Panel B, using two-tier engagements as the estimation sample. We then make out-of-sample predictions on the likelihood of an investor becoming a lead in single-tier engagements. An investor is identified as a pseudo lead if its

predicted probability of being a lead exceeds 0.25385.[17] Under this method, 41.0% of single-tier engagements have at least one pseudo lead, which we refer to as "pseudo-two-tier" engagements. In the second approach, we use a naïve method to identify pseudo leads. We classify an investor as a pseudo lead if it is domestic, an investment manager, and has internal staff dedicated to engagements – factors identified in Table 3, Panels A and B, as the most prominent determinants of leadership. Using this method, we identify 40.6% of single-tier engagements as "pseudo-two-tier" engagements.

We then rerun the regression analysis from Column (1) of Table 4, Panel A, replacing the two-tier engagement indicator with the pseudo-two-tier engagement indicator and focusing on the single-tier engagements. The results, reported in Table 4, Panel B, show that the coefficient on the pseudo-two-tier engagement indicator is insignificant in both model specifications. This suggests that having investors with leader-like attributes in the engagement team does not improve success rates unless those investors are officially appointed as leads with corresponding responsibility.

A second concern is that single-tier and two-tier engagements may focus on different E&S topics, which could explain the differences in success rates. For example, all UNGC engagements (mostly via email correspondence with target firms) follow a single-tier structure, while most engagements on social issues use a two-tier structure. To address this, we repeat the success analysis using subsamples with comparable engagement topics. We create two subsamples: one excluding all UNGC projects, and another including only environmental-themed projects.[18] We continue to find a positive and significant coefficient on the two-tier engagement indicator (results untabulated).

Third, although the two-tier structure is imposed exogenously by PRI on the engagement team, the higher success rate could still be driven by learning, as most of the two-tier engagements occurred

[17] Using this threshold, only the investors in the top 95 percentile of the predicted probability are identified as pseudo leads. This ensures that the percentage of pseudo leads in the single-tier engagement subsample is comparable to the percentage of actual leads in the two-tier engagement subsample. Our results are not sensitive to the threshold choice.

[18] There are 14 environmental projects with success data, including carbon disclosure leadership index 2011 and 2012, CDP carbon action, CDP engagement on emission reduction plans, CDP water disclosure 2011 and 2012, CEO water mandate, corporate climate lobbying, forest footprint disclosure 2011 and 2012, fracking, palm oil growers, sustainable fisheries, and water risks in agricultural supply chains.

in later years.[19] We address this concern in two ways. Firstly, if learning were the driving factor, we would expect more experienced teams to have higher success rates. We measure team experience by the percentage of investors with prior engagement experience and include this in the regression on success, but we do not find a positive association with success likelihood (results untabulated).

Secondly, as discussed in Section 1.2 and shown in Figure 1, our sample period is divided into three subperiods: the single-tier period, the experimental period, and the two-tier period. During the experimental period, three two-tier and ten single-tier engagement projects were initiated, allowing us to conduct a success analysis for this period specifically. A shorter event window reduces the likelihood that the results are driven by learning. Moreover, all two-tier projects were initiated at the start of the experimental period, making them less likely to benefit from learning compared to single-tier projects initiated during the same period. Table IA.6, Panel B reports the results for engagements initiated during the experimental period versus those initiated during other periods. The two-tier engagement indicator remains positive and significant in both cases, although the magnitude of the coefficient is lower for the experimental period subsample. This could be because lead investors were identified with a less structured process during this experimental period. These results suggest that the higher success rates of two-tier engagements cannot be fully attributed to learning.

Overall, the findings in this section suggest a likely causal effect of the two-tier engagement structure on engagement success, consistent with the leadership economics framework established by Hermalin (1998). In order to argue more convincingly that the causal link goes from the organizational structure of the team to performance, we further build on theory and analyze the mechanism for effective leadership in collaborative engagements in the following section.

### 3.2 Mechanisms for effective leadership

In this section, we explore the two channels, namely information and reputation, through which a

[19] Another alternative explanation could be an upward time trend in success rates. However, the idea that "low-hanging fruit" in E&S engagements are addressed first would suggest a bias against such a trend.

two-tier structure could enhance engagement success. According to the informational theory of leadership established by Hermalin (1998), a leader has superior information about the coalition's productivity prospects. One credible way for the leader to convey this valuable information to the team is by exerting costly effort (i.e., leadership by example). In a repeated leadership setting, Hermalin (2007) extends his initial model and demonstrates that a leader can develop a reputation for being credible. Building on these insights, we expect better informed and more reputable leaders to be more effective at leading the coordinated engagements.

*3.2.1 The information channel*

In **Table 5**, Panel A, we test the information channel using the subsample of two-tier engagements. To measure leaders' informational advantage, we regard leaders from the same country as the target firm as those with an informational advantage. Slightly over half (55%) of the two-tier engagement subsample has domestic leads. Consistent with our hypothesis, we find a positive coefficient on the indicator for having domestic leads (Column 1 of Table 5, Panel A). In terms of economic significance, having domestic leads increases the success rate of two-tier engagements by 23.6%. The geographic and cultural proximity of the lead investor to the target firm provides local expertise and knowledge (and potentially higher credibility), while reducing engagement costs, thereby leading to better outcomes. This finding supports the results reported in Table 3, Panel B, which suggest that home bias influences signatories' decision to lead engagements.

We also expect this domestic leaders' informational advantage to be particularly beneficial when foreign investors face an opaque information environment regarding the target firm. We identify opaque firms as those located in countries where: (i) access to shareholder meetings is difficult (Maffett, Nakhmurina, and Skinner, 2022), (ii) disclosure requirements for related-party transactions are low (Djankov, La Porta, Lopez-de-Silanes, and Shleifer, 2008), and (iii) the population is large.[20] In these countries, foreign investors are likely to struggle to obtain necessary

[20] We use large populations as a proxy for an opaque information environment, as soft information, being context-dependent and proximity-reliant, becomes harder to gather and transmit. Geographic and cultural diversity in large populations exacerbates these challenges, particularly for foreign or distant investors lacking localized knowledge. This view is consistent with Liberti and Petersen (2019).

information to engage with target firms. Among all the two-tier engagements, 46%, 52%, and 49% are identified as having opaque targets using the above-mentioned three criteria, respectively. We introduce the opaque target indicator as a stand-alone variable and interact it with the domestic lead indicator. The coefficient on opaque target indicator alone is insignificant (Columns 2, 4, and 6 of Table 5, Panel A), suggesting that engagements with opaque firms are not necessarily less likely to succeed. This may be due to greater potential for improvement in such firms. More importantly, when we include the interaction term, the coefficient on the opaque target indicator becomes negative and the interaction is positive and significant. This suggests that for opaque target firms, having a domestic leader significantly improves the success rate, whereas the likelihood of success is much lower without a domestic leader.

Regarding other leader attributes, we find that equity holdings in target firms by lead investors and leadership from high social norm countries improve success rate, while having a public pension fund or founding signatory as a leader decreases success rate. The former finding aligns with the notion that that having more "skin in the game" and being from high social norm countries may help leaders credibly convince others to follow (Hermalin, 1998). The latter finding supports the view that public pension funds, unlike hedge funds, do not have to compete for investment capital and are subject to political constraints and conflicts of interest, which may reduce their incentive or effectiveness in leading engagements (Kahan and Rock, 2007).[21]

*3.2.2 The reputation channel*

To test the reputation channel, we propose three ways an institution could develop a credible reputation as a leader: (i) through past leading experience at PRI-coordinated engagements, (ii) by actively participating in collaborative initiatives outside the PRI,[22] and (iii) by receiving high

[21] Seven of the 22 founding signatories in the lead investor sample are public pension funds. We are unable to analyze the effect of having a private pension fund as the lead investor because there is only one such fund in our sample. Additionally, only four engagements in the sample involve a private pension fund as a lead, and in all cases, they co-led the engagement with a public pension fund.

[22] We are unable to analyze the effect of having a formal engagement process managed by internal staff—an important leader attribute identified in Table 3, Panel A—because 96% of the leaders in our sample already have such a mechanism in place.

ratings from the PRI on active ownership.[23] These three measures capture different aspects of a leader's reputation. The first focuses on reputation built through the PRI network, the second one reflects broader collaborative efforts, and the third measures overall active ownership activities. Approximately 59%, 48%, and 55% of two-tier engagements are identified as having reputable leaders under the three measures, respectively.

Table 5, Panel B presents the effect of having a reputable leader on engagement success. Interestingly, we find that engagements with reputable leaders have a higher success rate only when reputation is measured by leaders' past leading experience within PRI (Column 1). This is likely because past leading experience is the most direct way to enhance a leader's credibility in the context of PRI-coordinated engagements, whereas collaborative efforts outside the PRI network and PRI's active ownership rating may be less effective in terms of visibility and access in developing a reputation as a credible leader (Columns 3 and 5 of Table 5, Panel B). [24]

Hermalin (2007) also finds that the value of establishing a reputation for honesty is greatest when leaders and followers are more confident that the high-productivity state will occur. Pertinent to this point, Dyck et al. (2019) document that investors from high social norm countries drive better ESG performance. Therefore, we expect that having reputable leaders from high social norm countries could further increase engagement success. Consistent with this conjecture, we find that across all three measures of reputation, engagements with reputable leaders from high social norm countries have significantly higher success rates (Columns 2, 4, and 6 of Table 5, Panel B). This suggests that leader's reputation, enhanced by credibility, helps the team achieve greater success. In terms of economic significance, the success rate for engagements with reputable leaders from high social norm countries is 16.5%, 24.2%, and 22% higher than for those with reputable leaders

[23] Since 2014, PRI has assigned proprietary signatory ratings based on responses to the reporting framework survey. We focus on the ratings assigned to the Listed Equity Active Ownership (LEA) module, which evaluates signatories' active ownership activities, including individual and collaborative engagement as well as voting activities. PRI uses its own algorithm to aggregate this information and generate a rating for the LEA module. Due to the confidential nature of the PRI signatory ratings, this particular analysis was conducted on-site at PRI's headquarters using their computers to ensure security.

[24] Note that the PRI ratings were not made public to other signatories. However, signatories may choose to display their PRI ratings on their websites as a form of promotion.

from low social norm countries, respectively corresponding to the reputation measures of past PRI leadership, external collaboration, and PRI active ownership ratings. It is worth emphasizing that these findings are incremental to the positive effect of having domestic leaders, which continues to enhance success rates. The coefficients for other leader attributes are largely consistent with those in Table 5, Panel A.

In summary, the findings in this section suggest that an effective two-tier engagement structure, which significantly enhances engagement success, involves appointing leaders from the same country as the target firms and/or leaders with strong reputations based on prior experience and efforts, particularly those from high social norm countries.

### 3.3 Target firm financial performance

In this section, we examine the impact of coordinated engagements on the financial performance of target firms, starting with stock market returns and then exploring accounting performance.

#### *3.3.1 Target long-term stock performance*

We examine the changes in target firms' annual stock returns around the engagement initiation. **Table 6**, Panel A reports the regression results on target firms' abnormal annual buy-and-hold (B&H) returns, defined as target's 12-month B&H return minus market's 12-month B&H return. We use the MSCI country return index of the target's home country to measure market return.[25] For each target firm in an engagement, we keep 24 months before and 36 months after the engagement start date, as the average and median engagements in our sample take two years to conclude. Month 0 is the calendar month when the engagement started. We create a *Post-engagement*$_{Year+1\&+2}$ indicator, defined as one for Month 0 to Month 23 and a *Post-engagement*$_{Year+3}$ indicator, defined as one for Month 24 to Month 35. The benchmark period is thus Month –24 to Month –1. We control for target firm characteristics at the corresponding fiscal year (firm size, market-to-book ratio, leverage, and return volatility), target firm fixed effects, and calendar year fixed effects in the regressions. The unit of analysis is target-engagement-year, and

[25] In unreported analyses, we also measure stock performance using the target firms' annual cumulative abnormal returns (CARs), defined as the target's monthly return minus the MSCI monthly return, cumulated over 12 months. The results are very similar.

we cluster standard errors at the target firm level.

In Columns (1) and (2) of Table 6, Panel A, we separately run the regression for the two-tier and single-tier engagements and compare the coefficients across these two. We find that target firms in two-tier engagements experience a 4.7% increase in annual abnormal returns within the first two years after the engagement initiation, relative to the pre-engagement level. This increase widens to 9.4% in the third year. This finding further supports the conjecture that leadership in engagement coalitions is associated with a positive shareholder outcome. In contrast, we observe no change in target firms' stock performance among single-tier engagements. The coefficients on both post-engagement indicators are statistically different across these two regressions. In Columns (3) and (4) of Table 6, Panel A, we analyze stock performance conditioning on engagement outcome. We find a larger increase in annual abnormal return among two-tier engagements that concluded successfully: a 6.3% increase within the first two years, and a 12.6% increase in the third year. There is again no change in target firms' stock performance among unsuccessful single-tier engagements. The coefficients on post-engagement indicators are again statistically different across these two regressions.

Overall, we find engagements concluding successfully are rewarded by the market in the first three years of the engagement. Our results chime with Dimson, Karakaş, and Li (2015) who report 7–8% abnormal returns to successful engagements and zero returns to unsuccessful engagements.[26]

*3.3.2 Target accounting performance*

We also examine the changes in targets' accounting performance around the engagement. Table 6, Panel B reports the regression results on target firms' annual return on assets (ROA), defined as earnings before interest, tax, depreciation and amortization (EBITDA) divided by total assets. For each target firm in an engagement, we examine two fiscal years before and three fiscal years after

[26] Based on our observations of the PRI engagement data, engagements are typically conducted privately. As a result, it may take time for market prices to reflect information that is not immediately available in the public domain. Given the private nature of these engagements, it is difficult to pinpoint the exact timing of market reactions. Nevertheless, we anticipate that returns will be realized within three years after the engagement start date, as the average and median engagements in our sample take two years to conclude. This expectation is consistent with the findings of Dimson, Karakaş, and Li (2015).

the engagement start date. *Post-engagement*$_{Year+1\&+2}$ is defined as one for the first two fiscal year ends after engagement start date. *Post-engagement*$_{Year+3}$ is defined as one for the third fiscal year end after engagement start date. We control for the targets' characteristics (firm size and market-to-book ratio), fixed effects and year fixed effects. We also include peer group ROA to control for potential industry trends. The peer group is defined in the same way as in Section 2.1. The unit of analysis is target-engagement-year, and we cluster standard errors at the target firm level.

In Columns (1) and (2) of Table 6, Panel B, we separately run the regressions for the two-tier and single-tier engagements and compare the coefficients across these two. We find that target firms in two-tier engagements experience a 0.9% increase in ROA within the first two years after the engagement initiation, relative to the pre-engagement level. This increase widens to 2.3% in the third year. In contrast, we observe no change in target firms' ROA among single-tier engagements. The coefficients on both post-engagement indicators are statistically different across these two regressions. In Columns (3) and (4) of Table 6, Panel B, we find a larger increase in ROA for the two-tier engagements that concluded successfully: a 1.4% increase within the first two years, and a 3.2% increase in the third year. There is again no change in target firms' ROA among unsuccessful single-tier engagements and the coefficients on post-engagement indicators are statistically different across these two regressions. Dimson, Karakaş, and Li (2015) find a 1.4% increase in ROA following successful E&S engagements, compared to unsuccessful ones.[27]

*3.3.3 Addressing endogeneity concerns: Target firm performance*

An alternative explanation that pervades the shareholder activism literature is that the outperformance of target firms is driven by the engagement teams' superior stock-picking skills and/or the anticipation of positive changes in target firms, rather than the engagement itself (e.g., Brav, Jiang, and Kim, 2015). However, this argument is inconsistent with the contrasting results documented across two-tier and single-tier engagements: superior stock-picking should have resulted in target firms outperforming in both types of engagements.

[27] Dimson, Karakaş, and Li (2015) attribute the improvements to higher profitability and increased efficiency. They suggest that ESG practices help firms attract socially conscious customers and enhance employee productivity.

Could the outperformance observed in two-tier engagements be attributed to the lead investors' superior stock-picking skills? Since lead investors are often more resourceful and knowledgeable about the targets, they may be better able to identify target firms with better future performance. To address this concern, we employ the "pseudo-lead" method described in Section 3.1.3. As before, we conduct a counterfactual analysis on target performance using a subsample of "pseudo-two-tier" engagements, i.e., single-tier engagements with at least one pseudo lead. The results are tabulated in Table IA.7, where the coefficients on post-engagement indicators are mostly insignificant.[28] This suggests that the superior performance of target firms observed after two-tier engagements is unlikely to be driven by the lead investors' superior stock-picking.

Another alternative explanation is mean reversion or self-cure, suggesting that target firms experienced deteriorating performance before engagements and that mean reversion subsequently drove up their performance post-engagement (see Brav, Jiang, and Kim, 2015, for a detailed discussion). However, this argument is inconsistent with the contrasting results documented across two-tier and single-tier engagements. Nevertheless, to further address this concern, we conduct two additional analyses (untabulated). In the first analysis, we include an additional time indicator to capture the pre-engagement trend. We find no evidence suggesting that target performance was deteriorating before engagement, which is inconsistent with the mean-reversion narrative.

In the second analysis, we conduct a placebo test on the matched non-target firms (labeled as the placebo group). The firms in the placebo group are chosen from the target's peer group, as described in Section 2.1, and we further match targets and peers based on their pre-engagement performance.[29] We run similar regressions to those in Table 6, Panels A and B, using the placebo

[28] The only exception occurs in Column (3) of Table IA.7, where we use the prediction method to identify pseudo leads: the target's ROA increases by 0.5% in the first two years after engagement initiation. However, this magnitude is much smaller than the 0.9% increase observed in the two-tier engagement subsample (Column 1 of Table 6, Panel B). Furthermore, in the same column, the ROA change in the third year (compared to the pre-engagement period) is statistically insignificant. This finding aligns with the results in Albuquerque, Fos, and Schroth (2022), which indicate that 75% of the value creation by activist investors focusing on governance issues is achieved through treatment rather than stock picking or sample selection.

[29] We use Entropy Balancing and Propensity Score Matching methods to match target and peer groups across three dimensions: firm size in Year –1, firm performance in Year –1, and firm performance in Year –2. This approach is similar to that employed in Brav, Jiang, and Kim (2015, Section 6.2.1).

group of targets in two-tier engagements. Since the target and placebo firms are matched based on pre-engagement performance, if targets' outperformance after two-tier engagement is driven by mean reversion, we should observe a similar pattern among the placebo group. Contrary to this prediction, we do not observe any changes in the performance of placebo firms (either stock return or ROA) after engagement.

The results from these two analyses suggest that the improvement in firm performance observed after two-tier engagements is unlikely to be attributable to mean reversion or self-cure.

### 3.4 Signatory future fund flows

In the previous section, we demonstrated the effectiveness of leadership in driving successful engagements outcomes, as well as the information and reputation channels through which leadership operates. In this section, we examine fund flows as a key financial incentive for investors to collaborate and assume leadership roles. As discussed in Brav, Dasgupta, and Mathews' (2019) "wolf-pack activism" model, funds are incentivized to engage and assume costly leadership roles to showcase their skills and attract capital inflows. Building on this insight, we examine whether participating in or leading coordinated engagements on E&S issues affects signatories' future fund flows. While their model focuses on *implicit* coordination in activist "wolf packs," we test whether similar incentive mechanisms operate in our setting of *explicit* PRI-coordinated engagements.

To examine whether participating in or leading a coordinated engagement improves a signatory's future fund flows, we conduct an analysis using imputed data on disclosed holdings from FactSet, following Gibson-Brandon et al. (2022). In brief, a signatory's annual fund flow is calculated as the year-over-year percentage change in total equity holding value, adjusted for stock price changes during the year. The detailed definition is included in Appendix C. The fund flow data cover 503 signatories (470 investment managers and 33 asset owners), amounting to 5,360

signatory-years between 2007 and 2019.[30]

To assess the incremental effect of lead experience on future fund flows, we narrow our sample to collaborating signatories and focus on the period between 2013 and 2019.[31] To isolate the impact of engagement and lead experience on future fund flows, we control for signatory size (portfolio value and number of funds), past performance (annual return and fund flow), and signatory activities (churn ratio).

**Table 7**, Panel A reports the summary statistics of our regression variables, with the unit of analysis being signatory-year. The variables of interest include indicators for engagement experience (defined as participation in any engagement initiated before the current year-end), successful engagement experience (participation in any successful engagement concluded before the current year-end), lead experience (leading any engagement initiated before the current year-end), and successful lead experience (leading any successful engagement before the current year-end). For collaborating signatories, the average (median) annual flow is 8.6% (5.6%) of AUM.

Table 7, Panel B reports the OLS regression results on signatory annual fund flows, including signatory and year fixed effects to control for unobservable characteristics and time effects, with standard errors clustered at the signatory level. The left-hand half of the table compares collaborating and non-collaborating signatories. In Column (1) of Table 7, Panel B, we find that past engagement experience improves future fund flow by 12.5%. This increase resembles that observed after US mutual funds joined the PRI in Gibson-Brandon et al. (2022) and Kim and Yoon (2023).[32] In Column (2) of Table 7, Panel B, we introduce the indicator for successful engagement experience, finding that successful engagement experience boosts future fund flows by 18.3%. The coefficient for engagement experience (regardless of whether it was successful) becomes

[30] Many signatories either lack holdings in public equity or do not publicly disclose their holdings. We selected 2007 as the starting year for the fund flow analysis, as the first engagement project was initiated that year. The analysis ends in 2019, as the last engagement project concluded in 2018.

[31] We selected 2013 as the starting year because the first two-tier engagement project concluded in late 2012, and the majority of two-tier engagement projects were initiated in or after June 2012.

[32] Gibson-Brandon et al. (2022, Table 9) report a 9% increase in annual fund flow, while Kim and Yoon (2023, Table 5) document a 5% increase in quarterly fund flow following the sign-up of funds as PRI signatories.

insignificant, suggesting that unsuccessful engagements do not attract future fund flows. This indicates that clients value successful engagements. Columns (3) and (4) of Table 7, Panel B repeat the analysis for investment managers only, showing slightly larger effects for both engagement and successful engagement experience, reinforcing the notion that investment managers are more driven by fund flows than asset owners.

The right-hand half of the table focuses on the incremental effect of lead experience on future fund flows among collaborating signatories. In Columns (5) and (6) of Table 7, Panel B, we find that having lead experience increases future fund flows by 8.9%. Interestingly, the coefficient for successful lead experience is not significant, while lead experience remains positive and significant. This suggests that the costly act of leading, regardless of success, sends a strong signal of commitment to clients. Columns (7) and (8) of Table 7, Panel B show even stronger results for investment managers, underscoring that leadership—despite being costly—offers the benefit of attracting additional fund flows, irrespective of the engagement's outcome. For investment managers, demonstrating leadership in E&S engagements can be particularly rewarding.

## 4. Conclusion

Coordinated engagements on E&S issues are becoming increasingly common in the institutional investment landscape. Our study provides the first detailed evidence of the nature and impact of these engagements on a global scale. We demonstrate that leadership plays a critical role in collaborative engagements, with institutions' incentives to take on leadership shaped by their economic interests, resource bases, and geographic and cultural proximity to the target companies. A structured engagement strategy helps institutions achieve their objectives, increases future fund flows, and enhances the performance of target companies. Institutions with more "skin in the game" compared to other investors are more likely to bear the costs of engagement and assume a lead role. Additionally, informational advantages and a credible reputation provide leaders with the necessary means and motivation to be effective.

# Appendix A: Illustrative Engagement Projects

The examples illustrated in this appendix are sourced from PRI's internal records.

## A.1 An example of single-tier engagement: CDLI 2011

In March 2011, the PRI Secretariat, along with a group of investors, initiated a collaborative engagement on the Carbon Disclosure Leadership Index (CDLI) to improve the quality of responses to the Carbon Disclosure Project (CDP). This collaborative engagement was subsequently listed on the PRI Collaboration Platform, inviting interested investors to join.

By the end of March 2011, a total of 13 PRI signatories had joined the collaborative engagement (referred to as participating investors). The engagement team, consisting of the PRI and the participating investors, identified 91 public companies included in major stock indexes across 19 countries as engagement targets. These companies were selected because their CDLI scores were in the bottom quartile among respondents to the 2010 CDP questionnaire. The CDLI scores were intended to rank the quality of companies' CDP disclosures, with the scoring methodology developed by CDP and PwC.

In April 2011, the PRI Secretariat, on behalf of the participating investors, sent a joint letter to these target companies requesting improvements in their responses to the CDP questionnaire by the deadline of May 31, 2011. The letter emphasized the importance of climate change reporting through the CDP questionnaire and provided guidance on best disclosure practices. It was signed by representatives from all participating investors. The PRI Secretariat and participating investors then followed up with phone calls and/or meetings with the target companies to discuss the strengths and weaknesses of their climate disclosures and to encourage them to enhance the quality of information provided in the next questionnaire, reiterating the value of this information for investors.

In June 2011, the PRI Secretariat organized a call with the participating investors to discuss interactions with individual targets and provide updates on outcomes so far. During the call, the engagement team established an evaluation framework for the final engagement outcome. All participating investors were encouraged to continue following up with the target companies and were asked to send summaries of their interactions to the PRI. These summaries were later compiled centrally and shared with the entire team. The engagement project concluded on December 31, 2011. Success was recorded when a target company was no longer in the lowest quartile of the CDLI score based on its 2011 CDP disclosure.

## A.2 An example of two-tier engagement: Employee relations

In October 2012, the PRI Secretariat initiated a collaborative engagement focused on employee relations, aiming to enhance company disclosure on human capital management and improve employee practices among global retail firms. By December 2012, the Human Capital Steering Committee (HCSC) was established, consisting of 11 signatories, most of whom became lead investors in one or more engagements under this project. Committee members were appointed through mutual agreement between the PRI Secretariat and themselves, committing sufficient time to support the development of the engagement project.

The HCSC held regular meetings to define the focus of the engagement, commission research from service providers or consultants, identify target companies, develop letters and scorecards to track company engagement, and establish guidelines for the engagement group. Meanwhile, the collaborative engagement was listed on the PRI Collaboration Platform, inviting interested investors to join as either lead or supporting investors by December 11, 2013. The post clearly outlined the responsibilities of both lead and supporting investors. Lead investors were tasked with leading dialogues with target companies on behalf of the group and conducting research and assessments of those companies, while supporting investors were encouraged to contribute by providing feedback, sharing knowledge and experience, and lending support to the initiative. Signatories were urged to choose their roles based on their internal capacity and priorities.

Between January and April 2014, lead investors, on behalf of all supporting investors (who also signed the letters), sent requests for more information regarding the management of employee relations issues to a total of 25 target companies located in 14 countries. The lead investors then followed up through phone calls, meetings, or additional letters with the target companies throughout the remainder of 2014 and into 2015. During these follow-ups, the engagement team (primarily consisting of lead investors) communicated the importance of human capital management, listened to the companies' current strategies, and provided guidance for future improvements. The lead investors also developed interim evaluations to provide feedback to the target companies.

The engagement project concluded on December 31, 2015. Success was evaluated based on the target companies' scorecards developed by a third-party consultant. Key performance indicators (KPIs) were used to assess various aspects of a company's human capital management, including training and development, employee engagement, remuneration and recognition, recruitment, retention, and staff management. Success was recorded if a target company's performance on core indicators increased between 2013 and 2015 relative to the years 2011 and 2012.

## Appendix B: Success Measures

This appendix lists the criteria used by PRI to evaluate the success of each project in our sample. CDLI refers to the Carbon Disclosure Leadership Index, CDP denotes the Carbon Disclosure Project, COP stands for Communication on Progress, and UNGC refers to the United Nations Global Compact. Success is evaluated individually for each target firm within each project. In some COP projects, engagements took the form of congratulatory letters sent to target companies, for which success cannot be assessed. Additionally, for palm oil buyers, PRI had not evaluated success by the time the data were provided to us.

| Project name | Success measure |
|---|---|
| Anti-corruption (Phase 1) | Scorecards |
| Anti-corruption (Phase 2) | Scorecards |
| CDLI 2011 | Whether target's leadership index improved |
| CDLI 2012 | Whether target's leadership index improved |
| CDP Carbon Action | Whether target sets an objective or demonstrated progress on this |
| CDP Engagement on Emissions Reduction Plans | Whether emission reduction program started in year after engagement |
| CDP Water Disclosure 2011 | Whether the target disclosed to CDP Water in year after engagement |
| CDP Water Disclosure 2012 | Whether the target disclosed to CDP Water in year after engagement |
| CEO Water Mandate | Whether the target signed up in the initiative |
| COP1 - First annual UNGC engagement | Whether the UNGC target company became active |
| COP2 - Second annual UNGC engagement | N/A |
| COP3 - Third annual UNGC engagement | Whether the UNGC target company became active |
| COP4 - Fourth annual UNGC engagement | Whether the UNGC target company became active |
| COP5 - Fifth annual UNGC engagement | Whether the UNGC target company became active |
| COP6 - Sixth annual UNGC engagement | N/A |
| Corporate climate lobbying | Scorecards |
| Director nominations | Scorecards |
| Employee relations | Scorecards |
| Forest Footprint Disclosure 2011 | Whether the target disclosed forest footprint |
| Forest Footprint Disclosure 2012 | Whether the target disclosed forest footprint |
| Fracking | Scorecards |
| Human rights in extractives | Scorecards |
| Indigenous rights | Scorecards |
| Labor standards in agricultural supply chain: phase 1 | Scorecards |
| Palm oil buyers | N/A |
| Palm oil growers | Scorecards (based on interim evaluation) |
| Conflict minerals | Scorecards |
| Senior gender equity with global companies | Scorecards |
| Sudan engagement | Scorecards |
| Sustainable fisheries | Whether the target provided a response addressing requested areas |
| Water risks in agricultural supply chains | Scorecards |

# Appendix C: Variable Definitions

| Variable Name | Definition |
|---|---|
| ***Target firm characteristics*** (*Data source: WorldScope and Compustat*) | |
| Market cap (log, $m) | The natural logarithm of market capitalization in millions of dollars, converted from local currencies to US dollars using fiscal year-end exchange rate. |
| Market-to-book | Market capitalization / Book value of equity. |
| Stock return | Annual buy-and-hold stock return. |
| Stock return volatility | Standard deviation of monthly stock returns during the fiscal year. |
| Sales growth | (Current year sales – Previous year sales) / Previous year sales. |
| Return on assets (ROA) | Earnings before interest, tax, depreciation and amortization (EBITDA) / Total assets |
| Cash/Assets | Cash / Total assets |
| Capex/Assets | Capital expenditures / Total assets |
| R&D/Assets | R&D expenditures / Total assets |
| Leverage | (Short-term debt + Long-term debt) / Total assets |
| Dividend payout | Common dividends in cash / Net income before extraordinary items |
| Foreign sales% | Foreign sales/Total sales |
| Insider holdings | The number of closely held shares / Common shares outstanding. |
| ***Shareholdings in target firms*** (*Data source: FactSet*) | |
| Long-term inst. holdings | Percentage of shares held by long-term institutions whose portfolio churn ratio is below the sample median (Gaspar, Massa, and Matos (2005)). |
| Investor group holdings | Percentage of shares held by all participating investors. |
| Investor group holdings (log, $m) | Natural logarithm of 1 plus the investor group holdings in millions of dollars, calculated as the percentage of shareholdings held by all participating investors multiplied by the target firm's market capitalization. |
| Lead investor holdings | Percentage of shares held by lead investors. |
| Lead investor holdings (log, $m) | Natural logarithm of 1 plus the lead investor holdings in millions of dollars, calculated as the percentage of shareholdings held by all participating investors multiplied by the target firm's market capitalization. |
| Supporting investor holdings | Percentage of shares held by supporting investors. |
| Supporting investor holdings ($m) | Natural logarithm of 1 plus the supporting investor holdings in millions of dollars, calculated as the percentage of shareholdings held by all participating investors multiplied by the target firm's market capitalization. |
| Signatory exposure to target | The value of a signatory's shareholdings in the target divided by the signatory's total portfolio value, measured at the end of the calendar quarter immediately preceding the engagement start date. A signatory's overall equity portfolio value is calculated as the sum of all holdings in a quarter, as recorded by FactSet. |
| Signatory holdings in target | Percentage of shares in target held by a signatory, measured at the end of calendar quarter immediately preceding the engagement start date. |
| ***Target firm ESG ratings*** (*Data sources: Refinitiv*) | |
| Refinitiv overall ESG rating | Refinitiv's ESG Combined Score. It is an overall firm score based on the reported information in the E, S, and G pillars (ESG Score) with an ESG Controversies overlay. All Refinitiv ratings are reported on a scale of 0 to 100. |
| Refinitiv governance rating | Refinitiv's Governance Pillar Score. It is the weighted average relative rating of a company based on the reported governance information and the resulting three governance category scores. |
| Refinitiv social rating | Refinitiv's Social Pillar Score. It is the weighted average relative rating of a company based on the reported social information and the resulting four social category scores. |
| Refinitiv environment rating | Refinitiv's Environment Pillar Score. It is the weighted average relative rating of a company based on the reported environmental information and the resulting three environmental category scores. |
| ***Target firm/Investor country-level variables*** (*Data sources: Literature*) | |
| Legal origin | Legal origin is one of four categories: English, French, Scandinavian, or German, based on the commercial law legal origin of a target firm's home country or a signatory's headquarter country. We reclassify Russia as having German rather than socialist origin. The data are obtained from Djankov, McLiesh, and Shleifer (2007). |
| Social norm | We measure a country's aggregate E&S social norm using the World Values Survey (WVS). The data on social norms for our sample countries uses the World Value E&S Index from Dyck et al. (2019, Table 5). This variable is averaged over 1999-2010. |

| Variable Name | Definition |
|---|---|
| ***Signatory/Investor-level variables*** (*Data source: PRI and FactSet*) | |
| AUM ($tr) | Signatories' self-reported AUM as of 2017 in trillion US dollars. AUMs are unavailable for service providers. |
| PRI's founding signatory | Indicator of whether the signatory is identified on PRI website (unpri.org/about-the-pri) as founding signatory. |
| Years of being a signatory | Year 2017 minus the year when the investor signed up as a PRI signatory. It is missing for four signatories. |
| Formal process of engagements by internal staff | Indicator of whether the signatory self-reports a formal process for identifying and organizing engagement activities by internal staff. We take the maximum value in PRI's annual reporting surveys during 2014–2018. Data is missing for a few signatories. (Source: PRI Reporting Framework) |
| Number of collaborative initiatives participated besides PRI | Non-PRI participations include UN Global Compact, CDP Climate Change, CDP Forest, CFP Water, Asian Corporate Governance Association, Association for Sustainable & Responsible Investment in Asia, Global Real Estate Sustainability Benchmark (GRESB), Institutional Investors Group on Climate Change (IIGCC), International Corporate Governance Network (ICGN), etc. We take the maximum number in PRI's annual reporting surveys for 2014–2018. Data is missing for a few signatories. (Source: PRI Reporting Framework) |
| Signatory is asset owner | Indicator of whether the signatory is self-reported as an Asset Owner when signing up at PRI. |
| Signatory is pension fund | Indicator of whether the signatory is a pension fund. We use signatories' self-reported type, the Top 1000 European Pension Funds 2016 list and The World's 300 Largest Pension Funds 2016 list to identify pensions. |
| Signatory is public/private pension | Indicator of whether the signatory is a public/private pension fund. Among all the pensions, we classify those self-reported as "non-corporate pension" or "sovereign wealth fund or government-controlled fund" as public pensions. The remaining types, including insurance pensions, corporate pensions, etc., are deemed private pensions. |
| Signatory is other asset owner | Indicator whether the signatory is other asset owner. An asset owner that is not a pension fund is classified as other asset owner. |
| Signatory annual flow | We first calculate quarterly fund flow as the total equity portfolio value at quarter end divided by the total equity portfolio value at the previous quarter end. We then subtract the portfolio return, computed as stock price changes during the quarter multiplied with equity holdings at the previous quarter end, and then divided by the total equity portfolio value at the previous quarter end. If a signatory has multiple funds under FactSet, we calculate the weighted average fund flow, using total equity portfolio value as weight. Lastly, we compute annual flows by cumulating the quarterly flows. This approach assumes no interim trading between reported quarter ends. |
| Signatory annual return | We first calculate quarterly fund return as stock price changes during the quarter multiplied with equity holdings at the previous quarter end, and then divided by the total equity portfolio value at the previous quarter end. If a signatory has multiple funds under FactSet, we calculate the weighted average fund return, using total equity portfolio value as weight. Lastly, we compute annual returns by cumulating the quarterly returns. |
| Signatory churn ratio | It is the average portfolio churn ratio over the last four consecutive quarters. See Gaspar, Massa, and Matos (2005) for the calculation of portfolio churn ratio. If a signatory has multiple funds under FactSet, we calculate the weighted average churn ratio, using total equity portfolio value as weight. |
| Num. of funds under signatory | The total number of funds a signatory has under FactSet. |
| Signatory portfolio value | The aggregate value of equity holdings a signatory has at a year end. |
| Signatory has engagement experience | An indicator variable defined as one if the signatory joined an engagement initiated during the calendar year and it remains as one for the signatory for all future years. It is set as zero for non-collaborating signatories (those never participated in any engagement) and for a collaborating signatory before it joined any engagement. |
| Signatory has successful engagement experience | An indicator variable defined as one during the year when a successful engagement the signatory joined ended and it remains as one for the signatory for all future years. It is set as zero for non-collaborating signatories (those never participated in any engagement). |
| Signatory has lead experience | An indicator variable defined as one if the signatory led an engagement initiated during the calendar year and it remains as one for the signatory for all future years. |
| Signatory has successful lead experience | An indicator variable defined as one during the year when a successful engagement the signatory led ended, and it remains as one for the signatory for all future years. |
| ***Signatory-engagement level variables*** (*Data source: Authors' calculations*) | |
| Target is domestic | An indicator variable defined as one if the target firm and signatory/investor are located in the same country. |
| Geographic distance between target and signatory | It is defined as zero if the target firm and signatory are located in the same country, one if they are from the same geographic region (Europe, Asia, Africa, Middle East, Latin America, North America, and Oceania) but different countries, and two if they are from different regions. |

| Variable Name | Definition |
|---|---|
| Cultural distance between target and signatory | The Euclidean distance in two dimensions of culture, i.e., traditional versus secular/rational and survival versus self-expression orientations. Culture values are obtained from WVS and measured at the year immediately before engagement starting date (worldvaluessurvey.org/WVSEventsShow.jsp?ID=428&ID=428). |
| Joined PRI before project start | An indicator variable defined as one if the signatories signed up at PRI before the project started, and zero otherwise. |
| Signatory has past projects | An indicator variable defined as one if the signatory participated in at least one PRI-coordinated engagement project that concluded before the current project started, and zero otherwise. |
| Signatory has other ongoing projects | An indicator variable defined as one if the signatory participated in at least one PRI-coordinated engagement project that started before the current project and was still ongoing, and zero otherwise. |
| Signatory has past projects as lead | An indicator variable defined as one if the signatory led at least one PRI-coordinated engagement project that concluded before the current project started, and zero otherwise. |
| Signatory has other ongoing projects as lead | An indicator variable defined as one if the signatory led at least one PRI-coordinated engagement project that started before the current project and was still ongoing, and zero otherwise. |
| Lead and signatory from the same country | An indicator variable defined as one if the lead investor is headquartered in the same country as the signatory, and zero otherwise. If there are multiple lead investors in the engagement, the maximum value is used. |
| Geographic distance between lead and signatory | It is defined as zero if the lead investor and signatory are headquartered in the same country, one if in the same geographic region (Europe, Asia, Africa, Middle East, Latin America, North America, and Oceania) but different countries, and two if in different regions. If there are multiple lead investors in the engagement, the minimum distance value is used. |
| Cultural distance between lead and signatory | The Euclidean distance in two dimensions of culture, i.e., traditional versus secular/rational and survival versus self-expression orientations. Culture values are obtained from WVS and measured at the year immediately before engagement starting date (worldvaluessurvey.org/WVSEventsShow.jsp?ID=428&ID=428). If there are multiple lead investors in the engagement, the minimum distance value is used. |
| ***Engagement level variables*** (*Data source: Authors' calculations*) | |
| Public pension funds in investor group% | The number of public pension funds in the investor group divided by the total number of investors in the group. |
| Private pension funds in investor group% | The number of private pension funds in the investor group divided by the total number of investors in the group. |
| Other asset owners in investor group% | The number of other asset owners which are not pension funds in the investor group divided by the total number of investors in the group. |
| Founding signatories in investor group% | The number of PRI founding signatories in the investor group divided by the total number of investors in the group. |
| Domestic signatories in investor group% | The number of investors headquartered in the same country as the target firm divided by the total number of investors in the group. |
| Investors from high social norm countries% | The number of investors headquartered in high social norm countries divided by the total number of investors in the group. We define a country as having high social norm if its WVS value is above the sample median of 0.53. |
| Two-tier engagement | An indicator defined as one if the engagement has a two-tier engagement structure, and zero otherwise. |

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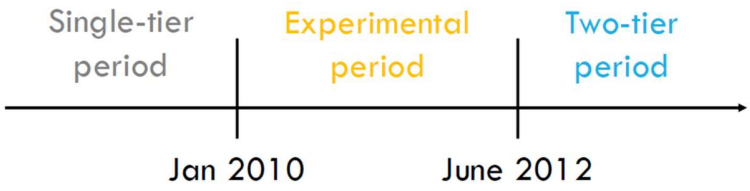
**Figure 1: Timeline of PRI engagement structure change**

This figure illustrates the timeline of the PRI engagement structure changes. All PRI-coordinated projects initiated before January 2010 followed a single-tier engagement structure. We refer to this phase as the "single-tier period", which includes four single-tier engagement projects with success data. Between January 2010 and May 2012, PRI began experimenting with a two-tier structure in some of its engagement projects. We label this phase as the "experimental period", which includes three two-tier engagement projects and ten single-tier engagement projects with success data. From June 2012 onwards, all newly initiated engagement projects (except for one without success data) adopted a two-tier structure. We label this phase as the "two-tier period", which includes 11 two-tier projects with success data.



## Table 1: List of coordinated engagement projects

This table lists the 31 PRI-coordinated projects used in our analysis. An engagement is defined as a sequence of dialogues and interactions with a target firm within a project. The table reports the start and end dates, the number of engagements, the number of countries where the target firms are domiciled, and the average number of participating investors in each project. It also indicates whether the project follows a two-tier engagement structure. CDP refers to the former Carbon Disclosure Project, COP to Communication on Progress, and UNGC to the United Nations Global Compact. All projects had concluded by the time of writing, except for Palm Oil Growers, which was still ongoing.

| Project name | Project duration | Num. of engagements | Num. of countries | Avg. num. of investors | Two-tier engagement |
|---|---|---|---|---|---|
| Anti-corruption (Phase 1) | 01 Mar 10 - 31 Mar 13 | 20 | 14 | 25 | Yes |
| Anti-corruption (Phase 2) | 01 Apr 13 - 15 Jun 15 | 32 | 13 | 37 | Yes |
| Carbon Disclosure Leadership Index: CDLI 2011 | 01 Mar 11 - 31 Dec 11 | 91 | 19 | 13 | No |
| Carbon Disclosure Leadership Index: CDLI 2012 | 01 Mar 12 - 31 Jan 13 | 69 | 20 | 21 | No |
| CDP Carbon Action | 16 Nov 12 - 19 Dec 14 | 25 | 12 | 2 | Yes |
| CDP Engagement on Emissions Reduction Plans | 01 Sep 09 - 31 Dec 11 | 81 | 19 | 34 | No |
| CDP Water Disclosure 2011 | 01 Feb 11 - 30 Sep 11 | 123 | 30 | 33 | No |
| CDP Water Disclosure 2012 | 01 Mar 12 - 31 Oct 12 | 40 | 21 | 30 | No |
| CEO Water Mandate | 01 Aug 08 - 30 Sep 10 | 94 | 25 | 15 | No |
| COP1 - First Annual UNGC Engagement | 01 Jan 07 - 31 Dec 08 | 78 | 28 | 20 | No |
| COP2 - Second Annual UNGC Engagement | 01 Dec 08 - 31 Dec 09 | 102 | 35 | 35 | No |
| COP3 - Third Annual UNGC Engagement | 01 Jan 10 - 31 Dec 10 | 109 | 37 | 36 | No |
| COP4 - Fourth Annual UNGC Engagement | 01 Jan 11 - 31 Dec 11 | 103 | 39 | 39 | No |
| COP5 - Fifth Annual UNGC Engagement | 01 Feb 12 - 28 Feb 13 | 115 | 41 | 35 | No |
| COP6 - Sixth Annual UNGC Engagement | 10 Mar 14 - 16 Apr 14 | 163 | 41 | 22 | No |
| Corporate Climate Lobbying | 03 Mar 15 - 31 Dec 18 | 19 | 3 | 5 | Yes |
| Director Nominations | 19 Oct 12 - 30 Sep 16 | 23 | 3 | 18 | Yes |
| Employee Relations | 19 Oct 12 - 31 Dec 15 | 25 | 14 | 24 | Yes |
| Forest Footprint Disclosure 2011 | 01 Aug 11 - 31 Mar 12 | 25 | 11 | 21 | No |
| Forest Footprint Disclosure 2012 | 01 Jun 12 - 31 Oct 12 | 8 | 2 | 31 | Yes |
| Fracking | 19 Oct 12 - 23 Dec 16 | 29 | 8 | 8 | Yes |
| Human Rights in Extractives | 03 Feb 14 - 01 Nov 17 | 32 | 17 | 51 | Yes |
| Indigenous Rights | 01 Jun 10 - 31 Dec 12 | 10 | 5 | 16 | Yes |
| Labor Standards in the Agr Supply Chain: phase 1 | 19 Oct 12 - 31 Dec 15 | 32 | 14 | 39 | Yes |
| Palm Oil Buyers | 25 Jan 13 - 31 Dec 15 | 45 | 15 | 25 | Yes |
| Palm Oil Growers | 26 Mar 14 - | 13 | 4 | 10 | Yes |
| Conflict Minerals | 01 Nov 10 - 30 Sep 13 | 15 | 4 | 16 | No |
| Senior Gender Equality with Global Companies | 01 Feb 10 - 30 Sep 12 | 55 | 9 | 10 | Yes |
| Sudan Engagement | 01 Jan 08 - 31 Dec 12 | 7 | 6 | 28 | No |
| Sustainable Fisheries | 01 Jun 11 - 31 Jan 13 | 41 | 18 | 20 | No |
| Water Risks in Agricultural Supply Chains | 01 Jan 15 - 30 Sep 17 | 30 | 13 | 23 | Yes |
| Sample Mean | 795 days | 53 | 18 | 26 | |
| Sample Median | 798 days | 32 | 14 | 25 | |

## Table 2: Attributes of target firms

This table analyzes the determinants of targeting by comparing target firms with their peers in the fiscal year immediately prior to the engagement start date using probit regressions. For each target, peer firms are selected from the same country and industry (3-digit SIC). If fewer than three peers are identified for a target, the industry is relaxed to 2-digit SIC. When more than 10 peers are identified, we retain the 10 closest in market capitalization to the target. The dependent variable is set to one for the target and zero for its peers. Coefficients are presented as marginal effects. Columns (1), (3), and (5) include all engagements with available data on the regression variables, while Columns (2), (4), and (6) are limited to two-tier engagements. Regressions in Columns (3) and (4) include the Refinitiv overall ESG score, and Columns (5) and (6) include individual ESG component ratings. All variables are defined in Appendix C. The regressions control for industry (2-digit SIC) and year fixed effects, and standard errors are clustered at the project level. All continuous variables are winsorized at the 1st and 99th percentiles. ∗∗∗, ∗∗, and ∗ denote significance at the 1%, 5%, and 10% levels, respectively.

| | **No ESG ratings** | | **Refinitiv overall ESG rating** | | **Refinitiv ESG components ratings** | |
|---|---|---|---|---|---|---|
| | **All engagements** | **Two-tier engagements** | **All engagements** | **Two-tier engagements** | **All engagements** | **Two-tier engagements** |
| | **(1)** | **(2)** | **(3)** | **(4)** | **(5)** | **(6)** |
| Market cap (log, $m) | 0.050*** | 0.035*** | 0.135*** | 0.130*** | 0.134*** | 0.130*** |
| | (9.43) | (6.27) | (8.88) | (7.67) | (8.81) | (7.17) |
| Market-to-book | –0.002** | –0.002** | 0.001 | 0.002 | 0.001 | 0.003 |
| | (–2.26) | (–2.02) | (0.21) | (0.23) | (0.13) | (0.43) |
| Stock return | –0.027*** | –0.023*** | –0.040 | –0.080** | –0.040 | –0.076** |
| | (–5.91) | (–2.75) | (–1.52) | (–2.29) | (–1.52) | (–2.19) |
| Stock return volatility | 0.054 | 0.041 | 0.011 | –0.774 | 0.008 | –0.845 |
| | (1.01) | (0.50) | (0.03) | (–1.36) | (0.02) | (–1.44) |
| Return on assets | 0.073** | 0.045 | 0.026 | –0.191 | 0.038 | –0.221 |
| | (2.45) | (1.20) | (0.21) | (–0.85) | (0.30) | (–0.96) |
| Leverage | 0.009 | –0.003 | 0.007 | –0.194 | –0.003 | –0.198 |
| | (0.43) | (–0.12) | (0.09) | (–1.44) | (–0.04) | (–1.50) |
| Dividend payout | 0.004 | 0.004 | 0.026 | 0.052* | 0.026 | 0.050* |
| | (1.22) | (1.13) | (1.58) | (1.73) | (1.56) | (1.69) |
| Sales growth | –0.039*** | –0.029*** | –0.143*** | –0.062* | –0.146*** | –0.053 |
| | (–3.76) | (–2.64) | (–3.65) | (–1.68) | (–3.71) | (–1.48) |
| Cash/Assets | –0.125*** | –0.093*** | –0.220* | –0.290 | –0.216* | –0.327* |
| | (–3.34) | (–2.91) | (–1.72) | (–1.59) | (–1.66) | (–1.95) |
| Capex/Assets | –0.023 | 0.098 | 0.051 | 0.629* | 0.057 | 0.589* |
| | (–0.43) | (1.44) | (0.24) | (1.89) | (0.26) | (1.78) |
| R&D/Assets | –0.808*** | –0.350** | –2.999*** | –3.234*** | –3.015*** | –3.240*** |
| | (–5.73) | (–2.50) | (–5.64) | (–6.57) | (–5.64) | (–6.97) |
| Long-term inst. holdings | –0.006 | 0.010 | –0.073* | –0.056 | –0.069* | –0.069 |
| | (–0.61) | (0.93) | (–1.84) | (–1.10) | (–1.66) | (–1.26) |
| Insider holdings | 0.009 | –0.009 | 0.077** | 0.076 | 0.069* | 0.105 |
| | (0.98) | (–0.88) | (2.04) | (1.16) | (1.79) | (1.50) |
| Foreign sales% | 0.067*** | 0.046*** | 0.129*** | 0.080 | 0.128*** | 0.085 |
| | (6.80) | (4.42) | (4.27) | (1.52) | (4.10) | (1.56) |
| Investor group holdings | 0.746*** | | 1.330*** | | 1.330*** | |
| | (5.51) | | (3.45) | | (3.39) | |
| Lead investor holdings | | 2.588*** | | 8.331*** | | 8.283*** |
| | | (4.67) | | (3.95) | | (3.78) |
| Supporting investor holdings | | 0.027 | | –0.494 | | –0.523 |
| | | (0.15) | | (–0.55) | | (–0.59) |
| Refinitiv overall ESG rating | | | 0.005*** | 0.006*** | | |
| | | | (5.95) | (9.05) | | |
| Refinitiv governance rating | | | | | 0.001 | 0.003*** |
| | | | | | (1.58) | (3.84) |
| Refinitiv social rating | | | | | 0.002*** | 0.002** |
| | | | | | (3.85) | (2.39) |
| Refinitiv environment rating | | | | | 0.002*** | 0.002** |
| | | | | | (5.20) | (1.97) |
| Observations | 10,859 | 2,697 | 3,917 | 1,217 | 3,907 | 1,214 |
| Num. of targets / controls | 1,495 / 9,364 | 366 / 2,331 | 1,106 / 2,811 | 319 / 898 | 1,105 / 2,802 | 318 / 896 |
| Pseudo R-squared | 0.285 | 0.437 | 0.321 | 0.436 | 0.321 | 0.439 |
| Year Fixed Effects | Y | Y | Y | Y | Y | Y |
| Industry Fixed Effects | Y | Y | Y | Y | Y | Y |

## Table 3: Attributes of collaborating investors

This table presents analyses of the signatories' decision to collaborate. Panel A, Columns (1) to (3) report marginal effects from signatory-level probit regressions on the likelihood of a signatory becoming a collaborating investor (i.e., participating in at least one engagement). The sample includes all PRI signatories that are either asset owners or investment managers with available data on the regression variables. Panel A, Columns (4) to (5) report marginal effects from signatory-level probit regressions on a signatory becoming a lead investor (i.e., leading at least one engagement). The sample here consists of all collaborating investors who are either asset owners or investment managers with available information on the regression variables. $AUM^2$ refers to the square of AUM.

Panel B reports signatory-engagement level OLS regression results on a signatory participating in an engagement (Columns 1 to 4), leading an engagement (Columns 5 to 6), and supporting an engagement (Columns 7 to 8), while incorporating signatory and engagement fixed effects. Standard errors are clustered at the signatory and project levels. In Columns (1) to (4), the dependent variable is defined as one if a signatory participated in a particular engagement and zero otherwise. For each engagement, all 208 collaborating investors (excluding service providers) in our sample are considered potential candidates. Analyses are conducted separately for all engagements (Columns 1 and 2) and for single-tier engagements (Columns 3 and 4). In Columns (5) and (6), the dependent variable is defined as one if a collaborating investor took the lead role in a particular engagement, and zero otherwise. Only those collaborating investors who participated in the engagement are considered potential candidates for the lead role. In Columns (7) and (8), the dependent variable is defined as one if a collaborating investor assumed the supporting role, and zero otherwise. All 208 collaborating investors other than the lead(s) in the engagement are considered candidates for the supporting role. Only two-tier engagements are included in the analyses reported in Columns (5) to (8).

In both panels, all variables are defined in Appendix C. "Signatory exposure to target" and "Signatory holdings in target" are multiplied by 100 for easier interpretation. All continuous variables are winsorized at the 1st and 99th percentiles. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

### Panel A: Signatory-level attributes

| | Becoming a collaborating investor | | | Becoming a lead investor | |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| PRI's founding signatory | 0.143*** | 0.082* | 0.137*** | 0.166 | 0.166 |
| | (2.87) | (1.89) | (2.75) | (1.43) | (1.43) |
| Signatory is asset owner | 0.032* | 0.039** | | –0.237*** | |
| | (1.88) | (2.36) | | (–2.75) | |
| Signatory is private pension | | | –0.011 | | –0.360** |
| | | | (–0.39) | | (–2.09) |
| Signatory is public pension | | | 0.061** | | –0.196** |
| | | | (2.35) | | (–2.10) |
| Signatory is other asset owner | | | 0.018 | | –0.218* |
| | | | (0.72) | | (–1.75) |
| Signatory has French legal origin | –0.011 | –0.010 | –0.006 | 0.135 | 0.140 |
| | (–0.62) | (–0.61) | (–0.32) | (1.33) | (1.38) |
| Signatory has Scandinavian legal origin | –0.041* | –0.022 | –0.039 | 0.016 | 0.042 |
| | (–1.67) | (–0.87) | (–1.54) | (0.09) | (0.24) |
| Signatory has German legal origin | –0.055*** | –0.032* | –0.052*** | 0.149 | 0.150 |
| | (–2.85) | (–1.67) | (–2.65) | (0.90) | (0.91) |
| Signatory country social norm | 0.636*** | 0.368** | 0.628*** | 1.380 | 1.323 |
| | (4.00) | (2.45) | (3.90) | (1.53) | (1.47) |
| Years of being a signatory | 0.031*** | 0.017*** | 0.031*** | –0.001 | –0.005 |
| | (11.51) | (6.57) | (11.27) | (–0.05) | (–0.27) |
| AUM ($tr) | 0.433*** | –0.110 | 0.432*** | –0.465 | –0.458 |
| | (3.32) | (–0.83) | (3.29) | (–0.88) | (–0.88) |
| $AUM^2$ | –0.374** | 0.064 | –0.372** | 0.238 | 0.224 |
| | (–2.30) | (0.41) | (–2.27) | (0.45) | (0.42) |
| Signatory has formal process of engagements by internal staff | | 0.106*** | | 0.330*** | 0.324*** |
| | | (5.73) | | (2.85) | (2.80) |
| Num. of collaborative initiatives participated besides PRI | | 0.016*** | | 0.027** | 0.028** |
| | | (7.21) | | (2.23) | (2.30) |
| Observations | 1,443 | 1,354 | 1,443 | 199 | 199 |
| Adj R-squared | 0.297 | 0.417 | 0.299 | 0.190 | 0.197 |

**Panel B: Engagement-level attributes**

| | All engagements | | Single-tier engagements | | Two-tier engagements | | | |
|---|---|---|---|---|---|---|---|---|
| | Participating in an engagement | | Participating in an engagement | | Leading an engagement | | Supporting an engagement | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Target is domestic | 0.027*** | | 0.026** | | 0.220*** | | –0.003 | –0.008 |
| | (3.09) | | (2.39) | | (3.81) | | (–0.30) | (–0.78) |
| Geographic distance between target and signatory | | –0.017*** | | –0.018** | | –0.044*** | | |
| | | (–2.91) | | (–2.57) | | (–4.21) | | |
| Cultural distance between target and signatory | | 0.008 | | 0.009 | | –0.092*** | | |
| | | (1.58) | | (1.55) | | (–3.07) | | |
| Joined PRI before project start | 0.095*** | 0.095*** | 0.073** | 0.073*** | 0.008 | –0.001 | 0.090** | 0.091*** |
| | (4.64) | (4.71) | (2.93) | (2.98) | (0.27) | (–0.02) | (2.91) | (2.99) |
| Signatory has past projects | –0.110* | –0.110* | –0.112 | –0.113 | | | –0.075** | –0.074** |
| | (–1.92) | (–1.93) | (–1.46) | (–1.47) | | | (–2.62) | (–2.58) |
| Signatory has other ongoing projects | –0.053* | –0.053* | –0.059 | –0.060 | | | –0.066** | –0.066** |
| | (–1.88) | (–1.92) | (–1.41) | (–1.44) | | | (–2.52) | (–2.53) |
| Signatory has past projects as lead | | | | | 0.011 | 0.009 | | |
| | | | | | (0.55) | (0.46) | | |
| Signatory has other ongoing projects as lead | | | | | –0.035** | –0.036** | | |
| | | | | | (–2.80) | (–2.95) | | |
| Signatory exposure to target | 0.000 | 0.002 | –0.021 | –0.019 | 0.078** | 0.083*** | 0.017 | 0.017 |
| | (0.02) | (0.11) | (–1.08) | (–1.03) | (2.76) | (3.43) | (1.34) | (1.34) |
| Signatory holdings in target | –0.005 | –0.003 | –0.001 | 0.001 | 0.104** | 0.093** | –0.010 | –0.011 |
| | (–0.42) | (–0.22) | (–0.09) | (0.04) | (2.51) | (2.84) | (–0.82) | (–0.93) |
| Lead and signatory from the same country | | | | | | | 0.014** | |
| | | | | | | | (2.84) | |
| Geographic distance between lead and signatory | | | | | | | | –0.005 |
| | | | | | | | | (–1.13) |
| Cultural distance between lead and signatory | | | | | | | | –0.016* |
| | | | | | | | | (–1.88) |
| Observations | 342,857 | 333,974 | 260,596 | 252,935 | 8,412 | 8,272 | 80,707 | 80,314 |
| Adj. R-squared | 0.242 | 0.241 | 0.327 | 0.326 | 0.156 | 0.158 | 0.174 | 0.176 |
| Engagement fixed effects | Y | Y | Y | Y | Y | Y | Y | Y |
| Signatory fixed effects | Y | Y | Y | Y | Y | Y | Y | Y |

## Table 4: Determinants of engagement success

This table analyzes the determinants of engagement success. Panel A reports the engagement-level probit regression results on engagement success. The regression in Column (1) includes all engagements with available data on the regression variables. In Columns (2) and (3), we match observations between single-tier and two-tier engagements based on target firm characteristics and investor group holdings, using all determinant variables listed in Table 2, Column (1). We also include target firms' country legal origins and social norms as additional matching variables. We use Entropy Balancing (at the first two moments) and Propensity Score Matching (PSM, with replacement and a caliper of 0.01) approaches in Column (2) and Column (3), respectively.

In Panel B, we replace the two-tier engagement indicator with an indicator for pseudo-lead engagements. An engagement is classified as a pseudo-two-tier engagement if it has at least one pseudo lead investor. We regress the pseudo-two-tier engagement indicator on success using single-tier engagements only. We use two approaches to identify the pseudo-lead in a single-tier engagement. In the first approach, we use the lead-investor determinant model from Column (5) of Table 3, Panel B and apply the estimated coefficients to make out-of-sample predictions on the probability of an investor being a lead in a single-tier engagement. An investor is classified as a pseudo-lead if its predicted probability of being a lead exceeds 0.25385, a threshold selected to match the percentage of pseudo-leads in the single-tier subsample with the percentage of actual leads in the two-tier engagement subsample. In the second approach, we use a naïve method to identify the pseudo-lead in an engagement, classifying an investor as a pseudo-lead if they are domestic, an investment manager, and have internal staff dedicated to engagements. In this panel, additional engagement-level attributes and target firm characteristics (as in Panel A) are included in all regressions, though their coefficients are abbreviated for brevity.

Coefficients are presented as marginal effects. Standard errors are clustered at the project level, and *t*-statistics are shown in parentheses. Variables are defined in Appendix C. All continuous variables are winsorized at 1st and 99th percentile levels. ∗∗∗, ∗∗, and ∗ denote significance at the 1%, 5%, and 10% level, respectively.

**Panel A: Regression analysis on engagement success**

| **Marginal effects** | **All engagements** | **Entropy Balanced** | **PSM** |
|---|---|---|---|
| | **(1)** | **(2)** | **(3)** |
| ***Engagement-level attributes:*** | | | |
| **Two-tier engagement** | **0.251*** ** | **0.234*** ** | **0.306*** ** |
| | **(3.11)** | **(2.66)** | **(2.67)** |
| Investor group holdings (log, $m) | 0.011 | 0.007 | 0.011 |
| | (0.91) | (0.55) | (0.70) |
| Public pension funds in investor group% | 0.445** | 0.558* | 0.288 |
| | (2.50) | (1.70) | (0.65) |
| Private pension funds in investor group% | –2.910*** | –1.966 | –1.464 |
| | (–2.92) | (–1.56) | (–0.94) |
| Other asset owners in investor group% | –0.927 | –0.840 | –0.766 |
| | (–0.77) | (–0.69) | (–0.56) |
| Founding signatories in investor group% | –0.130 | 0.269 | 0.128 |
| | (–0.56) | (0.85) | (0.30) |
| Domestic signatories in investor group% | 0.241 | 0.398** | 0.611** |
| | (1.32) | (2.21) | (2.34) |
| Investors from high social norm countries% | 0.892*** | 0.827*** | 1.119*** |
| | (4.25) | (2.99) | (2.87) |
| ***Target firm characteristics:*** | | | |
| Market cap (log, $m) | 0.057*** | 0.068** | 0.039 |
| | (3.62) | (2.40) | (1.29) |
| Market-to-book | –0.013 | –0.003 | –0.027* |
| | (–1.37) | (–0.24) | (–1.67) |
| Stock return | –0.005 | –0.173*** | –0.128 |
| | (–0.10) | (–3.04) | (–1.50) |
| Stock return volatility | –1.003* | –0.108 | –1.062 |
| | (–1.87) | (–0.13) | (–0.77) |

| | | | |
|---|---|---|---|
| Return on assets | 0.004 | 0.434 | 0.849 |
| | (0.01) | (0.73) | (1.14) |
| Leverage | –0.049 | –0.031 | –0.137 |
| | (–0.25) | (–0.14) | (–0.46) |
| Dividend payout | 0.047* | 0.042 | 0.060 |
| | (1.68) | (1.03) | (1.09) |
| Sales growth | –0.137 | –0.403** | –0.245** |
| | (–1.48) | (–2.48) | (–2.04) |
| Cash/Assets | –0.018 | –0.141 | 0.855* |
| | (–0.06) | (–0.30) | (1.81) |
| Capex/Assets | –0.055 | –0.033 | –0.626 |
| | (–0.11) | (–0.07) | (–0.71) |
| R&D/Assets | 1.485 | 0.739 | –0.131 |
| | (1.37) | (0.45) | (–0.06) |
| Long-term inst. holdings | 0.178* | 0.281** | 0.328** |
| | (1.66) | (2.49) | (2.21) |
| Insider holdings | 0.112 | 0.099 | –0.003 |
| | (1.23) | (0.78) | (-0.02) |
| Foreign sales% | –0.063 | –0.122 | –0.345* |
| | (–0.81) | (–1.32) | (–1.72) |
| French legal origin | 0.177** | 0.221** | 0.289** |
| | (2.54) | (2.31) | (2.41) |
| Scandinavian legal origin | 0.073 | 0.130 | 0.326** |
| | (0.64) | (1.00) | (2.14) |
| German legal origin | –0.003 | 0.071 | 0.023 |
| | (–0.04) | (0.76) | (0.18) |
| Country social norm | 0.433 | 0.294 | –0.153 |
| | (1.34) | (0.82) | (–0.27) |
| Observations | 911 | 911 | 555 |
| Pseudo R-squared | 0.222 | 0.232 | 0.265 |
| Year Fixed Effects | N | N | N |
| Industry Fixed Effects | Y | Y | Y |

**Panel B: Regression using pseudo lead**

| | **Single-tier Engagements** | |
|---|---|---|
| | **Pseudo lead using predicted value** | **Pseudo lead using naïve method** |
| | **(1)** | **(2)** |
| **Pseudo-two-tier engagement** | **0.012** | **–0.101** |
| | **(0.17)** | **(–1.27)** |
| Observations | 593 | 593 |
| Pseudo R-squared | 0.186 | 0.188 |
| Target firm characteristics | Y | Y |
| Engagement-level attributes | Y | Y |
| Year fixed effects | N | N |
| Industry fixed effects | Y | Y |

## Table 5: Determinants of engagement success: leader characteristics

This table reports the engagement-level probit regression results on engagement success conditioning on two-tier structure. In Panel A, *Target is Opaque* is defined in three different ways. In Columns (2) and (3), it is defined as one if the target firm is in a country with limited access to shareholder meetings (at or below the sample median of 3). A country's access to shareholder meeting is calculated as the sum of four indicators: (1) whether the country's governance code requires that all shareholders are notified of the general meeting, (2) whether the minimum number of days a company is required to notify shareholders before a meeting is greater than the median for each calendar year, (3) whether the percentage of share ownership required to request a shareholder meeting is below the median for each calendar year, and (4) whether the percentage of share ownership required to put an item on the meeting agenda for a vote is below the median for each calendar year. These indicators are obtained from Maffett, Nakhmurina, and Skinner (2022). In Columns (4) and (5), *Target is Opaque* is defined as one if the target firm is in a country with a low disclosure score (at or below the sample median of 74), which measures the approval and disclosure requirements for related-party transactions. The score ranges from 0 to 100, where 0 represents the worst, and is obtained for 2012 from the World Bank Doing Business project database (http://www.doingbusiness.org/). In Columns (6) and (7), *Target is Opaque* is defined as one if the target firm is in a country with large population (equal to or above the sample median of 65 million), based on the country's total population in 2012, downloaded from the World Bank database.

In Panel B, *Engagement has Reputable Lead(s)* is defined as one if the engagement includes at least a leader with the reputation measure equal to one. In Columns (1) and (2), a reputable leader is defined as one who led at least a coordinated engagement in our sample prior to the current engagement. In Columns (3) and (4), a leader participating in at least 12 collaborative initiatives outside the PRI (top quartile) is classified as having a reputation. In Columns (5) and (6), a leader who received an A+ rating (the highest rating) from PRI for the Listed Equity Active Ownership (LEA) module during any year between 2014 and 2018 is classified as having a reputation. *Engagement has Reputable and High Social Norm Lead(s)* is defined as one if the engagement has at least a reputable lead from high social norm countries.

Coefficients are presented as marginal effects. Standard errors are clustered at the project level, and *t*-statistics are shown in parentheses. Variables are defined in Appendix C. All continuous variables are winsorized at 1st and 99th percentile levels. ∗∗∗, ∗∗, and ∗ denote significance at the 1%, 5%, and 10% level, respectively.

**Panel A: Leader with informational advantage**

| **Opaqueness measured as:** | | **Target home country has limited access to shareholder meeting (score<=3)** | | **Target home country has low disclosure score in 2012 (score<=74)** | | **Target home country has large population in 2012 (>=65 million)** | |
|---|---|---|---|---|---|---|---|
| | **(1)** | **(2)** | **(3)** | **(4)** | **(5)** | **(6)** | **(7)** |
| ***Leader attributes:*** | | | | | | | |
| Lead investor holdings (log, $m) | 0.032*** | 0.033*** | 0.028*** | 0.031*** | 0.033*** | 0.033*** | 0.033*** |
| | (3.80) | (3.63) | (2.79) | (3.96) | (3.76) | (3.99) | (3.90) |
| Engagement has Public Pension Plan as Lead(s) | –0.205*** | –0.207*** | –0.226*** | –0.197** | –0.184** | –0.196*** | –0.203*** |
| | (–2.62) | (–2.66) | (–3.00) | (–2.42) | (–2.32) | (–2.73) | (–2.82) |
| Engagement has Founding Signatory as Lead(s) | –0.136* | –0.135* | –0.108 | –0.131* | –0.129* | –0.131* | –0.124* |
| | (–1.81) | (–1.80) | (–1.43) | (–1.80) | (–1.82) | (–1.69) | (–1.65) |
| **Engagement has Domestic Lead(s)** | **0.236*** ** | **0.250*** ** | **0.092** | **0.251*** ** | **0.119** ** | **0.240*** ** | **0.111** |
| | **(4.43)** | **(4.18)** | **(1.23)** | **(4.27)** | **(2.14)** | **(4.46)** | **(1.51)** |
| Engagement has High Social Norm Lead(s) | 0.108 | 0.115* | –0.087 | 0.118* | 0.131** | 0.107* | 0.137** |
| | (1.62) | (1.82) | (–0.94) | (1.81) | (2.01) | (1.65) | (2.17) |
| Target is Opaque | | 0.092 | –0.176* | 0.080 | –0.038 | –0.063 | –0.165** |
| | | (0.98) | (–1.81) | (1.56) | (–0.66) | (–0.74) | (–2.12) |
| **Engagement has Domestic Lead × Target is Opaque** | | | **0.183*** | | **0.174** ** | | **0.193** ** |
| | | | **(1.76)** | | **(2.25)** | | **(2.08)** |
| Observations | 267 | 267 | 267 | 267 | 267 | 267 | 267 |
| Pseudo R-squared | 0.324 | 0.327 | 0.346 | 0.328 | 0.334 | 0.326 | 0.336 |
| Target firm characteristics | Y | Y | Y | Y | Y | Y | Y |
| Engagement-level attributes | Y | Y | Y | Y | Y | Y | Y |
| Year Fixed Effects | Y | Y | Y | Y | Y | Y | Y |
| Industry Fixed Effects | Y | Y | Y | Y | Y | Y | Y |

**Panel B: Leader with reputation for credibility**

| **Leader reputation measured as:** | **With past leading experience** | | **Having a high number of collaborative initiatives outside the PRI** | | **Having A+ PRI Active Ownership Rating** | |
|---|---|---|---|---|---|---|
| | **(1)** | **(2)** | **(3)** | **(4)** | **(5)** | **(6)** |
| ***Leader attributes:*** | | | | | | |
| Lead investor holdings (log, $m) | 0.028*** | 0.024*** | 0.034*** | 0.021* | 0.031*** | 0.037*** |
| | (3.50) | (3.06) | (3.63) | (1.85) | (3.42) | (4.04) |
| Engagement has Public Pension Plan as Lead(s) | –0.221*** | –0.249*** | –0.210** | –0.208*** | –0.205*** | –0.214** |
| | (–3.01) | (–3.30) | (–2.35) | (–2.61) | (–2.63) | (–2.49) |
| Engagement has Founding Signatory as Lead(s) | –0.131* | –0.132** | –0.133* | –0.097 | –0.140* | –0.161** |
| | (–1.80) | (–1.99) | (–1.69) | (–1.31) | (–1.65) | (–2.01) |
| Engagement has Domestic Lead(s) | 0.221*** | 0.216*** | 0.233*** | 0.250*** | 0.236*** | 0.229*** |
| | (4.26) | (4.40) | (4.42) | (4.60) | (4.51) | (4.44) |
| Engagement has High Social Norm Lead(s) | 0.086 | 0.048 | 0.108 | –0.059 | 0.109 | –0.042 |
| | (1.17) | (0.69) | (1.61) | (–0.67) | (1.59) | (–0.58) |
| **Engagement has Reputable Lead(s)** | **0.175*****| **0.172***** | **–0.022** | **–0.148** | **0.021** | **–0.096** |
| | **(3.37)** | **(3.57)** | **(–0.28)** | **(–1.63)** | **(0.25)** | **(–1.07)** |
| **Engagement has Reputable and High Social Norm Lead(s)** | | **0.165**** | | **0.242***** | | **0.220**** |
| | | **(2.19)** | | **(3.00)** | | **(2.48)** |
| Observations | 267 | 267 | 267 | 267 | 267 | 267 |
| Pseudo R-squared | 0.339 | 0.348 | 0.324 | 0.351 | 0.324 | 0.340 |
| Target firm characteristics | Y | Y | Y | Y | Y | Y |
| Engagement-level attributes | Y | Y | Y | Y | Y | Y |
| Year Fixed Effects | Y | Y | Y | Y | Y | Y |
| Industry Fixed Effects | Y | Y | Y | Y | Y | Y |

## Table 6: Target firm performance

This table examines changes in target firm performance following engagements. Both panels present target-engagement-year level OLS regression results. In Panel A, the dependent variable is abnormal annual buy-and-hold returns, calculated as the target firm's 12-month buy-and-hold return minus the market's 12-month buy-and-hold return, using the MSCI return index. The analysis includes data from 24 months before to 36 months after the engagement start date. Year+1 covers month 0 to month 11, Year+2 includes month 12 to month 23, and Year+3 includes month 24 to month 35, with month 0 representing the monthly return when the engagement started.

In Panel B, the dependent variable is the target firm's return on assets (ROA). The analysis spans two fiscal years before and three fiscal years after the engagement start date. The variable $Post\text{-}engagment_{Year+1\&+2}$ is set to one for the event window covering Year+1 and Year+2, and $Post\text{-}engagment_{Year+3}$ is set to one for the event window covering Year+3. Target firm characteristics are obtained from the corresponding fiscal year-end. All variables are defined in Appendix C. Bold numbers in Column (1) indicate coefficients that are statistically different across subsamples of two-tier and single-tier engagements. Bold numbers in Column (3) indicate coefficients that are statistically different between successful two-tier and unsuccessful single-tier engagements. All regressions include target firm fixed effects and calendar year fixed effects. Standard errors are clustered at the target firm level, and *t*-statistics are reported in parentheses. All continuous variables are winsorized at 1st and 99th percentile levels. ∗∗∗, ∗∗, and ∗ denote significance at the 1%, 5%, and 10% level, respectively.

**Panel A: Regression analysis on target stock performance**

| | Two-tier engagements | Single-tier engagements | Successful two-tier engagements | Unsuccessful single-tier engagements |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Post-engagement$_{Year+1\&+2}$ | **0.047***** | –0.010 | **0.063***** | –0.036 |
| | **(3.03)** | (–0.92) | **(3.07)** | (–1.55) |
| Post-engagement$_{Year+3}$ | **0.094***** | 0.010 | **0.126***** | 0.037 |
| | **(3.51)** | (0.72) | **(3.38)** | (1.16) |
| Market cap (log, $m) | 0.091*** | 0.039** | 0.065 | 0.031 |
| | (2.84) | (1.97) | (1.65) | (1.06) |
| Market-to-book | 0.020** | 0.031*** | 0.018 | 0.049*** |
| | (2.57) | (3.35) | (1.57) | (3.40) |
| Leverage | –0.403** | –0.400** | –0.335 | –0.763*** |
| | (–2.57) | (–2.47) | (–1.63) | (–2.88) |
| Stock return volatility | 1.689*** | 2.034*** | 1.523*** | 1.993*** |
| | (4.27) | (7.60) | (2.81) | (5.48) |
| Target firm fixed effects | Y | Y | Y | Y |
| Year fixed effects | Y | Y | Y | Y |
| Observations | 1,830 | 5,569 | 1,104 | 2,236 |
| Adj R-squared | 0.194 | 0.126 | 0.153 | 0.160 |

**Panel B: Regression analysis on target accounting performance**

| | Two-tier engagements | Single-tier engagements | Successful two-tier engagements | Unsuccessful single-tier engagements |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Post-engagement$_{Year+1\&+2}$ | **0.009**** | 0.001 | **0.014***** | –0.003 |
| | **(2.46)** | (0.74) | **(2.66)** | (–1.03) |
| Post-engagement$_{Year+3}$ | **0.023***** | 0.002 | **0.032***** | 0.001 |
| | **(3.80)** | (0.70) | **(3.59)** | (0.13) |
| Market cap (log, $m) | 0.041*** | 0.024*** | 0.041*** | 0.020*** |
| | (4.19) | (6.10) | (3.35) | (3.00) |
| Market-to-book | –0.000 | 0.002 | –0.001 | 0.005** |
| | (–0.19) | (1.46) | (–0.40) | (2.50) |
| Peer group ROA | 0.095** | 0.078** | 0.091* | 0.120*** |
| | (2.04) | (2.43) | (1.67) | (2.88) |
| Target firm fixed effects | Y | Y | Y | Y |
| Year fixed effects | Y | Y | Y | Y |
| Observations | 1,816 | 5,714 | 1,117 | 2,286 |
| Adj R-squared | 0.730 | 0.766 | 0.701 | 0.754 |

## Table 7: Engagement and future fund flows

This table examines the effect of signatory engagement experience on future fund flows. Panel A provides summary statistics for the regression variables, while Panel B presents OLS regression results. All regressions are performed at the signatory-year level, with the dependent variable being annual signatory fund flows. In Columns (3) and (4) and Columns (7) and (8) of Panel B, the analysis is repeated for investment managers only, corresponding to Columns (1) and (2), and Columns (5) and (6), respectively. Variables are defined in Appendix C. All regressions include signatory fixed effects and calendar year fixed effects. Standard errors are clustered at the signatory level, and *t*-statistics are shown in parentheses. All continuous variables are winsorized at 1st and 99th percentile levels. ∗∗∗, ∗∗, and ∗ denote significance at the 1%, 5%, and 10% level, respectively.

**Panel A: Summary Statistics**

| | **Collaborating and non-collaborating signatories** | | | | **Collaborating signatories** | | | |
|---|---|---|---|---|---|---|---|---|
| | **2007-2019** | | | | **2013-2019** | | | |
| | **Obs** | **Mean** | **Median** | **Std.** | **Obs** | **Mean** | **Median** | **Std.** |
| Signatory annual flow | 5,360 | 1.281 | 1.064 | 1.004 | 705 | 1.086 | 1.056 | 0.252 |
| Signatory annual return$_{Year-1}$ | 5,360 | 0.060 | 0.083 | 0.235 | 705 | 0.068 | 0.053 | 0.141 |
| Signatory annual flow$_{Year-1}$ | 5,360 | 1.425 | 1.078 | 1.666 | 705 | 1.135 | 1.059 | 0.466 |
| Signatory churn ratio$_{Year-1}$ | 5,360 | 0.217 | 0.191 | 0.133 | 705 | 0.176 | 0.170 | 0.089 |
| Num. of funds under signatory | 5,360 | 1.756 | 1.000 | 1.924 | 705 | 2.278 | 1.000 | 2.230 |
| Signatory portfolio value$_{Year-1}$ ($b) | 5,360 | 19.241 | 2.283 | 51.698 | 705 | 27.211 | 7.475 | 42.650 |
| Signatory has engagement experience | 5,360 | 0.172 | 0.000 | 0.377 | 705 | 0.973 | 1.000 | 0.162 |
| Signatory has successful engagement experience | 5,360 | 0.128 | 0.000 | 0.334 | 705 | 0.796 | 1.000 | 0.403 |
| Signatory has lead experience | | | | | 705 | 0.496 | 0.000 | 0.500 |
| Signatory has successful lead experience | | | | | 705 | 0.316 | 0.000 | 0.465 |

**Panel B: Regression analysis on future fund flows**

| | Collaborating and non-collaborating signatories | | Collaborating and non-collaborating signatories (investment managers only) | | Collaborating signatories | | Collaborating signatories (investment managers only) | |
|---|---|---|---|---|---|---|---|---|
| | 2007-2019 | | 2007-2019 | | 2013-2019 | | 2013-2019 | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Signatory annual return$_{Year-1}$ | 0.635*** | 0.632*** | 0.666*** | 0.664*** | 0.339 | 0.339 | 0.416 | 0.417 |
| | (3.09) | (3.07) | (2.98) | (2.97) | (1.49) | (1.47) | (1.63) | (1.61) |
| Signatory annual flow$_{Year-1}$ | 0.018 | 0.017 | 0.02 | 0.019 | 0.077 | 0.077 | 0.061 | 0.061 |
| | (0.63) | (0.60) | (0.70) | (0.68) | (1.45) | (1.44) | (1.02) | (1.01) |
| Signatory churn ratio$_{Year-1}$ | –0.004 | 0.000 | –0.033 | –0.029 | 0.169 | 0.168 | 0.178 | 0.182 |
| | (–0.01) | (0.00) | (–0.11) | (–0.10) | (0.61) | (0.59) | (0.59) | (0.59) |
| Num. of funds under signatory (log) | –0.118 | –0.115 | –0.135 | –0.132 | 0.007 | 0.006 | –0.023 | –0.021 |
| | (–1.05) | (–1.03) | (–1.11) | (–1.09) | (0.13) | (0.13) | (–0.46) | (–0.44) |
| Signatory portfolio value$_{Year-1}$ ($b) | –0.001 | –0.001* | –0.001 | –0.001 | –0.002** | –0.002** | –0.002* | –0.002** |
| | (–1.55) | (–1.67) | (–1.46) | (–1.58) | (–2.56) | (–2.62) | (–1.93) | (–2.01) |
| Signatory has engagement experience | 0.125*** | 0.018 | 0.138*** | 0.028 | | | | |
| | (2.95) | (0.36) | (2.99) | (0.49) | | | | |
| Signatory has successful engagement experience | | 0.183*** | | 0.191*** | | | | |
| | | (2.93) | | (2.65) | | | | |
| Signatory has lead experience | | | | | 0.089* | 0.090** | 0.109** | 0.107** |
| | | | | | (1.92) | (2.05) | (2.08) | (2.20) |
| Signatory has successful lead experience | | | | | | –0.001 | | 0.007 |
| | | | | | | (–0.02) | | (0.18) |
| Observations | 5,360 | 5,360 | 5,065 | 5,065 | 705 | 705 | 610 | 610 |
| Number of signatories | 503 | 503 | 470 | 470 | 107 | 107 | 91 | 91 |
| Adj R-squared | 0.250 | 0.251 | 0.252 | 0.253 | 0.242 | 0.241 | 0.230 | 0.228 |
| Signatory fixed effects | Y | Y | Y | Y | Y | Y | Y | Y |
| Year fixed effects | Y | Y | Y | Y | Y | Y | Y | Y |

# Internet Appendix (Not for publication)

# Coordinated Engagements

This is an addendum to our paper 'Coordinated Engagements'. In Section IA.1, we include additional institutional details about PRI, including its Collaboration Platform. In Section IA.2, we discuss a more detailed literature review in this addendum. In Section IA.3, we discuss the characteristics of engaging investors in detail. We report in the internet appendix tables detailed results that are omitted from our paper. The findings reported here are consistent with the conclusions drawn in our paper.

## IA.1 Additional Institutional Details about PRI

A large proportion of asset owners and investment managers have expressed commitment to investment responsibility by signing up to the UN-sponsored Principles for Responsible Investment. By signing up as signatories, institutions pledge to follow PRI's six principles, one of which is to become active owners and incorporate ESG issues into their ownership policies and practices. By 2023 PRI reported they had 5,435 signatories from 88 countries, representing over $121 trillion in AUM. Our dataset is drawn from PRI's initiative to support investor engagements on ESG issues with corporations. PRI aims to be "*an enabling organization that may help to overcome barriers to collective action by providing an infrastructure for investors to work with one another, and through maintaining time-continuity of investors' engagement, thus resulting in continued pressure on targeted firms*" (Gond and Piani, 2013).

The organization's governance and incentive structures are likely to uphold the objectivity of the data it collects. PRI states that it is "*truly independent. It encourages investors to use responsible investment to enhance returns and better manage risks, but does not operate for its own profit; it engages with global policymakers but is not associated with any government; it is supported by, but not part of, the United Nations"*.

PRI's funding is provided primarily via the annual membership fee payable by all signatories, with additional funding via grants from governments, foundations and international organizations. The annual fee is scaled according to each signatory's category, type and assets under management. For instance, the 2022/23 fee for asset owners with AUM above $10 billion is £9,396, for investment managers with AUM above $50 billion it is £15,218, and for service providers with above 200 staff it is £9,396. The fees are lower for smaller asset owners, investment managers, and service providers, and are discounted for owners headquartered in emerging markets or developing economies. All the information about the PRI is obtained from unpri.org.

Shortly after PRI was founded in 2006, the PRI Collaboration Platform (then known as the PRI Clearinghouse) was initiated as a forum for shareholder engagements and a vehicle for alliances among institutional investors and their advisors. This facility rapidly became the world's largest platform for collaborative engagement activities. The PRI Collaboration Platform exists to help PRI signatories work together on engagements with target companies, and potentially with regulators and other actors on ESG issues across the world. Engagement begins after one or several signatories identify an issue relating to a company or sector and determine that there is a case for change (Piani, 2013, p.8). The signatories may then talk with peers and with PRI to explore the scope for engaging collaboratively. The projects are then interactively posted on the Collaboration Platform.

For selected collaborative projects, the PRI Secretariat plays an active role in governing and coordinating them (labelled as PRI-coordinated projects). These projects are conducted by PRI signatories, but the PRI Secretariat's roles include providing strategic, organizational and administrative support to the engaging group, using expertise and topical knowledge to assist the group in reaching agreement, and ensuring the engagement adheres to an agreed timeline. The PRI Secretariat is also responsible for monitoring engaging investors' contributions in line with their agreed roles throughout the engagement process and helping develop or commission third parties to develop the evaluation framework for engagement outcomes.

## IA.2. Literature Review

Academic work on active ownership and investor engagement on ESG/CSR issues has extended recently in both breadth and depth. However, there are still major gaps in the literature. More than a decade ago, Peloza and Falkenberg (2009, p.95) reported that "*The lack of a conclusive business case for corporate social responsibility* (*CSR*) *is at the heart of the ongoing debate over the role of business in solving social and environmental problems."* The absence of a business case reflects not only a lack of convincing examples, but also the fact that we do not know which interventions are more likely to be effective. They continued, "*Although the link between CSR activities and firm financial performance is still debated, research suggests that the relationship depends, at least in part, on how the CSR initiative is executed*" (ibid). The knowledge gap about how to intervene with a target company is almost as large today as it was then, and this is the challenge that we address in our paper.

### IA.2.1 Shareholder action on ESG

Although there have been several thousand published studies on ESG investing (Friede, Busch, and Bassen, 2015), the research fails even to indicate whether investors who pursue a responsible E&S approach can anticipate an enhanced or impaired portfolio return, including over the very long term.

An exception is Dimson, Karakaş, and Li (2015), an investigation of an investment company's 2,152 engagements with US target companies. In that study, successful engagements were followed by positive abnormal returns, improved performance and governance, and increased institutional ownership, while unsuccessful engagements generated zero abnormal returns.

Many scholars, and practitioners, also perceive a conflict between shareholder activism and social activism. Shareholder activism generally addresses conflicts between managers and shareholders and seeks to create value for shareholders. Barber (2007, p.66) asserts that "*portfolio managers… can also abuse their position by pursuing actions that advance their own moral values or political interests at the expense of investors* (*social activism*)*"* (parentheses in original). Using CSR performance as a proxy for social capital (i.e., for trust between shareholders and managers), and shareholder governance proposals as a proxy for shareholder activism, Dimitrov and Gao (2017) argue that shareholders of firms with higher CSR scores play a constructive role in efforts on corporate governance. In a theoretical framework, Pastor, Stambaugh, Taylor (2021) model the investor's tradeoff between favorable CSR attributes and financial rewards.

The private nature of certain engagements makes it more challenging for researchers to analyze them. A detailed clinical study was undertaken by Carleton, Nelson, and Weisbach (1998). They gained access to a collection of engagement correspondence from 1992–1996 between the Teachers Insurance Annuity Association–College Retirement Equities Fund (TIAA-CREF) and various target companies. The correspondence provided the first "large sample" (45 firms) of private negotiations; in most cases TIAA-CREF was able to reach an agreement with the targets to implement the requested changes. The fact that TIAA-CREF negotiated with the target almost never became public knowledge, and it seems that these solo negotiations successfully induced change. While some initiatives may best be conducted privately by a single asset owner, this raises the question of whether broader collaborative engagement may be superior. Although other papers such as Smith's (1996) study of engagements by the California Public Employees' Retirement System (CalPERS) included negotiated agreements, they are less informative about the nature of these private agreements. Becht, Franks, Mayer, and Rossi (2009) analyze the private engagements of a UK activist fund and find that it outperformed its benchmarks, largely through its value-enhancing engagements rather than stock picking.

### IA.2.2 Collaborative engagements

There appear to be significant benefits associated with collaborative engagements. Indeed, the common rationale for inter-organizational collaboration is to exploit the collaborating partners'

resources, skills and expertise to gain *collaborative advantage* (Huxham and Vangen, 2005). First and foremost, by pooling resources and influence, investors can achieve greater success via increased voting power and an amplified voice (Hirschman, 1970). Building upon this, Broccardo, Hart, and Zingales (2022) argue that in a competitive world, voice (engagement) is more effective than exit (divestment) in pushing firms to act in a socially responsible manner. Gillan and Starks (2000) find that shareholder proposals on corporate governance issues sponsored by coordinated groups gain substantially more support than those sponsored by individuals. Black and Coffee (1994) discuss the institutional coalition formation in the UK, by conducting a series of interviews with senior officers in major British institutions and providing anecdotal evidence. They observe that communication and coalition formation among institutional investors has for a long time been more acceptable in the UK than in the US, and coordination costs are lower in the UK. Giannetti and Laeven (2009) also mention some anecdotal evidence that public pension funds tend to coordinate their activities on corporate governance of target firms in episodes of activism. Dimson, Karakaş, and Li (2015) find that collaboration with other shareholders and/or stakeholders significantly improves the success rate of engagements, especially those on environmental and social topics.

Second, engaging as a coordinated group also improves engagement efficiency by borrowing expertise from group members who are more knowledgeable about an issue or target company, and by sharing research costs. This is especially efficient for smaller investors who are too resource-constrained to afford an in-house engagement team. It is informative to make a comparison with hedge fund activists whose holdings in target companies are typically smaller than institutional ownership in investee companies. Kedia, Starks and Wang (2021) find that cooperation between hedge funds and like-minded institutions increases the likelihood of success in engagements.

Third, collaboration in ESG engagements facilitates risk-sharing among active owners. For instance, the owner may be reluctant to engage a target firm on a solo basis due to the risk of impairing existing business relations; engaging as part of a larger coalition can mitigate this risk. Fourth, many E&S issues, such as climate change and labor standards in supply chains, are borderless by nature. A successful resolution of these issues thus requires cross-border collaborations from various parties. Fifth, collaboration promotes the production and sharing of partial and complementary private information held separately by corporate insiders and outsiders (Fisch and Sepe, 2020).

However, collaborative engagements also face many challenges, which may lead to *collaborative inertia* rather than *collaborative advantage* (Huxham and Vangen, 2005). The first challenge is the free-rider problem: costs may be borne by a small group of committed and resourceful participants,

while benefits are shared with a wider group of investors inside (or even outside) the coalition. Relatedly, competition between institutions (through reputation and superior performance) makes collaboration difficult and requires incentives in the coalition to be set carefully. Second, coordination is difficult and time-consuming: investors may have different objectives and interests, so achieving agreement within a group from diverse geographic and cultural backgrounds may prolong the process. The delayed action may also reduce the effectiveness of engagements on time-sensitive issues. Third, potential regulatory barriers in certain markets could dissuade investors from behaving as a "concert party". We argue that having a third-party coordinator, such as the PRI with its Collaboration Platform team, can substantially reduce these challenges.

Focusing on wolf-pack activism, Brav, Dasgupta, and Mathews (2019) highlight the implicit coordination among heterogeneous block investors. In this form of activism, it is asserted that a coalition of institutional blockholders (typically hedge funds) implicitly coordinate their interventions with the target firms where one blockholder acts as a "lead" activist, with the other blockholders as supporting "wolf-pack" members. In their theoretical model, wolf-pack members are delegated portfolio managers who compete for capital from clients. The wolf-pack members are incentivized via the reputational gains from being recognized as skilled institutions, which in turn attracts investment flows and helps overcome the free-rider problem of collective action.[33]

Empirical evidence supports the formation of implicit coordination among activist investors. Brav, Jiang, Li, and Pinnington (2024) analyze mutual fund voting in proxy contests and find evidence that dissident shareholders "pick friends": in their decision to engage in a proxy fight, they select a target firm with a pro-activist shareholder base. Such collaboration is crucial particularly in contested elections during proxy fights. Defining the connected institutions as those which each have more than 5% of the same firm, Crane, Koch, and Michenaud (2019) find that such connected institutions act as a coordinated group by voting together, particularly against low quality management proposals. Examining the trading patterns prior to 13D filings, Wong (2020) finds evidence consistent with coordinated effort among activist hedge funds, that is, lead activists orchestrate the "wolf packs" in hedge fund activism.

The evidence on the effectiveness of implicit coordination is mostly positive. Studying a sample of international hedge fund activists, Becht, Franks, Grant, Wagner (2017) report that engagements by multiple investors perform better than those by a single organization. Wong (2020) finds that the

[33] In recent work, Liang, Sun, and Teo (2022) find that PRI signatory hedge funds attract an economically and statistically meaningful 19.7% more flows per annum than do non-signatories.

presence of a wolf pack is positively associated with the success of hedge fund campaigns. Crane, Koch, and Michenaud (2019) find that coordination strengthens governance via voice. An exception is Song and Szewczyk (2003), who study the effectiveness of implicit coordination among institutional investors via the Focus List released by the Council of Institutional investors (CII), an organization of public and private pension funds. The Focus List encourages institutional investors to direct activism to certain underperforming target firms without requiring explicit consultation among investors. They find very little evidence supporting the efficacy of shareholder activism coordinated via the Focus List.

### IA.2.3 Role of institutional investors

Collaboration among investors requires effective commitment. A coordinated group of institutional investors, potentially including both index investors and active managers, can provide the necessary mechanism. Long-horizon investors can be motivated by their role as universal owners (Hawley and Williams, 1997). It is in their interest to reduce negative externalities and to exploit positive externalities in the firms that they hold. This can transform competition between investment managers and asset owners into collaboration, and can alleviate the free-rider dilemma that might otherwise impede coordinated engagements with investee companies.

The engagements studied in our paper are conducted by a large number of major institutional investors whose size and breadth of shareholdings should incentivize them to behave as universal owners. They are members of a global association (the PRI) that elevates the importance of taking a broad, social view, so smaller asset owners are likely to be favorably inclined to a universal-owner approach to investing. Evidence supports the claim that long-horizon investors prefer firms with better ESG practices; see, for example, Starks, Venkat, and Zhu (2018). In a similar vein, Dyck, Lins, Roth, and Wagner (2019) report that institutional investors demand stronger E&S performance from the firms in which they invest worldwide. This is in line with Hart and Zingales (2017), who argue that asset managers should invest according to the preferences of their investors.

If responsible investors are willing to pay more for the shares of companies that adhere to social values, subsequent investment returns can be expected to be impaired, at least marginally. This is confirmed in a comparison of PRI signatories relative to non-signatories which reports that signatories have slightly lower returns; see Gibson-Brandon, Glossner, Krueger, Matos, and Steffen (2022). Aragon, Jiang, Joenväärä, and Tiu (2023) report that adoption of socially responsible policies imposes a performance drag on endowment funds. Dimson, Marsh, and Staunton (2020) report that over a period of 120 years, sin sectors (alcohol and tobacco) in the largest markets (the US and UK)

have on average sold at a lower price-to-dividend ratio than other sectors and consequently performed better than any other sector with a complete history. There is thus some evidence that investors seek a larger return from stocks that are non-compliant with ESG values, and are willing to accept a modest reduction in investment returns as the price to be paid for a higher standard of investment behavior.

Bebchuk, Brav, Jiang, and Keusch (2020) analyze the cooperation between activists and target firms and find that a settlement is more likely when an activist has a credible chance of obtaining a board seat in a proxy fight. These findings resonate with ours, illustrating that the chances of success in E&S engagements increase with investor influence which, in our study, is proxied by activist holdings in the target, and the quantum of the activist's assets under management.

## IA.3. Characteristics of engaging investors

In this section, we discuss the characteristics of engaging investors in more detail. In **Table IA.1**, we provide summary statistics on the location of engaged companies (Panel A of Table IA.1) and their industrial classification (Panel B of Table IA.1). Our target firms are domiciled in 63 countries across different regions of the world, highlighting a large geographic dispersion of collaborative engagements. More than three-quarters of engagements involve countries other than the US and the UK. There are over 100 engagement sequences in each of the US, France, and UK, followed by Japan, Germany, Canada, and India. PRI coordinated engagements are heavily concentrated in the manufacturing sector, followed by infrastructure and wholesale/retail trade. This resembles the distribution across industries reported in Dimson, Karakaş, and Li (2015) for a single investor's ESG engagements with US firms which were most frequently in manufacturing, followed by financials and then wholesale/retail trade.

Block A of **Table IA.2** shows that the 224 investment institutions are headquartered in 24 different countries, though—as with the location of target companies—their location is relatively concentrated. Half are located in just 3–4 countries (the UK, US, and Netherlands, with Canada taking the proportion to over half). Half of all lead investors are shown (in the column headed "Num leads") to be located in the same 3–4 countries. Regarding the category of investors, Blocks B and C report on who are asset owners and investment managers respectively, while Block D looks at service providers. For each group, we report on a country-by-country basis the number of investors in each category and their average AUM. As Table IA.2 shows, the US and UK have the largest number of engaging investors in our sample. For every country, we list the three asset owners and investment managers with the largest AUM and all service providers (for whom AUM is unavailable). For example, for the US, the three largest asset owners are CalPERS, CalSTRS, and the New York State

Local Retirement System; the three largest investment managers are T. Rowe Price, TIAA-CREF, and AllianceBernstein; and the service providers are As You Sow, ICCF, ISS, Bloomberg, and First Affirmative Financial Network. There is a broad spread of investors across countries, although some absences are perhaps surprising. For example, at the time of our study Japan had never had an asset owner participate in any PRI coordinated engagement,[34] and the world's "Big Three" investment managers (Blackrock, Vanguard, and State Street) had never participated in PRI engagements.[35]

Panel A of **Table IA.3** reports selected characteristics of the 224 investors who participated in collaborative engagements at least once. Among these collaborating investors, 87 are asset owners, 121 are investment managers and 16 are service providers. Among the asset owners, we further identify 53 as public pensions and 11 as private pensions.[36] An average investor in our sample participated in 194 engagements or 4 unique projects. The average AUM of an asset owner or investment manager in our sample is $112 billion, with the median being $23 billion. An average investor has been a signatory for eight years until the end of 2017. Panel B of Table IA.3 reports characteristics of 90 investors who led at least one collaborative engagement. Among these investors, 24 are asset owners, 61 are investment managers, and 5 are service providers. We observe that the average AUM of the lead investors ($136 billion) is higher than that of the overall collaborating investor sample. Compared to other collaborating investors, lead investors are also more likely to be PRI's founding signatories (24% vs. 17%), to have formal process of engagements by internal staff (96% vs. 80%), and to participate in more non-PRI collaborative initiatives (9.1 vs. 7.5), despite joining PRI at the similar time as the other investors. Lead investors exhibit both stronger interest in E&S engagements and collaboration, and are equipped with greater means to engage.

1,509 out of the 1,733 PRI signatories in our sample never participated in any coordinated engagements. We thus label them as non-collaborating signatories and report their characteristics at Panel C of Table IA.3. As mentioned before, these non-collaborating signatories include the large institutions who prefer not to engage via PRI's Collaborative Platform (e.g., 95 with AUM at or

[34] Analyzing hedge fund activism in Japan, Buchanan, Chai, and Deakin (2012) concluded that activism was not received favorably and was generally resisted in Japanese public firms. Our conversations with PRI confirmed this finding.

[35] The lack of participation in PRI-coordinated engagements by ultra-large investment managers is apparent even on PRI's website. The largest investment managers prefer to engage with investee companies by themselves, and they can anyway afford a substantial in-house engagement team. It has been suggested that their preference to forego collaborative engagement may reflect "concert party" concerns, as well as the influence of the managers' already large holdings in target firms. Bebchuk and Hirst (2019) point that the Big Three dominate the index fund sector in the US owning more than 20% of US public companies and steadily growing. They assert that index funds have strong incentives to underinvest in stewardship and to be excessively deferential to corporate managers.

[36] We use signatories' self-reported type, the Top 1000 European Pension Funds 2016 list and The World's 300 Largest Pension Funds 2016 list to identify pensions. Among all the pensions, we further classify those self-reported as "non-corporate pension" or "sovereign wealth fund or government-controlled fund" as public pensions. The remaining types, including insurance pensions, corporate pensions, and others, are classified as private pensions.

higher than $100 billion), the small institutions who could not afford to engage even in a collaborative way (e.g., 384 with AUM at or below $100 million), those located in regions with a distaste for shareholder activism (e.g., 52 located in Japan), as well as those without holdings in public equity.[37] On average, these non-collaborating signatories have lower AUM ($45 billion). Not surprisingly, compared to collaborating investors, these non-collaborating ones have been a PRI signatory for a shorter period (four years until 2017), are less likely to be PRI founding signatories (1%), are less likely to have formal process of engagements by internal staff (26%), and participate in fewer collaborative initiatives outside the PRI (2.2).

**Table IA.4**, Panel A reports the top 10 investors by number of engagements participated, and the selected characteristics of these investors. The top 10 organizations by number of engagements are Aviva Investors (UK), Boston Common Asset Management (US), Robeco (Netherlands), Amundi (France), Northern Ireland Local Government Officers' Superannuation Committee (UK), Candriam Investors Group (Luxembourg), Canada Pension Plan Investment Boards (Canada), MN (Netherlands), The Cooperative Asset Management (UK), and New Zealand Superannuation Fund (New Zealand). Out of the top 10 participants by number of engagements, seven are investment managers and three are asset owners. This table also reports the date when the organization became a PRI signatory. Among them, four joined PRI at inception in April 2006, and four are founding signatories: Aviva Investors, Candriam Investors Group, Canada Pension Plan Investment Board, and New Zealand Superannuation Fund. Panel B of Table IA.4 reports the top 10 lead investors by the number of engagements they led and selected characteristics of these group members. Nine out of 10 leads are investment managers, and one is a service provider. This is consistent with the view that an important incentive for investors to join or lead a coalition is to enhance reputation by demonstrating proactivity and responsiveness to the concerns of E&S conscious investors. Among them, Boston Common Asset Management, Robeco and MN are also listed as top 10 investors in Panel A of Table IA.4. Hermes Investment Management, PGGM Investments and BMO Global Asset Management (through F&C Asset Management) are among PRI's founding signatories.

For completeness, **Table IA.5** presents the coefficients on the additional target firm characteristics included in the regressions on engagement success, which were abbreviated in Table 4, Panel C. **Table IA.6** presents results from robustness analysis on target firm performance, which are discussed in detail in Section 3.3.3. **Table IA.7** conducts a counterfactual analysis on target performance using a subsample of "pseudo-two-tier" engagements, i.e., single-tier engagements with at least one pseudo lead, which are discussed in detail in Section 3.3.3.

[37] Based on conversations with PRI, around 860 out of more than 1,700 signatories in 2017 did not have publicly listed equity in their portfolios. In 2017, signatories had 38% of their AUM invested in listed equity (https://tinyurl.com/PRIReportingFramework2017).

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## Table IA.1: Attributes of targets

Panel A lists the countries where targets are domiciled and the number of engagements and of unique target firms within each country. Panel B lists the industries (one-digit SIC code) of target firms and number of engagements. Infrastructure & Utilities industries include transportation, communications, electric, gas, and sanitary services. The sample includes 960 unique target firms from 63 countries, involved in 1,654 engagement sequences.

**Panel A: Country of targets**

| Target country | Number of engagements | Number of targets | Target country | Number of engagements | Number of targets |
|---|---|---|---|---|---|
| United States | 286 | 161 | Portugal | 9 | 4 |
| France | 122 | 61 | Taiwan | 8 | 7 |
| United Kingdom | 110 | 67 | Israel | 7 | 5 |
| Japan | 95 | 62 | Bermuda | 7 | 4 |
| Germany | 83 | 44 | Luxembourg | 6 | 2 |
| Canada | 79 | 50 | Turkey | 5 | 5 |
| India | 78 | 57 | Thailand | 5 | 5 |
| Spain | 58 | 28 | Colombia | 5 | 4 |
| Brazil | 55 | 30 | Croatia | 5 | 4 |
| Italy | 54 | 27 | Egypt | 5 | 4 |
| Australia | 45 | 29 | Sri Lanka | 5 | 4 |
| South Korea | 44 | 24 | Ireland | 5 | 3 |
| Sweden | 41 | 23 | Nigeria | 4 | 4 |
| Switzerland | 41 | 21 | Greece | 4 | 3 |
| China | 34 | 20 | Peru | 4 | 3 |
| South Africa | 34 | 19 | Bulgaria | 4 | 2 |
| Pakistan | 32 | 17 | Poland | 4 | 2 |
| Netherlands | 32 | 13 | Tunisia | 3 | 3 |
| Finland | 29 | 13 | New Zealand | 3 | 3 |
| Norway | 23 | 13 | Czech Republic | 2 | 2 |
| Singapore | 23 | 9 | Macedonia | 2 | 2 |
| Denmark | 20 | 10 | Bosnia-Herzegovina | 2 | 1 |
| Mexico | 15 | 11 | Czech Republic | 2 | 1 |
| Hong Kong | 15 | 9 | Hungary | 2 | 1 |
| Russia | 15 | 9 | Bangladesh | 1 | 1 |
| Chile | 13 | 9 | Cyprus | 1 | 1 |
| Indonesia | 12 | 8 | Kenya | 1 | 1 |
| Belgium | 11 | 7 | Latvia | 1 | 1 |
| Malaysia | 10 | 7 | Oman | 1 | 1 |
| Argentina | 10 | 6 | UAE | 1 | 1 |
| Lithuania | 10 | 6 | Zambia | 1 | 1 |
| Austria | 10 | 5 | Total | 1,654 | 960 |

**Panel B: Industry of targets**

| Target industry (One-digit SIC) | Number of engagements | Number of targets | Number of countries |
|---|---|---|---|
| Manufacturing | 799 | 758 | 52 |
| Infrastructure and Utilities | 233 | 142 | 35 |
| Wholesale or Retail Trade | 204 | 97 | 32 |
| Mining | 188 | 96 | 23 |
| Finance, Insurance and Real Estate | 121 | 80 | 34 |
| Services | 73 | 61 | 21 |
| Construction | 34 | 24 | 12 |
| Agriculture, Forestry and Fishing | 2 | 2 | 2 |
| Total | 1,654 | 960 | 63 |

## Table IA.2: Location of investors

Our sample includes 224 unique investors from 24 countries, 90 of whom served at least once as lead investor. An investor is self-identified as one of three categories, asset owner, investment manager, or service provider when signing up as PRI signatory. This table also reports for each country the average AUM (in $billion), as self-reported by asset owners and investment managers on PRI's website. We list the top three investors (by AUM) for asset owners and investment managers, and all service providers. "Number" denotes the number of investors, "Num leads" denotes the number of lead investors. In the names, AM abbreviates for Asset Management, CM for Capital Management, GI for Global Investors, IM for Investment Management, IMs for Investment Managers, PF for Pension Fund, and SF for Superannuation Fund.

The following abbreviated names are used below: ATP Arbejdsmarkedets Tillægspension, CalPERS California Public Employees' Retirement System, CalSTERS California State Teachers' Retirement System, CDPQ Caisse de dépôt et placement du Québec, CPPIB Canada Pension Plan Investment Board, CSC Commonwealth Superannuation Corporation, EOS Hermes Equity Ownership Services, ERAFP French public service additional pension scheme, FAFN First Affirmative Financial Network, FRR Fonds de Réserve pour les Retraites, GPFG Norwegian Government PF Global, ICCF Interfaith Center on Corporate Responsibility, ISS Institutional Shareholder Services, LGIM Legal & General IM, PME Pensionfund Metalektro, RRSE Regroupement pour la Responsabilité Sociale des Entreprises, SEB Skandinaviska Enskilda Banken, SHARE Shareholder Association for Research & Education, and USS Universities Superannuation Scheme.

| A: All Investors | | | B: Asset Owners | | | C: Investment Managers | | | D: Service Providers | |
|---|---|---|---|---|---|---|---|---|---|---|
| Investor location | Num-ber | Num leads | Num-ber | Avg. AUM | Top 3 owners by AUM | Num-ber | Avg. AUM | Top 3 managers by AUM | Num-ber | Service providers |
| UK | 42 | 17 | 14 | 49 | Old Mutual, USS, Railways Pension Trustee | 24 | 183 | LGIM, Insight Investment, Schroders | 4 | LAPFF, EOS, PIRC, Inflection Point CM |
| USA | 40 | 15 | 14 | 64 | CalPERS, CalSTRS, New York State Local Retirement System | 21 | 119 | T. Rowe Price, TIAA – CREF, AllianceBernstein | 5 | As You Sow, ICCF, ISS, Bloomberg, FAFN |
| Netherlands | 21 | 10 | 5 | 69 | Stichting Pensioenfonds Zorg en Welzijn, PME, Achmea | 15 | 125 | APG AM, AEGON AM, PGGM Investments | 1 | Sustainalytics |
| Canada | 20 | 11 | 7 | 72 | CDPQ, CPPIB, British Columbia Municipal Pension Plan | 11 | 57 | BMO Global AM, TD AM, British Columbia IM Corp. | 2 | RRSE, SHARE |
| Sweden | 17 | 11 | 11 | 36 | SEB Life and Pension, AMF, Skandia | 6 | 79 | Nordea, SEB, Swedbank Robur | 0 | |
| Australia | 15 | 3 | 8 | 22 | AustralianSuper, Victorian Funds Management Corp., CSC | 6 | 27 | Colonial First State Global AM, Alphinity IM, Solaris IM | 1 | Australian Council of Superannuation Investors |
| France | 14 | 8 | 4 | 439 | AXA Group, FRR, ERAFP | 10 | 313 | Amundi, AXA Ims, BNP Paribas Investment Partners | 0 | |
| Germany | 8 | 3 | 3 | 1 | VERKA VK Kirchliche Vorsorge VvaG, Steyler Bank | 4 | 595 | Deutsche AM, Allianz GI, Union Investment | 1 | VIP eV |
| Norway | 6 | 2 | 6 | 191 | NGPFG, KLP, Storebrand AM | 0 | | | 0 | |
| South Africa | 6 | 1 | 1 | 119 | Government Employees PF of South Africa | 5 | 24 | Investec AM, Momentum Outcome Based Solutions, 27Four Ims | 0 | |
| Switzerland | 5 | 2 | 1 | | PeaceNexus Foundation | 3 | 102 | Bank J. Safra Sarasin, Von-tobel Holding, RobecoSAM | 1 | Fondation Guilé |
| Brazil | 4 | 1 | 1 | | Mongeral Aegon Seguros e Previdência | 2 | | FIR Capital, Santa Fé Portfolios | 1 | KEY Associados |

| A: All Investors | | | B: Asset Owners | | | C: Investment Managers | | | D: Service Providers | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Investor location** | **Num -ber** | **Num leads** | **Num -ber** | **Avg. AUM** | **Top 3 owners by AUM** | **Num -ber** | **Avg. AUM** | **Top 3 managers by AUM** | **Num -ber** | **Service providers** |
| Finland | 4 | 0 | 3 | 31 | Keva, Ilmarinen Mutual Pension Insurance Co., Church PF | 1 | 10 | LocalTapiola AM | 0 | |
| New Zealand | 4 | 0 | 4 | 13 | Accident Compensation Corp., New Zealand SF, Government SF Authority | 0 | | | 0 | |
| Spain | 4 | 0 | 3 | 3 | Pensions Caixa 30 FP, BBVA Fondo de Empleo, Repsol II Fondo de Pensiones | 1 | 5 | Ibercaja Pensión EGFP, SA | 0 | |
| Austria | 3 | 2 | 0 | | | 3 | 28 | Erste AM GmbH, Raiffeisen CM, C-QUADRAT AM | 0 | |
| Ireland | 2 | 0 | 1 | 9 | Ireland Strategic Investment Fund | 1 | 10 | KBI GI | 0 | |
| Japan | 2 | 1 | 0 | | | 2 | 358 | Sumitomo Mitsui Trust Bank, T&D AM Co | 0 | |
| Luxem-bourg | 2 | 1 | 0 | | | 2 | 60 | Candriam Investors Group, Sparinvest Group | 0 | |
| Belgium | 1 | 0 | 0 | | | 1 | 31 | Degroof Petercam AM | 0 | |
| Denmark | 1 | | 1 | 109 | ATP | 0 | | | 0 | |
| Italy | 1 | 1 | 0 | | | 1 | 3 | Etica SGR | 0 | |
| Mauritius | 1 | 0 | 0 | | | 1 | 0 | Sustainable Capital | 0 | |
| Singapore | 1 | 1 | 0 | | | 1 | 4 | Arisaig Partners (Asia) Pte | 0 | |
| Total | 224 | 90 | 87 | | | 121 | | | 16 | |

## Table IA.3: Characteristics of investors

This table presents selected characteristics of the collaborating investors, i.e., those participate in at least one collaborative engagement (Panel A), lead investors, i.e., those lead at least one engagement (Panel B), and non-collaborating signatories, i.e., PRI signatories that never participate in any collaborative engagements (Panel C).

**Panel A: Collaborating investors:** *All 224 investors, including 87 Asset Owners (including 64 pension funds, of which 53 are public pensions), 121 Investment Managers, and 16 Service Providers*

| | N | Mean | Q1 | Median | Q3 | StDev |
|---|---|---|---|---|---|---|
| Num. of engagements participated | 224 | 193.66 | 32 | 87 | 257 | 239 |
| Num. of projects participated | 224 | 3.79 | 1 | 2 | 5 | 4 |
| AUM ($b) | 208 | 111.82 | 3 | 23 | 97 | 235 |
| Years of being a signatory | 220 | 8.30 | 7.00 | 9.00 | 11.00 | 2.51 |
| PRI's Founding signatory | 224 | 0.17 | 0.00 | 0.00 | 0.00 | 0.38 |
| Signatory has formal process of engagements by internal staff | 200 | 0.80 | 1.00 | 1.00 | 1.00 | 0.40 |
| Num. of collaborative initiatives participated besides PRI | 200 | 7.54 | 4.50 | 7.00 | 10.00 | 4.34 |

**Panel B: Lead investors:** *All 90 lead investors, including 24 Asset Owners (including 19 pension funds, of which 18 are public pensions), 61 Investment Managers, and 5 Service Providers*

| | N | Mean | Q1 | Median | Q3 | StDev |
|---|---|---|---|---|---|---|
| Num. of engagements participated | 90 | 283.02 | 55 | 149 | 502 | 281 |
| Num. of projects participated | 90 | 6.04 | 3 | 4 | 9 | 5 |
| Num. of engagements led | 90 | 6.17 | 2 | 4 | 9 | 6 |
| Num. of projects led | 90 | 2.42 | 1 | 2 | 3 | 2 |
| AUM ($b) | 85 | 136.34 | 8 | 36 | 146 | 244 |
| Years of being a signatory | 90 | 8.68 | 7.00 | 9.50 | 11.00 | 2.42 |
| PRI's founding signatory | 90 | 0.24 | 0.00 | 0.00 | 0.00 | 0.43 |
| Signatory has formal process of engagements by internal staff | 84 | 0.96 | 1.00 | 1.00 | 1.00 | 0.19 |
| Num. of collaborative initiatives participated besides PRI | 84 | 9.11 | 6.00 | 9.00 | 12.00 | 4.21 |

**Panel C: Non-collaborating signatories:** *All 1,509 non-collaborating investors, including 264 Asset Owners (including 151 pension funds, of which 84 are public pensions), 1,033 Investment Managers, and 212 Service Providers*

| | N | Mean | Q1 | Median | Q3 | StDev |
|---|---|---|---|---|---|---|
| AUM ($b) | 1,297 | 45.20 | 0 | 2 | 15 | 235 |
| Years of being a signatory | 1,509 | 4.29 | 2.00 | 4.00 | 7.00 | 3.02 |
| PRI's founding signatory | 1,509 | 0.01 | 0.00 | 0.00 | 0.00 | 0.11 |
| Signatory has formal process of engagements by internal staff | 1,205 | 0.26 | 0.00 | 0.00 | 1.00 | 0.44 |
| Num. of collaborative initiatives participated besides PRI | 1,205 | 2.16 | 0.00 | 1.00 | 3.00 | 2.53 |

## Table IA.4: Characteristics of top 10 investors

Panel A lists the top 10 investors by the number of engagements in which they participated. CPPIB is the Canada Pension Plan Investment Board, and NI LGO denotes the Northern Ireland Local Government Officers' Superannuation Committee. Panel B lists the top 10 lead investors by the number of engagements they led. IM denotes Investment Manager, AO denotes Asset Owner, and SP denotes Service Provider. PRI's founding signatories are highlighted in bold.

**Panel A: Top 10 investors by engagements**

| Investor name | Headquarter country | Category | AUM ($b) | Number of engagements participated | Number of engagements led | Number of projects participated | Signature date |
|---|---|---|---|---|---|---|---|
| **Aviva Investors** | **UK** | **IM** | **438.2** | **1,001** | **2** | **16** | **27 Apr 06** |
| Boston Common Asset Mgt. | USA | IM | 2.2 | 975 | 21 | 21 | 17 Dec 08 |
| Robeco | Netherlands | IM | 146.2 | 908 | 13 | 14 | 4 Dec 06 |
| Amundi | France | IM | 1,158.7 | 898 | 3 | 11 | 27 Apr 06 |
| NI LGO | UK | AO | 7.4 | 864 | 0 | 10 | 18 Sep 07 |
| **Candriam Investors Group** | **Luxembourg** | **IM** | **109.1** | **857** | **0** | **11** | **26 Jun 06** |
| **CPPIB** | **Canada** | **AO** | **210.1** | **832** | **2** | **9** | **27 Apr 06** |
| MN | Netherlands | IM | 131.9 | 806 | 15 | 16 | 2 Mar 09 |
| The Cooperative Asset Mgt. | UK | IM | 2.6 | 803 | 8 | 13 | 13 Dec 07 |
| **NZ Superannuation Fund** | **New Zealand** | **AO** | **23.2** | **799** | **0** | **14** | **27 Apr 06** |

**Panel B: Top 10 lead investors by engagements**

| Investor Name | Headquarter country | Category | AUM ($b) | Number of engagements participated | Number of engagements led | Number of projects led | Signature date |
|---|---|---|---|---|---|---|---|
| APG Asset Mgt. | Netherlands | IM | 523.1 | 315 | 26 | 4 | 25 Sep 09 |
| **Hermes Investment Mgt.** | **UK** | **IM** | **34.3** | **305** | **25** | **8** | **27 Apr 06** |
| Hermes Equity Ownership Services | UK | SP | | 211 | 25 | 8 | 4 Jul 13 |
| Boston Common Asset Mgt. | USA | IM | 2.2 | 975 | 21 | 9 | 17 Dec 08 |
| MN | Netherlands | IM | 131.9 | 806 | 15 | 6 | 3 Feb 09 |
| ACTIAM | Netherlands | IM | 58.6 | 716 | 15 | 7 | 7 May 06 |
| **PGGM Investments** | **Netherlands** | **IM** | **220.3** | **607** | **14** | **5** | **1 Jan 08** |
| Robeco | Netherlands | IM | 146.2 | 908 | 13 | 6 | 12 Apr 06 |
| **BMO Global Asset Management** | **Canada** | **IM** | **237.0** | **525** | **13** | **7** | **27 Apr 06** |
| Boston Trust & Investment Mgt. | USA | IM | 7.9 | 391 | 13 | 4 | 7 Jul 07 |

## Table IA.5: Univariate analysis of two-tier and single-tier engagements

Panel A compares characteristics of target firms in the two-tier engagement subsample with those in the single-tier engagement subsample. Firm characteristics are measured at the fiscal year end immediately before the engagement start date. Panel B compares the engagement-level attributes between the two-tier engagement subsample and those in the single-tier engagement subsample. Investor shareholdings are measured at the calendar quarter immediately before the engagement start date. In both panels, bold numbers indicate that the sample means are significantly different from each other at 10% level using *t-test*. Variables are defined in Appendix C. All continuous variables are winsorized at 1st and 99th percentile levels.

**Panel A: Summary statistics of target firm characteristics**

| | Two-tier engagements | | | | Single-tier engagements | | | |
|---|---|---|---|---|---|---|---|---|
| | **Obs** | **Mean** | **Median** | **StDev** | **Obs** | **Mean** | **Median** | **StDev** |
| | **(1)** | **(2)** | **(3)** | **(4)** | **(5)** | **(6)** | **(7)** | **(8)** |
| Market cap ($b) | 328 | 59.077 | 19.859 | 138.714 | 749 | 44.212 | 7.052 | 151.433 |
| Market-to-book | 328 | 2.613 | 1.894 | 2.289 | 740 | 2.559 | 1.863 | 2.372 |
| Stock return | 327 | **0.094** | 0.053 | 0.391 | 738 | 0.161 | 0.112 | 0.474 |
| Stock return volatility | 323 | **0.078** | 0.067 | 0.041 | 732 | 0.093 | 0.084 | 0.048 |
| Return on assets | 328 | 0.134 | 0.130 | 0.083 | 746 | 0.134 | 0.119 | 0.084 |
| Leverage | 328 | 0.242 | 0.229 | 0.129 | 749 | 0.244 | 0.236 | 0.157 |
| Dividend payout | 328 | **0.415** | 0.355 | 0.589 | 749 | 0.321 | 0.295 | 0.586 |
| Sales growth | 327 | **0.053** | 0.049 | 0.196 | 744 | 0.118 | 0.092 | 0.230 |
| Cash/Assets | 328 | 0.060 | 0.039 | 0.061 | 740 | 0.063 | 0.042 | 0.066 |
| R&D/Assets | 328 | **0.008** | 0.000 | 0.021 | 749 | 0.011 | 0.000 | 0.023 |
| Capex/Assets | 328 | **0.076** | 0.062 | 0.059 | 749 | 0.059 | 0.047 | 0.049 |
| Long-term institutional holdings | 328 | **0.472** | 0.530 | 0.224 | 749 | 0.295 | 0.291 | 0.237 |
| Insider holdings | 328 | **0.201** | 0.051 | 0.259 | 749 | 0.294 | 0.224 | 0.288 |
| Foreign sales | 328 | **0.455** | 0.487 | 0.310 | 749 | 0.404 | 0.407 | 0.337 |
| French Legal Origin | 328 | 0.192 | 0.000 | 0.395 | 749 | 0.202 | 0.000 | 0.401 |
| Scandinavian Legal Origin | 328 | 0.064 | 0.000 | 0.245 | 749 | 0.053 | 0.000 | 0.225 |
| German Legal Origin | 328 | **0.098** | 0.000 | 0.297 | 749 | 0.250 | 0.000 | 0.433 |
| Country Social Norm | 314 | **0.530** | 0.530 | 0.071 | 676 | 0.508 | 0.530 | 0.080 |
| Refinitiv overall ESG rating | 295 | **61.622** | 65.320 | 19.123 | 505 | 53.261 | 54.810 | 20.483 |
| Refinitiv governance rating | 295 | **61.940** | 63.170 | 21.430 | 505 | 54.740 | 56.830 | 23.044 |
| Refinitiv social rating | 295 | **62.127** | 65.990 | 22.529 | 505 | 52.157 | 51.310 | 23.719 |
| Refinitiv environment rating | 295 | **61.451** | 67.920 | 25.080 | 505 | 52.906 | 55.560 | 25.903 |

**Panel B: Summary statistics of engagement-level attributes**

| | Two-tier engagements | | | | Single-tier engagements | | | |
|---|---|---|---|---|---|---|---|---|
| | **Obs** | **Mean** | **Median** | **StDev** | **Obs** | **Mean** | **Median** | **StDev** |
| | **(1)** | **(2)** | **(3)** | **(4)** | **(5)** | **(6)** | **(7)** | **(8)** |
| Success rate | 328 | **72.6%** | 100.0% | 44.7% | 749 | 32.8% | 0.0% | 47.0% |
| Num. of investors | 328 | **22.63** | 21.00 | 15.19 | 749 | 25.10 | 21.00 | 8.71 |
| Public pension funds in investor group% | 328 | **17.6%** | 17.9% | 11.2% | 749 | 19.3% | 18.2% | 14.1% |
| Private pension funds in investor group% | 328 | **2.7%** | 2.6% | 2.9% | 749 | 5.2% | 4.8% | 4.6% |
| Other asset owners in investor group% | 328 | **5.9%** | 5.4% | 4.9% | 749 | 3.9% | 3.0% | 2.8% |
| Founding signatories in investor group% | 328 | **29.1%** | 28.0% | 12.9% | 749 | 24.5% | 22.2% | 10.8% |
| Domestic signatories in investor group% | 328 | **15.8%** | 10.0% | 17.1% | 749 | 7.7% | 0.0% | 11.1% |
| Investors from high social norm countries% | 328 | **41.0%** | 41.0% | 18.7% | 749 | 37.4% | 35.0% | 14.4% |
| Investor group holdings | 328 | 1.4% | 0.5% | 2.1% | 749 | 1.3% | 0.4% | 2.1% |
| Investor group holdings ($m) | 328 | **544.67** | 120.05 | 1,088.73 | 749 | 298.04 | 39.75 | 760.19 |
| Investor group AUM ($b) | 328 | **2,046.27** | 1,845.69 | 1,964.86 | 749 | 2,660.03 | 2,517.59 | 1,007.59 |
| Service providers in investor group% | 328 | **4.7%** | 2.0% | 7% | 749 | 6.0% | 6.7% | 4.2% |
| Investment managers in investor group% | 328 | **68.9%** | 66.7% | 15% | 749 | 65.6% | 67.6% | 12.9% |

## Table IA.6: Regression analysis on engagement success: additional analysis

This table presents the additional analysis results on the determinants of engagement success. In Panel A, we additionally include target firms' ESG ratings from Refinitiv. Regressions in Columns (1) to (3) include Refinitiv overall ESG score, and regression in Column (4) include individual ESG component ratings. Regressions in Columns (1) and (4) use all engagements with data on regression variables. In Columns (2) and (3), we match observations in single-tier and two-tier engagements along target firm characteristics and Refinitiv overall ESG score as listed in Panel A. We use both Entropy Balancing (at the first two moments), and Propensity-Score-Matching (with replacement and caliper of 0.01) approaches. In Panel B, we run the regressions separately for the experimental period and other period. The subperiods are defined in Figure 1. and Columns (2), (4) and (6) include two-tier engagements only. All regressions incorporate industry (2-digit SIC) fixed effects, and Columns (2), (4) and (6) also include year fixed effects. Standard errors are clustered at the project level. All variables are defined in Appendix C. All continuous variables are winsorized at 1st and 99th percentile levels. ***, **, and * denote significance at the 1%, 5%, and 10% level, respectively.

**Panel A: With target firm ESG ratings**

| | **Refinitiv Overall Rating** | | | **Refinitiv Component Ratings** |
|---|---|---|---|---|
| | **All engagements** | **Entropy Balanced** | **PSM** | **All engagements** |
| | **(1)** | **(2)** | **(3)** | **(4)** |
| **Two-tier engagement** | **0.222*** ** | **0.185*** | **0.213*** | **0.222*** ** |
| | **(2.66)** | **(1.94)** | **(1.79)** | **(2.68)** |
| Refinitiv ESG rating | 0.007*** | 0.005*** | 0.006*** | |
| | (4.88) | (3.05) | (2.76) | |
| Refinitiv governance rating | | | | 0.001 |
| | | | | (1.05) |
| Refinitiv social rating | | | | 0.004* |
| | | | | (1.70) |
| Refinitiv environment rating | | | | 0.002 |
| | | | | (1.48) |
| Observations | 717 | 717 | 498 | 717 |
| Pseudo R-squared | 0.235 | 0.239 | 0.239 | 0.236 |
| Target firm characteristics | Y | Y | Y | Y |
| Engagement-level attributes | Y | Y | Y | Y |
| Year Fixed Effects | N | N | N | N |
| Industry Fixed Effects | Y | Y | Y | Y |

**Panel B: Regression using sub-sample periods**

| | **All engagements** | |
|---|---|---|
| | **Experimental period** | **Other periods** |
| | **(1)** | **(2)** |
| **Two-tier engagement** | **0.238*** ** | **0.497*** ** |
| | (2.96) | (4.83) |
| Observations | 448 | 438 |
| Pseudo R-squared | 0.240 | 0.304 |
| Target firm characteristics | Y | Y |
| Engagement-level attributes | Y | Y |
| Year fixed effects | N | N |
| Industry fixed effects | Y | Y |

## Table IA.7: Target firm performance: robustness analysis

This table examines the changes in target firm performance following single-tier engagements only. We further limit the sample to those with pseudo leads (or pseudo-two-tier engagements). We use the same methodologies as described in Table 5, Panel B to identify the pseudo lead in an engagement, i.e., a prediction model and a naïve method. The dependent variables are abnormal annual buy-and hold returns and target firm return on assets (ROA). All variables are defined in the same way as those in Table 7. All regressions incorporate target firm fixed effects and calendar year fixed effects. Standard errors are clustered at the target firm level and are used to calculate *t*-statistics reported in parentheses. All continuous variables are winsorized at 1st and 99th percentile levels. ∗∗∗, ∗∗, and ∗ denote significance at the 1%, 5%, and 10% level, respectively.

| | **Single-tier engagements** | | | |
|---|---|---|---|---|
| | **Target Abnormal Annual Buy-and-Hold Return (MSCI)** | | **Target ROA** | |
| | **Pseudo two-tier engagements (Prediction Model)** | **Pseudo two-tier engagements (Naïve Method)** | **Pseudo two-tier engagements (Prediction Model)** | **Pseudo two-tier engagements (Naïve Method)** |
| | **(1)** | **(2)** | **(3)** | **(4)** |
| Post-engagement$_{Year+1\&+2}$ | 0.003 | 0.004 | 0.005** | 0.003 |
| | (0.21) | (0.25) | (2.00) | (0.88) |
| Post-engagement$_{Year+3}$ | 0.004 | 0.011 | 0.006 | 0.003 |
| | (0.20) | (0.43) | (1.46) | (0.66) |
| Controls | Y | Y | Y | Y |
| Firm fixed effects | Y | Y | Y | Y |
| Year fixed effects | Y | Y | Y | Y |
| Observations | 2,301 | 1,915 | 2,331 | 1,969 |
| Adj R-squared | 0.16 | 0.184 | 0.764 | 0.759 |