Sustainability in Retreat: Evidence from Principles for Responsible Investment

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December 2025

Abstract

This study examines institutional investors' voluntary decisions to delist from the United Nations-supported Principles for Responsible Investment (PRI). Using a novel proprietary database on PRI signatories for an international sample, I document that around 1,370 signatories from over 40 countries have delisted, representing 22% of all PRI signatories. Signatories are more likely to delist when they exhibit weaker sustainable investment performance, attract less capital, and earn lower risk-adjusted returns after signing PRI. Limited internal resources and less supportive country-level sustainability environments are also positively associated with delisting. While signatories and PRI staff often attribute delisting to the burden caused by the standardized reporting PRI mandated in late 2013, I find that weaker sustainable investment performers become significantly more likely to delist after the mandate, likely because they are exposed to heightened reputational risks. Furthermore, only signatories delisted after the mandate substantively retreat from sustainable investing by reallocating assets to less sustainable stocks and scaling back sustainability-labeled funds. The market reacts to delisting by withdrawing capital, but the reaction is delayed, reflecting untimely delisting disclosures. Overall, the evidence is consistent with mandatory standardized reporting functioning as a screening mechanism that filters out sustainable investment laggards from voluntary sustainability commitments.

Keywords: sustainable investment; Principles for Responsible Investment (PRI); institutional investors; mutual funds, mandatory sustainability reporting standards; management control systems (MCS).

JEL Classification: G15, G23, G30, M14, M40

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1. Introduction

Over the past decades, sustainable investing has moved from the periphery to the mainstream of global capital markets. Institutional investors increasingly join alliances to publicly signal commitment to sustainability, with the United Nations-supported Principles for Responsible Investment (PRI) becoming the most prominent alliance. Since 2006, PRI signatories have expanded from 102 institutional investors with US$16 trillion in assets under management (AUM) to over 5,000 institutional investors with US$180 trillion by 2023. Less visible, however, is a substantial retreat: since 2009, around 1,370 signatories from more than 40 countries have voluntarily delisted from PRI, accounting for approximately 22% of all PRI signatories. This retreat is longer-running and more geographically dispersed than suggested by recent news coverage, which typically portrays sustainability withdrawal as a recent and predominantly U.S. phenomenon (Masters and Temple-West, 2022; Kerber, 2025). Critically, the compliance of PRI's mandatory reporting framework is frequently cited as the primary cost of remaining a signatory and a reason for delisting, raising concerns about whether mandatory standardized reporting requirements may deter even committed signatories from staying at PRI. However, despite PRI's prominence and the scale of delisting, little is understood about signatories' delisting decisions or the role played by the mandatory reporting framework.

This paper studies institutional investors' voluntary withdrawals from publicly stated sustainability commitments. Specifically, I examine when signatories are more likely to delist from PRI and how factors associated with delisting change following the introduction of a mandatory reporting framework. Extant literature generally argues that the benefits of publicly committing to sustainability, such as by becoming PRI signatories, far outweigh the costs (Brandon et al., 2022; Liang et al., 2022; Kim and Yoon, 2023). Nevertheless, the prevalence of delisting reveals that the costs exceed the benefits for a non-negligible number of institutional investors, which is intriguing to explore.

Conceptually, institutional investors generally expect three types of benefits from joining PRI or comparable sustainable investment alliances: resources to enhance sustainable investment performance, marketing benefits to attract capital, and performance gains to improve returns or reduce risk (Amel-Zadeh and Serafeim, 2018; Krueger et al., 2020; Edmans et al., 2025). However, these benefits are neither guaranteed nor uniform. When these benefits do not materialize, the incentive to remain at PRI likely diminishes. Specifically, when signatories exhibit lagging sustainable investment performance, continuing to hold PRI signatory status could expose them to heightened reputational risks from stakeholder pressure and public scrutiny. Depending on the preference of signatories' client base, they may experience fund outflows for being PRI signatories. If practicing sustainable investment does not improve, or even worsens, risk-adjusted returns, remaining at PRI could entail financial costs. Moreover, the likelihood and realized net benefits of remaining at PRI could depend on signatories' internal resources and external environment for sustainable investment, such as country-level environmental performance and social norms (Naughton et al., 2018; Dyck et al., 2019; Pedersen et al., 2020; Pástor et al., 2021, 2022).

In response to growing demand for accountability, PRI introduced a mandatory reporting framework in October 2013. This framework focuses on management control systems (MCS) and requires signatories to provide annual, standardized information on sustainable investment policies, oversight, incentives, assurance, and implementation. Reported information is widely used, such as by asset owners to select and monitor investment managers, by PRI to identify leaders and laggards, and by signatories for peer benchmarking. However, this mandate could impose significant costs on signatories and shift their cost-benefit equilibrium for staying at PRI. Direct costs arise from compliance in collecting and reporting required information, while indirect costs are mainly reputational, as standardized disclosures facilitate cross-signatory comparisons (Christensen et al., 2021). If reputational risks dominate, weaker sustainable

investment performers will be more likely to delist after the mandate. However, if compliance costs dominate, delisting likelihood may instead increase more among signatories with limited internal resources, regardless of their sustainable investment performance.

To answer the research questions, I collect proprietary data on all institutional investors that have signed the PRI from its establishment in April 2006 through December 2023, and match them to the monthly performance data of fund families in the Morningstar global open-end mutual fund universe.[1] The matched dataset covers 2,885 unique signatories, including 2,296 signatories that have stayed at PRI since signing (control group), 371 signatories delisted for non-restructuring reasons (treated group), and 218 signatories delisted for restructuring reasons such as merger, acquisition, or liquidation (placebo group). In addition, I manually collect a novel dataset on MCS for sustainable investment as disclosed annually by signatories following the mandatory reporting framework between 2014 and 2023.

In the primary analysis, I employ a Cox proportional hazard model to estimate the hazard of delisting, given each signatory's initial characteristics upon signing and their evolution over time. I find that signatories are more likely to delist when they exhibit weaker sustainable investment performance, as reflected by lower portfolio sustainability scores, more asset allocation to oil, gas, and coal ("dirty") industries, and less active collaborative engagements. Signatories are also more likely to delist when they attract fewer flows and deliver deteriorating risk-adjusted returns. Lastly, signatories managing fewer assets and less supported by PRI are more likely to delist, as are signatories headquartered in countries with worse environmental performance and less progressive social norms. These results are robust to controls for signatory characteristics, country-level economic and market conditions, and unobservable time- or country-related heterogeneity. By contrast, these patterns are not observed for delisting

[1] I focus on open-end mutual funds because their market reactions can be observed via fund flows.

due to restructuring reasons, suggesting that these factors are specific to decisions to discontinue PRI signatory status but not general organizational changes.

I next examine how these delisting factors change after the introduction of a mandatory reporting framework. The empirical evidence is more consistent with the reputational channel, as I find that the explanatory power of sustainable investment performance for delisting increases after the reporting mandate. A dynamic analysis also shows that portfolio sustainability scores and collaborative engagement activity are negatively associated with delisting only in the post-mandate period. There is some, albeit limited, evidence aligned with the compliance channel, as delisting becomes more strongly associated with PRI support but not signatory size after the mandate, suggesting that implementation support rather than scale is more relevant for reducing compliance costs. These results alleviate concerns that mandatory standardized reporting could discourage committed signatories from remaining at PRI, and instead suggest that mandatory standardized reporting functions as a screening mechanism to filter signatories with lagging sustainable investment performance out of PRI.

However, for such a screening mechanism to function, a necessary condition is that the reported information enables stakeholders to distinguish leaders from laggards. Therefore, I further explore the informativeness of signatories' reported MCS in two dimensions. First, I show that the reported MCS is systematically associated with future delisting. Signatories with stewardship policies, more extensive senior oversight, and more comprehensive sustainability-linked incentives are less likely to delist. Importantly, oversight by executives and department heads rather than board directors, and performance incentives targeting portfolio managers and investment analysts are particularly informative. Additionally, signatories that have disclosed similar information voluntarily before the mandate are less likely to delist after the mandate, consistent with voluntary reporters having more net benefits from standardized disclosure by revealed preference (Christensen et al., 2021). Second, I document that the reported MCS is

aligned with performance and strategic focus for sustainable investment. Signatories with exclusion policies tend to invest less in dirty industries, while those with stewardship policies and external assurance participate more frequently in collaborative engagements and hold portfolios with higher sustainability scores. Senior oversight and performance incentives for sustainable investment are consistently associated with stewardship activeness and offerings of sustainability-labelled funds.

I further study what happens after signatories delist from PRI, first focusing on market reactions. Prior evidence shows that signatories attract fund inflows when joining PRI (Brandon et al., 2022; Liang et al., 2022; Kim and Yoon, 2023), however signatories rarely disclose their delisting decisions, hence the magnitude and timing of flow response to delisting remain empirical questions. Using a matched sample of delisted and stayed signatories, I examine flows around both the actual delisting month and the month when delisting is disclosed in PRI's Annual Reports, the most consistent public information source of delisting. I find that markets react negatively to delisting by withdrawing flows, but the reaction is delayed and concentrated around the disclosure of delisting rather than the delisting event itself.

Finally, I assess whether delisting from PRI represents a substantive retreat from sustainable investment or primarily an abandonment of a symbolic label. I find that, relative to matched stayed signatories, delisted signatories subsequently shift their portfolios toward stocks with lower sustainability scores, allocate more assets to dirty industries, and reduce offerings of sustainability-labelled funds. These adjustments are concentrated among signatories that delist after the reporting mandate. Therefore, the evidence is consistent with delisting representing a substantive retreat from sustainable investment primarily in the post-mandate period, when standardized and mandatory reporting heightens the reputational risks of holding a PRI signatory status.

Taken together, this study makes three contributions to the literature. First, it complements and extends the literature on institutional sustainable investment by shifting the focus from joining to withdrawing from voluntary sustainability commitments, a neglected but important dimension. Prior research documents that becoming a PRI signatory is associated with higher flows but not necessarily with improvements in returns and sustainable investment performance, raising concerns that the signatory status may be primarily a marketing tool with minimal costs (Humphrey and Li, 2021; Brandon et al., 2022; Liang et al., 2022; Choi et al., 2023; Kim and Yoon, 2023; Slager et al., 2023; Agarwal et al., 2024; Dimson et al., 2025). This study highlights the costs of maintaining a public sustainability commitment, shedding light on the recent increase in withdrawals from other sustainability initiatives such as the Net Zero Asset Managers (NZAM) initiative and the Net Zero Banking Alliance (NZBA).

Second, this study responds to calls to examine the real effects of mandatory sustainability reporting standards, particularly to directly document the usage of market exit as an avoidance strategy (Christensen et al. 2021). Relevant evidence is extensive on financial disclosure regulation, such as the 2002 Sarbanes–Oxley Act (e.g., Engel et al., 2007; Marosi and Massoud, 2008; Leuz et al., 2008; Piotroski and Srinivasan, 2008; Doidge et al., 2010; DeFond and Lennox, 2011; Gao, 2011; Hostak et al., 2013; Li, 2014), but scarce and indirect on sustainability reporting requirements (Christensen et al., 2017; Rauter, 2020). This paper provides direct evidence on institutional investors' exit decisions in response to mandatory sustainability reporting standards, and suggests that sustainability reporting requirements can function as a screening mechanism by increasing reputational risks for weaker sustainability performers. These insights are relevant for recent policies on enhancing transparency for sustainable finance products, such as the EU Sustainable Finance Disclosure Regulation (SFDR) (European Commission, 2022) and the UK Sustainability Disclosure Requirements (SDR) (Financial Conduct Authority, 2023).

Third, this study adds to the nascent literature examining the integration of sustainability in management control systems (MCS). Research in sustainability accounting has focused on disclosure, with limited empirical insights on internal management primarily due to data limitations (Henri and Journeault, 2010; Joshi and Li, 2016; Grewal and Serafeim, 2020). Recent literature explores specific internal mechanisms to manage corporate social responsibility, such as target setting (Ioannou et al., 2016), executive compensation (Flammer et al., 2019; Cohen et al., 2023) and board oversight (Amiraslani et al., 2025; Chu et al., 2024). Leveraging PRI signatories' mandatory and standardized disclosures on a comprehensive set of management control components, the paper further opens the "black box" of MCS for sustainable investment.

2. Institutional Background

The United Nations-supported Principles for Responsible Investment (PRI) was launched in 2006 by the UN Environment Programme Finance Initiative (UNEP FI) and the UN Global Compact (UNGC) to foster a sustainable global financial system. Today, PRI is the world's largest network of institutional investors committed to sustainability, with nearly 5,000 signatories representing over US$180 trillion AUM. Therefore, signing the PRI serves as a visible public signal of sustainability commitment, offering signatories reputational capital, access to a global collaborative network, and opportunities to influence policy discussions.

PRI adopts a "big tent" strategy, which offers low entry barriers to welcome institutional investors with varying sustainable investment expertise to encourage learning, but imposes increasingly stringent compliance requirements, particularly on reporting (PRI, 2021). Any entity categorized as an asset owner, investment manager, or service provider can become a signatory by applying and paying a nominal annual fee.[2] According to PRI, asset owners are

[2] The annual fee is scaled based on AUM. For reference, in 2023, the fee for asset owners ranges from £478 (AUM below US$0.1 billion) to £8781 (AUM above US$10 billion). Investment managers' fee ranges from £1134 (AUM below US$0.1 billion) to £14222 (AUM above US$50 billion).

institutional investors directly accountable to beneficiaries or the government, while investment managers are institutional investors with most assets directed by asset owners, beneficiaries, or independent financial advisors. Service providers offer investment advice but do not make investment decisions, hence I exclude them from this study. Upon joining, PRI assigns each signatory a fixed service tier ranging from one to three, with higher tiers indicating stronger support from PRI via meetings, tailored plans, and progress tracking.[3] By signing the PRI, signatories commit to complying with the six Principles covering the integration of sustainability in investment decisions, stewardship, and reporting.[4]

Before 2011, compliance with the Principle on sustainability reporting was fulfilled through an annual survey with voluntary public disclosure. This survey relied heavily on open-ended questions, and even responses to closed-ended questions were subject to signatories' self-assessment (e.g., "small" or "large"), leaving discretion and limiting comparability across signatories. Responding to growing demand for accountability, PRI conducted multiple signatory consultations between 2011 and 2013, and introduced a mandatory reporting framework in October 2013 that requires all signatories to publicly disclose standardized information on sustainable investment practices. This framework consists mostly of multiple-choice questions with relatively objective options, and requires public disclosure on broadly applicable sustainable investment practices focusing on management control systems (MCS), and leaves commercially sensitive or asset-specific information voluntary to disclose.

The first set of standardized reports was published in 2014 and received broad viewership with more than 120,000 downloads by June 2015 (PRI, 2015). These reports are used widely,

[3] The service tier is decided by PRI based on the signatory's size and strategic importance, which reflects its potential contribution to building a sustainable financial system in its geographical region. Signatories considered strategically important include asset owners, entities affiliated with local governments, and institutions based in developing economies, especially countries where sustainable investment is less acknowledged.

[4] The six Principles are: (1) incorporate sustainability issues into investment analysis and decisions, (2) be active owners, (3) seek sustainability disclosure by portfolio companies, (4) promote sustainable investment, (5) collaborate to enhance effectiveness in sustainable investment, and (6) report on activities and progress towards sustainable investment.

such as by asset owners to select and monitor their investment managers, by PRI to identify leaders for awards and laggards for engagements, and by signatories for peer comparison and learning. The reporting framework is reviewed annually and underwent three major revisions during the sample period, which divide the post-mandate years into three subperiods: 2014-2015 for the initial rollout with ongoing trials and consultation, 2016-2020 for a more stable version, and 2021-2023 for a revision-intensive period with two significant overhauls.[5]

However, not all signatories stay at PRI after signing. Delisting can occur voluntarily due to corporate restructuring or other reasons, or involuntarily. According to PRI staff, signatories usually initiate delisting by submitting a formal request or by ceasing to pay the annual fee or submit the mandatory reports. PRI then inquires and records the reasons for withdrawal, engages with the signatory to explore potential resolution, and, if the issue cannot be addressed, typically approves the delisting in two weeks. Involuntary delisting did not occur until 2020, when PRI introduced minimum requirements based on information disclosed in the mandatory reports. Signatories that fail to meet the minimum requirements would be engaged by PRI for two years and delisted if they remain noncompliant. However, involuntary delisting remains rare, with only five cases by 2023.

While signatories typically publicize their attainment of the PRI signatory status, they seldom announce their delisting decisions. The most consistent public information source of delisting is PRI's Annual Report, which, from 2013 to 2023, listed the names of signatories that delisted during each reporting period, though without precise dates or specific reasons. Thus, the delisting disclosure could be significantly delayed after the actual delisting event. Online Appendix Table OA1 lists the release schedule of PRI Annual Reports between 2013 and 2023, as well as the covered delisting cases for each reporting period.

[5] All reporting frameworks are publicly available on PRI's online Reporting & Assessment Archive: https://www.unpri.org/reporting-and-assessment/reporting-and-assessment-archive/6567.article

To gain institutional insights on delisting incentives beyond the recorded reasons, I interviewed several PRI Signatory Relation Managers. Interviewees consistently highlighted the mandatory reporting framework as the primary cost of maintaining the PRI signatory status, which some signatories might not fully anticipate upon joining. According to interviewees, signatories often raise concerns about the resources required for reporting and the risks associated with public disclosure, with such complaints particularly common among those with lagging sustainable investment performance. Some signatories initially perceive joining PRI as a relatively low-cost way to signal sustainability commitment. However, when they later recognize the time and effort involved in reporting, they would intend to withdraw to save costs. The associated risks are viewed as mainly reputational, as stakeholders can benchmark them against peers and hold them accountable for disclosed information, and also include litigation risk.[6] Therefore, some signatories would also consider leaving PRI to manage risks.

3. Conceptual Framework

The institutional background and insights from PRI staff suggest that signatories' delisting likelihood depends on how the perceived costs and benefits of PRI signatory status evolve over time, particularly in response to the mandatory reporting framework. In this section, I develop a conceptual framework and outline the key empirical predictions.

3.1 Cost and Benefits of PRI Signatory Status

Institutional investors are typically motivated by three types of benefits to join PRI or a comparable sustainability alliance: learning resources and collaborative networks to enhance sustainable investment performance, marketing benefits to attract more capital flows, and

[6] A typical example on the reputational risk is on TIAA. In October 2022, nearly 300 professors filed a formal complaint with PRI alleging that TIAA's investments in fossil fuels violated the six Principles. They called on the PRI to evaluate TIAA and delist TIAA if it continues such "irresponsible investments and systematic greenwashing practices". Even though the PRI board dismissed the complaint after review, the group continued to expose and criticize TIAA's practices via media coverage and online posts.

performance improvements in risks and returns (Amel-Zadeh and Serafeim, 2018; Krueger et al., 2020; Edmans et al., 2025).

Sustainable investment can be practiced via either portfolio incorporation or stewardship. However, prior literature suggests that not all signatories exhibit better sustainable investment performance than non-signatories, or improve after joining PRI. Some find that PRI signatories hold portfolios with lower carbon emissions and higher sustainability scores than non-signatories and, in some cases, better incorporate sustainability factors in portfolio after signing (Humphrey and Li, 2021; Brandon et al., 2022; Choi et al., 2023). Studies also document that PRI signatories actively practice stewardship by collaboratively engaging with portfolio companies on environmental and social issues, and visiting portfolio companies to collect sustainability information (Slager et al., 2023; Agarwal et al., 2024; Dimson et al., 2025). However, others show that signatories, especially in the U.S., do not always improve sustainable investment performance after signing PRI (Brandon et al., 2022; Liang et al., 2022; Kim and Yoon, 2023). Similar evidence is observed for institutional investors labelling their funds as sustainable (Raghunandan and Rajgopal, 2022; Heath et al., 2023). When such "greenwashing" behavior is revealed, being a PRI signatory could attract heightened reputational risks from stakeholder pressure and public scrutiny, incentivizing signatories to delist from PRI.

Financially, U.S. signatories often experience higher flows after joining PRI, even when they do not improve sustainable investment performance or returns (Brandon et al., 2022; Liang et al., 2022; Kim and Yoon, 2023). Meanwhile, practicing sustainable investment can mitigate investment risk and enhance returns (Edmans, 2011; Dimson et al., 2015; Flammer, 2015; Khan et al., 2016; Dimson et al., 2025). However, these financial benefits are neither guaranteed nor uniform. Outside the U.S., flows may not rise and even fall after joining PRI (Brandon et al., 2022), and excluding investments with sustainability criteria can also constrain the investment

universe and negatively affect risk-adjusted returns (Hong and Kacperczyk, 2009; Pedersen et al., 2020). In such cases, staying at PRI could entail financial costs. Prior evidence suggests that when sustainability and financial objectives conflict, institutional investors tend to prioritize financial benefits (Li et al., 2023; Gantchev et al., 2024). Therefore, when signatories do not realize expected financial benefits in flows and risk-adjusted returns, they may also be inclined to delist from PRI.

The cost-benefit tradeoff could also depend on the signatory's internal resources and external environment. More resourceful signatories, such as larger signatories and those with stronger support from PRI, may better leverage the PRI signatory status to realize net benefits. Country-level sustainability environment, such as sustainability-related policies and enforcement, social norms, market preference or sentiment, may also shape the degree of sustainability commitment, reputational risks for not delivering the promises, and financial payoffs for keeping the PRI signatory status (Naughton et al., 2018; Dyck et al., 2019; Pedersen et al., 2020; Pástor et al., 2021, 2022).

3.2 Role of Mandatory Reporting Framework

The introduction of a mandatory reporting framework could shift the cost-benefit equilibrium of PRI signatories. Prior to the mandate, voluntary and non-standardized disclosures allow signatories to obscure limited progress. With this mandate, all signatories are obliged to allocate resources to comply with the reporting requirements, thereby increasing *compliance* costs, especially for those with constrained resources (Christensen et al. 2021). Meanwhile, standardization also enhances comparability, even without increasing information quantity or quality (Brochet et al., 2013; De George et al., 2016), hence heightening *reputational* risks for laggards in sustainable investment (Christensen et al. 2021).[7]

[7] Mandatory standardized reporting may also impose proprietary costs for signatories. However, because PRI's reporting framework only mandates disclosure on general sustainable investment practices, and makes it voluntary to disclose confidential or commercially sensitive information, the proprietary costs are likely to be minimal.

Some recent literature suggests that firms use exit decisions as a regulatory avoidance strategy in response to sustainability disclosure mandates, however such evidence is limited, indirect, and focuses on scaling back business operations (Christensen et al., 2017; Rauter, 2020). Richer evidence is documented for financial disclosure regulation, such as the 2002 Sarbanes–Oxley Act, where many firms went private or dark to avoid regulatory compliance (e.g., Engel et al., 2007; Marosi and Massoud, 2008; Leuz et al., 2008; Piotroski and Srinivasan, 2008; Doidge et al., 2010; DeFond and Lennox, 2011; Gao, 2011; Hostak et al., 2013; Li, 2014). Accordingly, I expect the delisting likelihood to increase after the PRI's mandate.

However, the delisting likelihood could increase in different patterns depending on which of the two costs dominates. If *reputational* costs dominate, signatories lagging in sustainable investment will face higher costs, hence are more likely to delist. In this vein, the mandate could act as a screening mechanism to remove those not "walking their talk" from PRI. However, if *compliance* costs dominate, the costs will not significantly differ based on sustainable investment performance. Instead, delisting likelihood will rise more among resource-constrained signatories. As such, the mandate could deter participation for even committed signatories, which is an unintended consequence.

These two costs also imply different mechanisms through which the mandate affects delisting decisions. Prior literature points out that MCS plays a crucial role in achieving sustainability and financial objectives (Henri and Journeault, 2010; Eccles et al., 2014; Ioannou et al., 2016; Flammer et al., 2019; Cohen et al., 2023; Chu et al., 2024; Amiraslani et al., 2025). For the mandate to function as a screening mechanism, it is necessary that the reported information, which focuses on MCS, enables peer differentiation to increase *reputational* costs for laggards. Thus, the reported MCS is expected to be informative of signatories' sustainability commitment, such as the remaining time at PRI, sustainable investment performance, and

strategic focus. In contrast, if the mandate primarily imposes *compliance* costs, the reported MCS is not expected to inform delisting timing or sustainable investment performance.

4. Data and Descriptive Statistics

In this section, I describe the key data sources, sample construction process, main variable measurement, and summary statistics.

4.1 PRI Delisting Data

I obtain complete signing and delisting records of all institutional investors that have become PRI signatories from April 2006 (PRI's establishment) to December 2023 from PRI. This novel proprietary dataset contains information regarding each institutional investor's name, location, website, signatory category, service tier, signature date, delisting date, and recorded reasons for delisting.

Table 1 Panel A reports the composition of institutional investors, either asset owners or investment managers, that have stayed at PRI since signing, and those that have delisted for either restructuring or non-restructuring reasons. Over the sample period, 6,217 institutional investors have signed PRI, among which 1,369 (22%) subsequently delisted, with non-restructuring delisting being more frequent (14%) than restructuring delisting (8%). Table 1 Panel B summarizes the recorded delisting reasons.[8] For non-restructuring delisting, most (34%) signatories did not specify a reason, while fee-related concerns, resource constraints, and reporting burden are the most frequently specified reasons. Half of the restructuring delisting cases involve combinations with existing signatories, implying continued PRI participation through the staying signatories.

Figure 1 Panel A visualizes the number and AUM of signed and delisted signatories for both types of reasons. By 2023, delisted signatories represent about 22% of all signatories by

[8] More than one reason could be recorded for each delisting case. A delisting is classified as for restructuring reasons as long as one of the restructuring reasons is reported, and as for non-restructuring reasons when none of the restructuring reasons is reported.

number and 4% by AUM, suggesting that delisted signatories tend to be smaller than those that remain. The annual frequency of signing, delisting for either type of reasons, as well as the number of signatories remained at PRI are detailed in Table 1 Panel C. New signings grow steadily through 2016 and then accelerate until peaking in 2021, followed by declines in 2022-2023. Delisting for non-restructuring reasons begins in 2009 and fluctuates in prevalence over time. While the number of signatories delisted increases substantially in 2022-2023, the percentage of signatories delisted is the highest in 2011. This coincides with the time when PRI released the first draft mandatory reporting framework for public consultation. In comparison, the number of signatories delisted for restructuring reasons increases steadily since 2018. As a result, PRI's signatory base expands gradually from inception to 2016, grows rapidly through 2021, and stabilizes at slightly below 5,000 signatories with US$180 billion AUM from 2022, as visualized in Figure 1 Panel B. Further, Figure 2 plots the distribution of tenure at PRI for signatories delisted for non-restructuring reasons. The distribution is significantly right-skewed, with 75% of them left within five years. The median tenure is 2.7 years, which roughly coincides with the timing of a signatory's first mandatory standardized report being released publicly by PRI.[9]

Table 1 Panel D reports cross-country signing and delisting prevalence among countries with at least ten PRI signatories, ordered by the number of signatories. For delisting due to non-restructuring reasons, the percentages are the highest in Turkey (60%), New Zealand (36%), and the Cayman Islands (35%), while the frequencies are the highest in the United States (228), followed by the United Kingdom (111) and Brazil (63). This disparity in delisting prevalence across economies highlights the importance of studying this delisting phenomenon with an international scope.

[9] New signatories have a one-year "grace period" before they are required to comply with the mandatory reporting framework. Hence, signatories' first mandatory standardized reports are due in the second year after signing and usually published by PRI around five months later.

4.2 Sample Construction

Table 2 summarizes the process of sample construction. Because PRI records signatories based on joining time without consolidating relisting or parent-subsidiary relationships, I first remove 159 duplicate entries from delist-relist cases, mergers into existing signatories, or subsidiaries of the same parent institutions so that each signatory corresponds to a unique fund family. I then match PRI signatories to Morningstar global fund families with open-end mutual funds launched by 31 December 2023 with no survivorship bias. Both active and passive funds are included because both play an important role in sustainable investment (Morningstar, 2022, 2021).[10] The matching is based on name, location, and website information, combining fuzzy string matching algorithm with manual verification. This step drops 3,173 signatories that do not manage open-end mutual funds. I further exclude the signatories left PRI involuntarily due to the minimum requirements. Ultimately, the sample consists of 2,885 signatories, with 371 signatories delisted for non-restructuring reasons ("delisted signatories") as the treated group, 2,296 signatories never delisted ("stayed signatories") as the control group, and 218 signatories delisted for restructuring reasons ("restructured signatories") as the placebo group. This is the largest sample of PRI signatories studied to date, with the number of signatories in prior research generally below 700 (e.g., Brandon et al., 2022).

4.3 Main Variables

To measure sustainable investment performance via portfolio incorporation, I combine monthly portfolio holdings from Morningstar On Demand with investee sustainability performance measured by LSEG (previously Refinitiv and Asset4) sustainability ratings to calculate a value-weighted *Portfolio Sustainability Score*.[11] While additional measures for portfolio incorporation would be preferred for robustness, none of other major sustainability

[10] According to Morningstar, index funds account for 22.5 percent by AUM of the sustainable fund market in the EU as of 2020, and 40 percent in the US as of 2021.

[11] All data from Refinitiv was downloaded in a single batch to avoid score modification due to updates in methodology (Berg et al., 2021).

score providers (e.g., MSCI, Sustainalytics, and S&P) covers the full sample period. Therefore, I resort to investee industry type, which is arguably more objective and less subject to rating bias (Christensen et al., 2022; Li et al., 2024; Tang et al., 2025). Specifically, I track signatories' value-weighted portfolio holdings in oil, gas, and coal industries (*Portfolio Dirty Holding*) to capture exposure to "dirty" sectors. To measure signatories' performance in stewardship, I follow recent literature (Slager et al., 2023; Dimson et al., 2025) and use records of the collaborative engagement on sustainability issues from the PRI Collaboration Platform. I calculate the number of collaborative engagements in which each signatory participates per month (*Collaborative Engagement*) as an empirical proxy for stewardship activeness.[12] Additionally, to gauge institutional investors' strategic focus on sustainable investment, I follow prior literature (e.g., Dikolli et al., 2022; Raghunandan and Rajgopal, 2022) to calculate the percentage of funds managed each month by the signatory that Morningstar designates as sustainability labelled (*Sustainability Funds Share*), which serves as a signal for sustainability-related emphasis in product positioning and marketing.

All financial data is collected from Morningstar Direct. All raw data is at the fund share class level, which I aggregate to the fund and then fund family (i.e., signatory) level. To measure financial performance, I calculate family-level flow (*Flow*) as the sum of fund-level net flows across all funds in a fund family per month, divided by the family's total net assets (TNA) at the end of the previous month. Fund-level net flow equals the change in fund TNA adjusted for the prior-month return net of fees. Because flows can be noisy, I also follow Hartzmark and Sussman (2019) and compute the *Normalized Flow*, defined as the monthly percentile rank of family flows within each TNA decile. Consistent with prior literature using

[12] Engagements can also be practiced individually, however such records are typically proprietary within each signatory and therefore not observable. Another important stewardship channel is shareholder voting. However, commonly used data sources for voting, such as ISS Voting Analytics and Morningstar, rely primarily on Form N-PX filings, which cover only SEC-registered funds and are not suitable for the international sample examined in this study.

the Morningstar database (e.g., Hartzmark and Sussman, 2019; Gantchev et al., 2024), I employ the *Star Rating* as the proxy for risk-adjusted returns. The star rating reflects a fund's weighted average risk-adjusted return ranking within its category over the past three, five, and ten years. In addition, I adopt two unadjusted performance measures: *Return*, as the raw monthly returns net of expenses, and *Volatility*, as the standard deviation of monthly net returns over the past three years. The fund-level star ratings, net returns, and volatility are aggregated to the family level on a value-weighted average basis. Lastly, as controls for signatory characteristics, I compute family-level percentage of index-tracking funds (*Index Funds Share*), and the number of unique stock holdings across the fund family (*Number of Stocks*) in each month.

To gauge the external environment for sustainable investment, I follow Dyck et al. (2019) and use a composite measure which combines the country-level environmental performance from Yale Environmental Performance Index (EPI) and the social norms from World Values Surveys (WVS). EPI gathers data on national policies in tackling environmental issues (Block et al., 2024), and WVS conducts surveys to study changing social values worldwide (Inglehart et al., 2022). EPI and social norms are highly correlated (coef. = 0.75, $p < 0.01$), thus I extract their principal component as the proxy for the country-level sustainability environment (*EPI & Social Norm*). In addition, I use control variables that measure country-level economic prosperity and capital market conditions by gross domestic product (*GDP*) and domestic market capitalization to GDP (*Market Capitalization*, also known as the Buffett Indicator), collected from the World Bank World Development Indicators database.

4.4 Standardized Sustainability Reports

The mandatory reporting framework is revised annually. Hence, to collect and compare signatories' reported information across time, I first manually map all the frameworks to identify common indicators that all signatories are required to disclose every year. Appendix B Panel A illustrates the structure of the 2023 reporting framework as an example. Among all

modules, two are mandatory for all signatories across all years hence serve as the main data source. Appendix B Panels B and C provide example structures of these two modules, and Appendix C presents examples of common indicators. Second, I collect the reported information on these common indicators for each signatory and year. As these information are answers to multiple choice questions which may differ in options across frameworks, I identify common options and standardize all answers into binary variables for comparison. Answers to certain questions are highly correlated with one another; in such cases, I combine these answers into summary measures using principal component analysis.

The resulting dataset is a consistent set of variables that reflect MCS linked to sustainable investment, covering five content categories: (1) sustainable investment policies and coverage (*Topic Policy*, *Exclusion Policy*, *Stewardship Policy*, and *Full Coverage*), (2) senior oversight (*Oversight*, which can be disaggregated into *Board Oversight*, *Executive Oversight*, and *Dept Head Oversight*), (3) performance incentives including key performance indicators and variable compensation (*Incentive*, which can be disaggregated into *Executive Incentive*, *Dept Head Incentive*, *Dept Head Incentive*, *RI Staff Incentive*, *Invest Staff Incentive*), (4) information assurance (*Internal Assurance* and *External Assurance*), and (5) internal implementation (*Implementation*). Larger values represent more comprehensive MCS.

In addition, I use the Internet Archive's Wayback Machine to retrieve historical versions of PRI's websites and identify signatories that voluntarily disclosed their responses to the annual PRI survey between 2007 and 2011 as voluntary reporters.

4.5 Descriptive Statistics

Table 3 Panel A compares delisted, stayed, and restructured signatories on the main variables during their time at PRI. Compared to delisted signatories, stayed signatories exhibit stronger sustainable investment performance, whereas no clear pattern is observed between restructured signatories with the other two groups. Stayed signatories also display superior

capital attraction and investment performance. In fact, only stayed signatories experience positive average flows, whereas both delisted and restructured signatories experience negative flows. Compared to delisted signatories, stayed signatories manage more assets, are assigned to higher PRI service tiers, hold a larger number of distinct stocks, offer more active funds, and consist of more investment managers than asset owners. At the country level, stayed signatories are more frequently headquartered in jurisdictions with stronger environmental performance and more progressive social norms, but slightly less developed capital markets. Table 3 Panel B compares delisted, stayed, and restructured signatories on their reported MCS for sustainable investment. Delisted signatories generally exhibit less comprehensive MCS than both stayed and restructured signatories across most dimensions. Additionally, a larger share of stayed signatories relative to delisted signatories are voluntary reporters.

5. Research Design and Empirical Results

In this section, I describe the research design and present the empirical results to answer the research questions.

5.1 When Do Signatories Delist?

As visualized in Online Appendix Figure OA1, delisted and stayed signatories exhibit distinct trajectories in both sustainable investment and financial performance, at entry and over their time at PRI. Therefore, to understand when signatories delist, I conduct a survival analysis using the Cox proportional hazard model ("Cox model") which tracks each signatory from joining PRI to estimate its expected time to delist from PRI, given its initial characteristics upon signing and their evolution over time relative to other signatories. The Cox model is the most suitable method to answer this research question because it accounts for time since signing until delisting happens, handles censored data, accommodates the non-normal distribution of tenure (Figure 2), and avoids parametric assumptions on the baseline hazard. The baseline model to be estimated is:

$$h_i(t) = h_0(t)\exp\left(\boldsymbol{\beta}'\boldsymbol{X_{i,t}} + \boldsymbol{\theta}'\boldsymbol{W_{i,t}}\right), \quad (1)$$

where $h_i(\mathrm{t})$ is the hazard rate of signatory *i* to delist at month *t* since signing. $h_0(t)$ is the baseline hazard. $\boldsymbol{X_{i,t}}$ is a vector of time-varying independent variables based on the conceptual framework, including *Portfolio Sustainability Score* and *Collaborative Engagement* as proxies for sustainable investment performance; *Flow, Star Rating*, *Return*, and *Volatility* for financial performance; *TNA* and *Service Tier* for internal resources; as well as *EPI & Social Norm* for external sustainability environment. For robustness, I replace *Portfolio Sustainability Score* with *Portfolio Dirty Holding*, and *Flow* with *Normalized Flow* as alternative proxies for sustainable investment performance and capital attraction, respectively. $\boldsymbol{W_{i,t}}$ represents control variables at the signatory-level, including *Index Funds Share*, *Number of Stock*, *Asset Owner*, as well as country-level, including *GDP* and *Market Capitalization.* Appendix A defines all variables.

There are two ways to control for unobservable heterogeneity in the Cox model: fixed effects and stratification. Fixed effects are used by adding indicator variables and require strong proportionality assumptions on hazard rates across countries and years, which are unlikely to hold in this setting. Further, the fixed effect approach may also suffer from incidental parameters problems. These issues can be addressed with stratification, which allows the baseline hazard to differ across strata while estimating common coefficients (Allison, 2009). Following An et al. (2024), I therefore use stratification to control for unobservable heterogeneity across years and countries. All delisting occurrences are examined, including those that have rejoined and re-delisted.[13] Ties are handled via the Breslow method. Robust standard errors are clustered by signatory for all models in this study.

Table 4 presents the baseline results. Across all specifications, signatories are less likely to delist when they exhibit better sustainable investment performance via either portfolio

[13] Such cases are rare, as only ten signatories have delisted more than once.

incorporation (*Portfolio Sustainability Score*) and stewardship (*Collaborative Engagement*). Economically, estimates in column (2) suggests that a one-unit increase in *Portfolio Sustainability Score* is associated with a decrease in the delisting hazard of around 80% (i.e., $1\text{-}e^{-1.580}$).[14] Consistently, higher exposure to oil, coal, and gas industries (*Portfolio Dirty Holding*) is positively associated with delisting. Financially, capital-attraction (*Flow* or *Normalized Flow*) and risk-adjusted returns (*Star Rating*) are both negatively associated with delisting, while unadjusted net returns and volatility show no association. Signatories with larger sizes (*TNA*) and more PRI support (*Service Tier*) are also less likely to delist, highlighting the importance of internal resources. Externally, delisting is less likely for signatories based in countries with better environmental performance and more progressive social norms (*EPI & Social Norm*).[15] Among the control variables, *Index Funds Share*, *Asset Owner* and *GDP* are all positively associated with delisting.

Given potential concerns that index funds are unlikely to adjust portfolio composition to consider sustainability factors, I re-estimate model (1) after excluding signatories with *Index Funds Share* of at least 50%. The results (untabulated) are highly consistent with the baseline findings. As a placebo test, I also estimate an analogous Cox model on the hazard of restructuring. The results reported in Online Appendix Table OA2 show that neither signatory-level sustainable investment performance nor country-level sustainability environment explains the restructuring timing, suggesting that the baseline results are specific to the decision to discontinue PRI signatory status, rather than reflecting general organizational restructuring.

[14] The results are robust when the measure for investee sustainability performance, LSEG ESG Combined Score, is replaced with its underlying components, including Environmental Score, Social Score, Governance Score, ESG Score, and ESG Controversy Score (untabulated).
[15] The results are consistent when *EPI* or *Social Norm* is estimated separately (untabulated).

5.2 Changes Around Mandatory Standardized Reporting

To answer the second research question, I first follow Leuz et al. (2008) and re-estimate model (1) separately for the periods before and after the mandate in October 2013, allowing the baseline hazard to differ across the two periods, and then test for differences in coefficients.

Table 5 Panel A reports the results. Sustainable investment performance and flows become statistically significant in explaining delisting decisions only in the post-mandate period. In particular, signatories with lower *Portfolio Sustainability Score* become significantly more likely to delist after the mandate. Signatory size (*TNA*) is negatively associated with delisting in both subsamples, with no statistically significant difference, whereas PRI support (*Service Tier*) becomes more negatively associated with delisting after the mandate. In contrast, the negative relationship between risk-adjusted returns (*Star Rating*) and delisting decreases in magnitude after the mandate. The coefficients on *Return*, *Volatility*, and *EPI & Social Norm* do not significantly differ between the two periods.

To examine how the associations between sustainable investment performance and delisting evolve over time, I next conduct a dynamic analysis by interacting measures for sustainable investment performance with indicators for five mutually exclusive periods based on the status of the mandatory reporting framework as described in the institutional background. The modified Cox model is:

$$h_i(t) = h_0(t)\exp\left(\sum_p \boldsymbol{\beta}'_p(\boldsymbol{X_{i,t}} \times \mathbf{1}\{t \in p\}) + \boldsymbol{\theta}'\boldsymbol{W_{i,t}}\right), \quad (2)$$

where *p* represents one of the following periods: 2006-2010 (voluntary reporting), 2011-2013 (consultation for the first mandatory reporting framework draft), then 2014-2015, 2016-2020, and 2021-2023 respectively for the mandate effective periods of the three framework versions over significant revisions. $\boldsymbol{W_{i,t}}$ represent control variables, including *Flow, Star Rating*, *Return*, *Volatility*, *Index Funds Share*, *Number of Stock*, and *Asset Owner*. When the model is not

stratified by country, I additionally control for country-level characteristics including *EPI & Social Norm, GDP*, and *Market Capitalization*.

Table 5 Panel B presents the results, with the voluntary reporting period being omitted as the benchmark years. During the pre-mandate consultation period, the coefficients on both *Portfolio Sustainability Score* and *Collaborative Engagement* are statistically insignificant. The coefficient of *Portfolio Sustainability Score* turns negative and statistically significant starting in the effective period of the first framework and remains negative in the subsequent periods. Coefficients on *Collaborative Engagement* show a similar pattern, becoming more negative and statistically significant in the post-mandate periods.

Collectively, these results are consistent with mandatory standardized reporting increasing the reputational costs of remaining at PRI for laggards. In this vein, the reporting mandate appears to function as a screening mechanism under which weaker sustainable investment performers are more likely to be filtered out of voluntary sustainability commitments. At the same time, the stronger post-mandate association between PRI support and delisting points to increasing compliance costs, which appear to be mitigated, at least in part, by implementation support from the standard setter in this setting.

5.3 Informativeness of Standardized Sustainability Reports

Given the changes around the reporting mandate, I next examine whether the content disclosed in these mandatory standardized reports is informative about (1) the subsequent delisting timing and (2) externally observable performance or strategic focus on sustainable investment, as potential explanations for documented shifts in delisting patterns.

First, I re-estimate the model (1) in the post-mandate period, replacing $\boldsymbol{X_{i,t}}$ with reported MCS. $\boldsymbol{W_{i,t}}$ represents signatory-level control variables including *TNA, Service Tier, Index Funds Share, Number of Stocks,* and *Asset Owner*. Same as in model (2), I either control for country-level covariates or estimate the model with stratification by country.

Table 6 presents the results. In columns (1) and (4), I focus on MCS at the overview level. Delisting is systematically and negatively associated with stewardship policies (*Stewardship Policy*), senior oversight (*Oversight*), and performance incentives for sustainable investment (*Incentive*). Economically, having a formal stewardship policy is associated with 63% lower delisting hazard (i.e., $1\text{-}e^{-1.007}$), while a one-unit increase in the comprehensiveness of senior oversight and performance incentives is associated with 53% (i.e., $1\text{-}e^{-0.745}$) and 38% (i.e., $1\text{-}e^{-0.476}$) lower delisting hazard. The coefficient of *External Audit* is positive when the model is stratified by country, suggesting third-party assurance is not consistently associated with delisting. For robustness, I also examine whether these reported MCS is informative about the future restructuring timing, with results summarized in Online Appendix Table OA3. In contrast, reported MCS is not systematically associated with the restructuring timing, suggesting that these reports are informative about signatories' willingness to maintain a public sustainability commitment rather than to continue business operation more generally.

Because *Oversight* and *Incentive* are principal components summarizing several indicators, I further decompose them by organizational hierarchy. Columns (2) and (5) show that signatories are less likely to delist with oversight by executives and department heads, but not by board directors. For performance incentives, columns (3) and (6) show that signatories are less likely to delist only when performance incentives are targeted at ground-level investment staff, i.e., investment analysts and portfolio managers. Finally, signatories that voluntarily reported in 2007-2011 (*Voluntary Reporter*) are less likely to delist in the post-mandate period, consistent with their pre-mandate readiness and net benefits from standardized reporting (Christensen et al., 2021).

Second, I examine whether reported MCS maps to externally observable performance and strategic focus on sustainable investment by estimating the following model:

$$Y_{i,t} = \alpha + \boldsymbol{\beta}' \boldsymbol{X_{i,t}} + \boldsymbol{\theta}' \boldsymbol{W_{i,t}} + \tau_t + \delta_c + \varepsilon_{i,t}, \quad (3)$$

where the dependent variable $Y_{i,t}$ is one of the following measures: *Portfolio Sustainability Score, Portfolio Dirty Holding*, *Collaborative Engagement*, and *Sustainability Funds Share.* $\boldsymbol{X_{i,t}}$ represents a vector of independent variables on reported MCS, and $\boldsymbol{W_{i,t}}$ includes *TNA, Service Tier, Index Funds Share, Number of Stocks,* and *Asset Owner*. τ_t and δ_c respectively denotes calendar year and country fixed effects. I do not control for signatory fixed effects as each signatory's MCS is relatively sticky over time, and signatory fixed effects will absorb cross-signatory variation of interest.

Table 7 presents the results, with overview-level variables in Panel A, and disaggregated oversight and incentive measures in Panel B. Panel A shows that dirty stocks are more likely to be held by signatories with no exclusion policy but a stewardship policy, consistent with such signatories being more likely to own dirty companies for engagement and impact. Those with a stewardship policy are also more active in collaborative engagements and hold portfolios with higher sustainability scores. Those with policies on specific environmental, social, and governance topics tend to manage more sustainability-labelled funds. External assurance is associated with higher portfolio sustainability scores, lower dirty holdings, and more frequent collaborative engagements. Senior oversight and performance incentives relate primarily to stewardship activeness, while these relations are less evident for portfolio incorporation of sustainability considerations.[16] The disaggregated analyses in Panel B further clarify these patterns. Collaborative engagement frequency is positively associated with oversight at all levels, as well as with most layers of performance incentives. Sustainability-labelled product offerings increase with executive accountability, via both oversight and incentives. Across different dimensions of sustainable investment performance, executive accountability appears

[16] Consistent results are observed when the sample includes restructured signatories (untabulated).

to show the most consistent associations. Economically, providing sustainability-linked performance incentives for executives is associated with 0.5 additional collaborative engagements per month, and 3% higher share of sustainability-labelled funds.

Taken together, these findings show that mandatory standardized reports are informative: reported MCS is systematically associated with subsequent delisting timing and align with sustainable investment performance and strategic focus. The informativeness of reported content helps explain why laggards could be exposed to heightened reputational risks and more likely to delist in the post-mandate period. The breakdown of oversight and incentive structures across organizational hierarchies further suggests that operational oversight and targeted incentives for ground-level investment decision makers are particularly informative for the duration to maintain public sustainability commitments, while executive-level accountability is linked to stewardship activity and sustainability product positioning.

5.4 Market Reaction to Delisting

To understand what happens after delisting, I first analyze market reactions by examining fund flows around delisting events. Since investors reward the attainment of the PRI signatory status with flows (Brandon et al., 2022; Liang et al., 2022; Kim and Yoon, 2023), they are expected to react negatively to delisting by withdrawing flows. However, as signatories rarely publicize their delistings, many investors may not be informed of delistings until the release of PRI Annual Reports, which are months after the actual delisting events.

To benchmark delisted signatories' flows against comparable stayed signatories, I match each delisted signatory with one stayed signatory with the same signing year, headquarter country, and closest total net assets (TNA) in the month prior to delisting, using coarsened exact matching (CEM). For each matched stayed signatory, I then assign a pseudo delisting month equal to the delisting month of its matched delisted signatory. In addition to flows around the actual delisting times, I also analyze flows around the time when the delisting is

disclosed in the PRI Annual Reports. Based on the schedule in Online Appendix Table OA1, I assign to each signatory delisted between July 2012 and March 2023 a delisting disclosure month equal to the release month of the PRI Annual Report that covers that delisting. Similarly, each matched stayed signatory is assigned a pseudo delisting disclosure month as delisting disclosure month of the matched delisted signatory.[17] I then estimate flow reactions over a three-year window before and after the delisting month, using the following difference-in-differences specification:

$$Flow_{i,t} = \alpha + \beta_1 Delisted\ Signatory_i \times Post_{i,t} + \beta_2 Post_{i,t} + \boldsymbol{\theta'} \boldsymbol{W_{i,t}} + \tau_t + \mu_i + \varepsilon_{i,t}\ , \quad (4)$$

where $Flow_{i,t}$ is the monthly net flows scaled by total net assets from the prior month of signatory i in month t. $Delisted\ Signatory_i$ is an indicator equal to one for delisted signatories and zero for matched stayed signatories. $Post_{i,t}$ is an indicator for months after the relevant event, either the delisting or pseudo delisting month ($Post\ Delist_{i,t}$), or the delisting-disclosure or pseudo delisting disclosure month ($Post\ Disclose_{i,t}$). $\boldsymbol{W_{i,t}}$ represents control variables including *TNA, Index Funds Share,* and *Number of Stocks.* τ_t and μ_i denote calendar year-month and signatory fixed effects, which omits $Delisted\ Signatory_i$, and the two time-invariant control variables used in prior models, *Asset Owner* and *Service Tier*.

To understand the dynamics of the market reaction, I also replace the single post-event indicator with separate indicators for the first, second, and third post-event years:

$$\begin{aligned} Flow_{i,t} = \alpha + \sum_{y=1}^{3} \beta_y (Delisted\ Signatory_i \times \mathbf{1}\{t \in Post\ Year_y\}) \\ + \sum_{y=1}^{3} \lambda_y \mathbf{1}\{t \in Post\ Year_y\} + \boldsymbol{\theta'} \boldsymbol{W_{i,t}} + \tau_t + \mu_i + \varepsilon_{i,t}\ , \end{aligned} \quad (5)$$

[17] Signatories delisted before July 2012 or after March 2023 are not disclosed in PRI Annual Reports. Hence, I treat them and their matched stayed signatories as with missing delisting disclosure months. Results are consistent when these delisted and matched stayed signatories are excluded from the sample (untabulated).

where $Post\ Year_y$ equals one if month t falls in post-event year one, two, or three respectively, and zero otherwise. I estimate models (4) and (5) separately when the post event is defined as the delisting month and delisting disclosure month.

Table 8 reports the results. The coefficient on $Delisted\ Signatory_i \times Post\ Delist_{i,t}$ is statistically insignificant. However, when the post-delisting period is decomposed into the first, second, and third years in column (2), flows become significantly negative in the second year after delisting, suggesting a delayed negative reaction. When the event is redefined as the delisting disclosure month, column (3) shows that the coefficient on $Delisted\ Signatory_i \times Post\ Disclose_{i,t}$ is negative and statistically significant. Economically, delisted signatories on average experience a monthly flow decline of about 0.8% relative to matched stayed signatories after delisting is disclosed. Column (4) further reveals that this decline is concentrated in the first and second years immediately after delisting disclosure. Results are robust when flow is alternatively measured by *Normalized Flow* (untabulated).

In sum, these findings suggest that delisting is associated with negative market reactions via fund outflows. However, this market reaction is delayed and concentrates around the time when delisting is disclosed in PRI's Annual Reports rather than the time of delisting itself. This pattern aligns with the limited and untimely disclosure of delisting decisions, and helps explain why the scale and history of PRI delisting have attracted relatively limited public attention.

5.5 Sustainable Investment Post Delisting

One remaining question is whether delisting from PRI represents a substantive retreat from sustainable investment or a mere abandonment of a symbolic label. This question also speaks to the substantiveness of institutional investors' voluntary sustainability commitments, as prior literature has not reached consensus on whether committed investors "walk their talk." Therefore, I examine how signatories adjust their performance and strategic focus on sustainable investment after withdrawing from PRI, distinguishing between delisting cases

before and after the introduction of mandatory standardized reporting. Using the same matched sample of delisted and stayed signatories as in the preceding section, I estimate the following difference-in-differences specification:

$$Y_{i,t} = \alpha + \beta_1 Delisted\ Signatory_i \times Post\ Delist_{i,t} + \beta_2 Post\ Delist_{i,t} + \boldsymbol{\theta'} \boldsymbol{W_{i,t}} + \tau_t + \mu_i + \varepsilon_{i,t}\ , \quad (6)$$

$$\begin{aligned} Y_{i,t} = \alpha &+ \beta_1 Delisted\ Signatory_i \times Post\ Delist\ Before\ Mandate_{i,t} \\ &+ \beta_2 Delisted\ Signatory_i \times Post\ Delist\ After\ Mandate_{i,t} \\ &+ \beta_3 Post\ Delist\ Before\ Mandate_{i,t} \\ &+ \beta_4 Post\ Delist\ After\ Mandate_{i,t} + \boldsymbol{\theta'} \boldsymbol{W_{i,t}} + \tau_t + \mu_i + \varepsilon_{i,t}\ , \end{aligned} \quad (7)$$

where $Y_{i,t}$ is one of the sustainable investment measures, including *Portfolio Sustainability Score, Portfolio Dirty Holding*, and *Sustainability Funds Share*. As delisted signatories no longer have access to the Collaboration Platform, I am unable to measure the changes in their stewardship activities after delisting. $Post\ Delist_{i,t}$ is an indicator equal to one in months after the actual or pseudo delisting month, and zero otherwise. $Post\ Delist\ Before\ Mandate_{i,t}$ equals one in months after the actual or pseudo delisting month before the mandate, and zero otherwise; and $Post\ Delist\ After\ Mandate_{i,t}$ is defined analogously for delisting events after the mandate. $\boldsymbol{W_{i,t}}$, τ_t, and μ_i are as defined in model (4).

Table 9 reports the results. Estimates in column (1) suggest that, following the delisting month, matched stayed signatories improve their *Portfolio Sustainability Score*, whereas delisted signatories exhibit a decline in *Portfolio Sustainability Score* relative to stayed peers. Column (2) reveals that these shifts are concentrated among post-mandate delisting cases. Columns (3) and (4) provide corroborating evidence that delisted signatories, particularly those delisted after the mandate, increase their allocations to dirty industries relative to stayed counterparts. Columns (5) and (6) add that delisted signatories reduce the share of sustainability-labelled funds by about 3% per month in the post-delisting period, with the reduction again concentrated among post-mandate delisting cases. In contrast, stayed

signatories expand the share of sustainability-labelled funds after the pseudo delisting month. Similar patterns are observed in the unmatched sample (untabulated).

Combined, these results are consistent with delisting from PRI representing a substantive retreat from sustainable investment, through lower portfolio sustainability, greater exposure to dirty industries, and a reduced emphasis on sustainability-labelled products, rather than a mere abandonment of a symbolic label. Moreover, these adjustments are primarily observed among signatories that delist after the reporting mandate, aligning with the notion that mandatory standardized reporting increases the substantiveness of PRI signatory status.

6. Discussion and Conclusion

This paper examines institutional investors' voluntary withdrawals from a publicly stated sustainability commitment – signing the Principles for Responsible Investment (PRI). The findings suggest that maintaining such a public sustainability commitment can be costly. In contrast to the view that voluntary sustainability commitments such as the PRI signatory status primarily serve as symbolic marketing tools with little downside, this study finds that, for a non-trivial number of PRI signatories, the realized net benefits appear insufficient to justify continued participation. These costs can be financial and, importantly, reputational, which become higher for weaker sustainable investment performers when mandatory standardized reporting is in place. The evidence also offers new insights about the real effects of mandating standardized sustainability disclosures for institutional investors. Although PRI's reporting framework focuses on *processes* rather than *outcomes*, the standardized information still enables cross-signatory benchmarking and exposes laggards to additional reputational risks. The results speak directly to the ongoing policy debates in mandating standardized disclosures for finance products with sustainability labels, such as the EU SFDR and the UK SDR. A further contribution is to open the "black box" of MCS for sustainable investment. The analysis documents how MCS varies across institutional investors, distinguishes oversight by boards

from oversight by executives and department heads, as well as incentives targeted at executives, responsible investment staff, and ground-level investment staff. The findings provide novel insights on how sustainability-linked MCS is related to the practice and persistence of sustainable investment, contributing to research about *how* to manage and incentivize better sustainability performance.

This paper opens several avenues for future research. First, while the proprietary data from PRI enables in-depth analysis of delisting, institutional investors self-select into PRI, which may shape the evidence documented in this paper. Relatedly, to observe market reactions via fund flows, I focus on open-end mutual fund families, which may behave differently from institutional investors focusing on other asset classes such as venture capital and real estate. Future research could examine other channels of institutional sustainability commitments and other types of financial institutions to further understand the determinants and consequences of sustainability withdrawal decisions. Second, information on MCS is self-reported. Although public disclosure and PRI inspections safeguard the information's credibility to some extent, not all the information is externally audited. Therefore, future research can explore novel data with third-party assurance to further unpack how specific components of MCS support the integration of sustainability objectives across the organization. Finally, it remains debatable whether delisting by weaker sustainable investment performers improves the average credibility of voluntary sustainability commitments or societal welfare. Given the increasing prevalence of sustainability withdrawal behaviors amid the politicization of sustainability-related topics and regulatory debates on mandatory sustainability disclosures, I believe this could be a fruitful area for future research.

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Appendices

Appendix A
Variable Definition

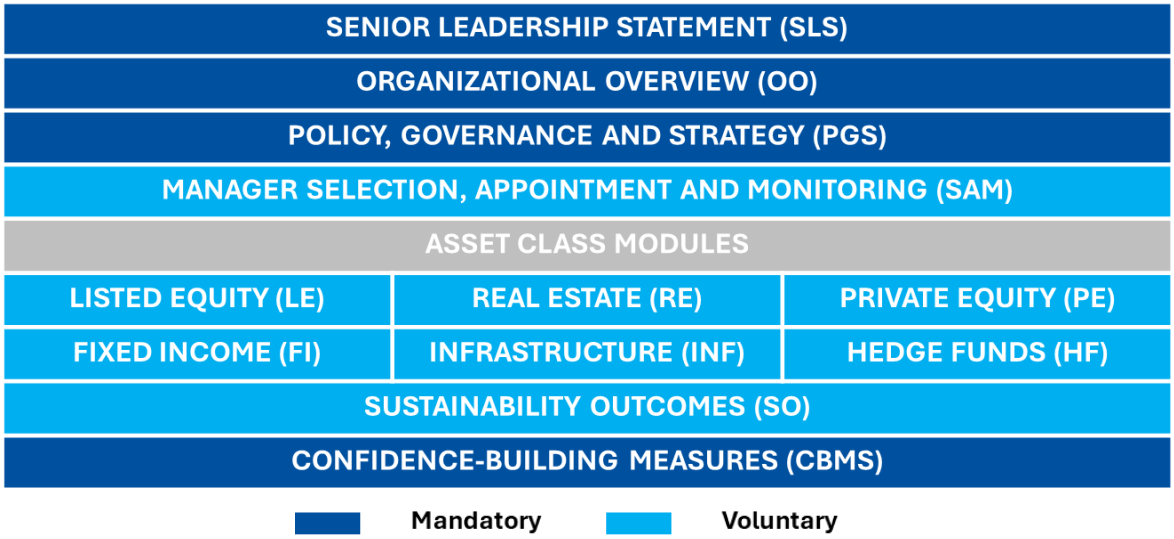
Variable	Source	Definition
Time to Delist	PRI	Number of months from the date an institutional investor becomes a PRI signatory until delisting for non-restructuring reasons.
Time to Restructure	PRI	Number of months from the date an institutional investor becomes a PRI signatory until delisting for restructuring reasons.
Portfolio Sustainability Score	Morningstar, LSEG	Monthly value-weighted average LSEG (formerly Refinitiv) ESG Combined Scores (0-1) of all portfolio companies held by each signatory. A higher score means better sustainability performance.
Portfolio Dirty Holding	Morningstar	Monthly value-weighted average percentage of portfolio invested in oil, gas, and coal industries by each signatory.
Collaborative Engagement	PRI	Monthly number of PRI collaborative engagements participated in by each signatory.
Flow	Morningstar	Monthly sum of net flows scaled by total net assets from the prior month across all open-end mutual funds managed by each signatory. Net flow at the fund level is the change in total net assets adjusted for the prior month return net of expenses.
Normalized Flow	Morningstar	Monthly percentile rank (0-100) of net flows within each total net asset decile across all open-end mutual funds managed by the signatory. Net flow at the fund level is the change in total net assets adjusted for the prior month return net of expenses.
Star Rating	Morningstar	Monthly value-weighted average star ratings (1-5) across all open-end mutual funds managed by each signatory. Star rating at the fund level is based on the rank of risk-adjusted returns relative to peers in the same fund category over the past three, five, and ten years. A higher rating means better risk-adjusted performance.
Return	Morningstar	Monthly value-weighted average total return net of expenses across all open-end mutual funds managed by each signatory.
Volatility	Morningstar	Monthly value-weighted average return volatility across all open-end mutual funds managed by each signatory per month. Volatility at the fund level is the standard deviation of monthly returns over the prior three years.
TNA	Morningstar	Natural logarithm of one plus the monthly total net assets across all open-end mutual funds managed by each signatory.
Service Tier	PRI	Service tier (1-3) assigned to each signatory by PRI upon signing, with a higher tier indicating a higher level of PRI support. The tier is fixed for each signatory and decided by PRI based on its strategic importance to PRI. The strategic importance is higher for asset owners, larger institutional investors, entities affiliated with local governments and based in developing economies.
EPI & Social Norm	Yale EPI, World Values Survey	Principal component of the Environmental Performance Index (EPI) and Social Norm for each signatory's headquarter country per year. EPI is computed using time-series raw data from Yale EPI following its latest scoring methodology. Social Norm is the emancipative value from the World Values Survey which reflects personal autonomy, gender equality, lifestyle liberty, and voice of the people.
Index Funds Share	Morningstar	Percentage of index funds among all open-end mutual funds managed by each signatory per month.

Number of Stocks	Morningstar	Natural logarithm of one plus the number of unique stocks held by each signatory per month.
Asset Owner	PRI	Indicator that equals one if the signatory is an asset owner, or zero if the signatory is an investment manager.
GDP	World Bank	Natural logarithm of one plus the gross domestic product in USD of each signatory's headquarter country per year.
Market Capitalization	World Bank	Natural logarithm of one plus the domestic market capitalization scaled by gross domestic product of each signatory's headquarter country per year, excluding firms whose business goal is to hold shares of other listed firms.
Portfolio Sustainability Score Missing	Morningstar, LSEG	Indicator that equals one if Portfolio Sustainability Score is unavailable due to the data coverage of Morningstar and LSEG, or zero otherwise.
Topic Policy	Signatory Reports	Principal component that summarizes the coverage of environmental, social, or governance factors in each signatory's sustainable investment policies during the reporting year.
Exclusion Policy	Signatory Reports	Indicator that equals one if the signatory's sustainable investment policy covers screening or exclusion during the reporting year.
Stewardship Policy	Signatory Reports	Indicator that equals one if the signatory's sustainable investment policy covers proxy voting, shareholder engagement, or stewardship during the reporting year.
Full Coverage	Signatory Reports	Indicator that equals one if the signatory's sustainable investment policy covers all its assets under management during the reporting year.
Oversight	Signatory Reports	Principal component that summarizes the existence of the signatory's board, executive, or department-head oversight for sustainable investment during the reporting year.
Board Oversight	Signatory Reports	Indicator that equals one if the signatory has formal board oversight of its sustainable investment during the reporting year, or zero otherwise.
Executive Oversight	Signatory Reports	Indicator that equals one if the signatory has formal executive-level oversight of its sustainable investment during the reporting year, or zero otherwise.
Dept Head Oversight	Signatory Reports	Indicator that equals one if the signatory has department-head oversight of its sustainable investment during the reporting year, or zero otherwise.
Incentive	Signatory Reports	Principal component that summarizes the existence of incentives, including KPIs and variable compensation, linked to sustainable investment objectives, assigned to the signatory's executives, department heads, dedicated responsible investment staff, portfolio managers, or investment analysts during the reporting year.
Executive Incentive	Signatory Reports	Principal component that summarizes the existence of incentives, including KPIs and variable compensation, linked to sustainable investment objectives, assigned to the signatory's executives during the reporting year.
Dept Head Incentive	Signatory Reports	Principal component that summarizes the existence of incentives, including KPIs and variable compensation, linked to sustainable investment objectives, assigned to the signatory's department heads during the reporting year.
RI Staff Incentive	Signatory Reports	Principal component that summarizes the existence of incentives, including KPIs and variable compensation, linked to sustainable investment objectives, assigned to the signatory's dedicated responsible investment staff during the reporting year.
Invest Staff Incentive	Signatory Reports	Principal component that summarizes the existence of incentives, including KPIs and variable compensation, linked to sustainable investment objectives, assigned to the

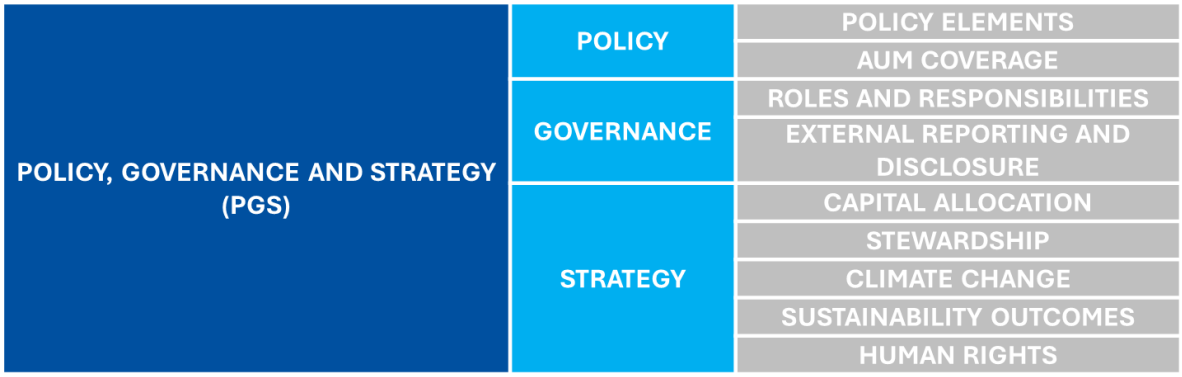
		signatory's portfolio managers or investment analysts during the reporting year.
Internal Assurance	Signatory Reports	Principal component that summarizes the existence of internal audit and internal review by senior leadership for the signatory's reported information during the reporting year.
External Assurance	Signatory Reports	Indicator that equals one if the signatory's reported information is externally audited during the reporting year, or zero otherwise.
Implementation	Signatory Reports	Principal component that summarizes the existence of internal implementation of sustainable investment by the signatory's dedicated responsible investment staff, portfolio managers, or investment analysts during the reporting year.
Voluntary Reporter	Wayback Machine	Indicator that equals one if the signatory has voluntarily provided standardized disclosure on sustainable investment practices following PRI annual survey between 2007-2011.
Report Missing	Signatory Reports	Indicator that equals one if the reported sustainability practices are unavailable, or zero otherwise. Reporting is voluntary for the first year upon signing.
Sustainability Funds Share	Morningstar	Percentage of sustainability-labelled funds among all open-end mutual funds managed by each signatory per month.
Delisted Signatory	PRI	Indicator that equals one if the signatory has delisted from PRI for non-restructuring reasons by December 2023.
Post Delist	PRI	Indicator that equals one if the month is after the delisting month of a delisted signatory or the pseudo delisting month of a matched stayed signatory, or zero otherwise.
Post Delist Year N	PRI	Three indicators, Post Delist Year 1, Post Delist Year 2, and Post Delist Year 3, which are indicators that equal one if the month is within the first, second, or third year after the delisting month of a delisted signatory or the pseudo delisting month of a matched stayed signatory, or zero otherwise.
Post Disclose	PRI	Indicator that equals one if the month is after the delisting is disclosed by PRI's Annual Report of a delisted signatory or the pseudo delisting is disclosed of a matched stayed signatory, or zero otherwise. Online Appendix Table OA1 lists the PRI Annual Reports release time and the delisting months covered by each Annual Report.
Post Disclose Year N	PRI	Three indicators, Post Disclose Year 1, Post Disclose Year 2, and Post Disclose Year 3, which are indicators that equal one if the month is within the first, second, or third year post delisting disclosure month of a delisted signatory or the pseudo delisting disclosure month of a matched stayed signatory, or zero otherwise.
Post Delist Before Mandate	PRI	Indicator that equals one if the delisting month of a delisted signatory or the pseudo delisting month of a matched stayed signatory is before the launch of mandatory reporting in October 2013.
Post Delist After Mandate	PRI	Indicator that equals one if the delisting month of a delisted signatory or the pseudo delisting month of a matched stayed signatory is after the launch of mandatory reporting in October 2013.

Appendix B
Example PRI Mandatory Reporting Framework

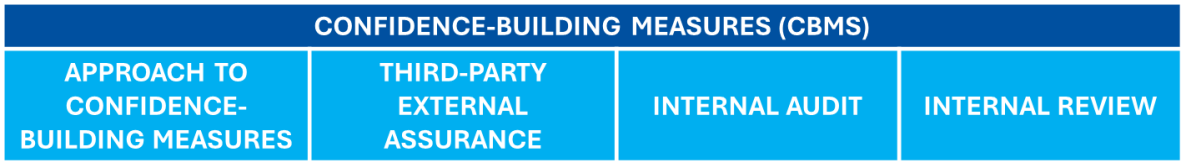
Panel A: Modules Overview



Panel B: Policy, Governance and Strategy Module Overview



Panel C: Confidence-building Measures Module Overview



Notes: Appendix B presents an example of PRI's mandatory reporting framework from 2023, with an overview of all modules in Panel A, an overview of the indicators under Policy, Governance and Strategy (PGS) module in Panel B, and an overview of indicators under Confidence-building Measures (CBMS) module in Panel C. The framework includes four modules mandatory for all signatories, including (1) Senior Leadership Statement, (2) Organizational Overview, (3) PGS, and (4) CBMS. Among these mandatory modules, Senior Leadership Statement was introduced in 2021, and Organizational Overview covers business operation information. PGS and CBMS are about management control systems in implementing sustainable investment. The framework also includes voluntary modules which are only applicable to signatories with certain practices or managing certain asset classes. Manager Selection, Appointment and Monitoring module is only required for signatories that hire external parties to implement sustainable investment indirectly, and the six asset class modules are only required for signatories with 10% or more AUM under each asset class. Sustainability Outcome module is voluntary for all. Module names have changed over the years, albeit covering similar indicators. The PGS module in 2023 corresponds to the Investment and Stewardship Policy module in 2021, the Strategy and Governance module in 2016-2020, and the Overarching Approach module in 2014-2015. The CBMS module was part of the PGS module in 2014-2016 and 2021.

Appendix C
Example Common PRI Mandatory Reporting Framework Indicators Across Years

Panel A: Investment Policies

Indicator ID	Dependent on:		Sub-section	PRI Principle	Type of indicator
PGS 1		OO 8, OO 9	Responsible investment policy elements	1, 2	CORE
MINIMUM REQUIREMENT	Gateway to:	Multiple indicators			

Which elements are covered in your formal responsible investment policy(ies)?

These elements may be set out in one or multiple standalone policy or guideline documents, or they may be part of a broader investment policy.

- ☐ (A) Overall approach to responsible investment
- ☐ (B) Guidelines on environmental factors
- ☐ (C) Guidelines on social factors
- ☐ (D) Guidelines on governance factors
- ☐ (E) Guidelines on sustainability outcomes
- ☐ (F) Guidelines tailored to the specific asset class(es) we hold
- ☐ (G) Guidelines on exclusions
- ☐ (H) Guidelines on managing conflicts of interest related to responsible investment
- ☐ (I) Stewardship: Guidelines on engagement with investees
- ☐ (J) Stewardship: Guidelines on overall political engagement
- ☐ (K) Stewardship: Guidelines on engagement with other key stakeholders
- ☐ (L) Stewardship: Guidelines on (proxy) voting
- ☐ (M) Other responsible investment elements not listed here
  Specify: ____ [Mandatory free text: small]
- ○ (N) Our organisation does not have a formal responsible investment policy and/or our policy(ies) do not cover any responsible investment elements

Panel B: Senior Oversight

Indicator ID	Dependent on:		Sub-section	PRI Principle	Type of indicator
PGS 11		N/A	Roles and responsibilities	1	CORE
MINIMUM REQUIREMENT	Gateway to:	Multiple indicators			

Which senior level body(ies) or role(s) in your organisation have formal oversight over and accountability for responsible investment?

- ☐ (A) Board members, trustees, or equivalent
- ☐ (B) Senior executive-level staff, or equivalent
  Specify: _____ [Mandatory free text: small]
- ☐ (C) Investment committee or equivalent
  Specify: _____ [Mandatory free text: small]
- ☐ (D) Head of department or equivalent
  Specify department: _____ [Mandatory free text: small]
- ○ (E) None of the above bodies and roles have oversight over and accountability for responsible investment

Panel C: Performance Incentives

Indicator ID	Dependent on:		Sub-section	PRI Principle	Type of indicator
PGS 14		PGS 11	Roles and responsibilities	1	CORE
	Gateway to:	N/A			

Does your organisation use responsible investment KPIs to evaluate the performance of your senior executive-level staff (or equivalent), and are these KPIs linked to compensation?

	Indicate whether these responsible investment KPIs are linked to compensation
○ (A) Yes, we use responsible investment KPIs to evaluate the performance of our senior executive-level staff (or equivalent) Describe: _____ [Voluntary free text: large]	[Dropdown list] (1) KPIs are linked to compensation (2) KPIs are not linked to compensation as these roles do not have variable compensation (3) KPIs are not linked to compensation even though these roles have variable compensation

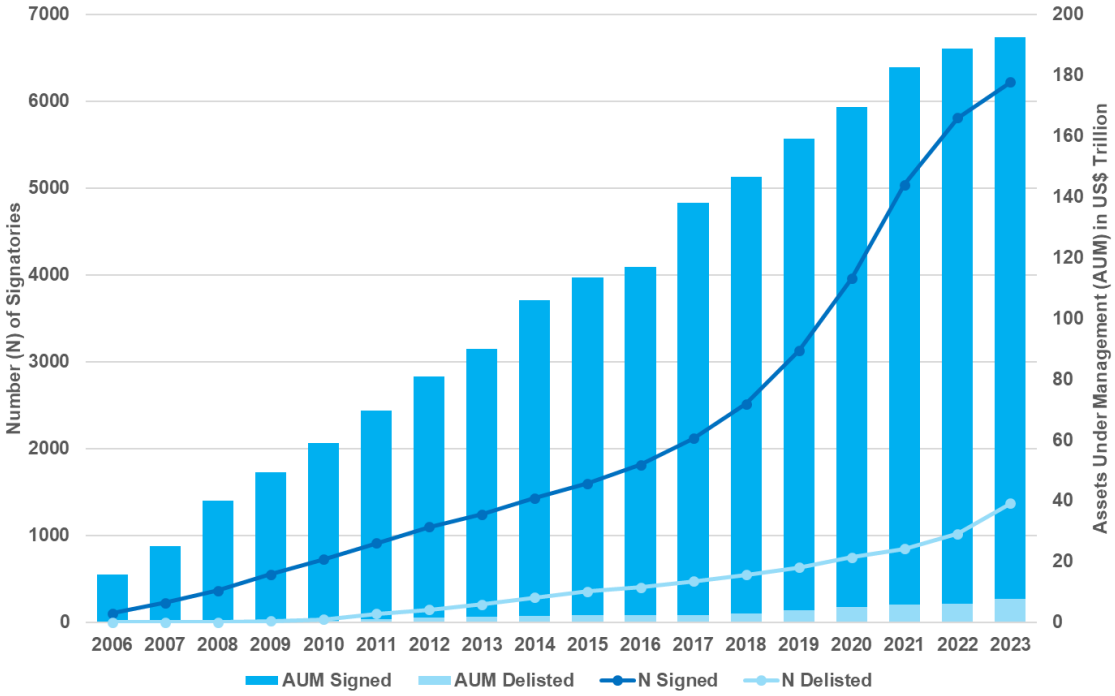
- ○ (B) No, we do not use responsible investment KPIs to evaluate the performance of our senior executive-level staff (or equivalent)
  Explain why: _____ [Voluntary free text: large]

Notes: Appendix C presents example common indicators of PRI's mandatory reporting framework which all signatories are required to disclose in all years. The examples are from the 2023 reporting framework, with example indicators for investment policies in Panel A, senior oversight in Panel B, and performance incentives in Panel C. Note that the frameworks are revised annually, hence only consistent options across all years are analyzed in the study. For example, option "(E) Guidelines on sustainability outcomes" in Panel A and option "(C) Investment committee or equivalent" in Panel B are newly added in 2023 hence are not analyzed.

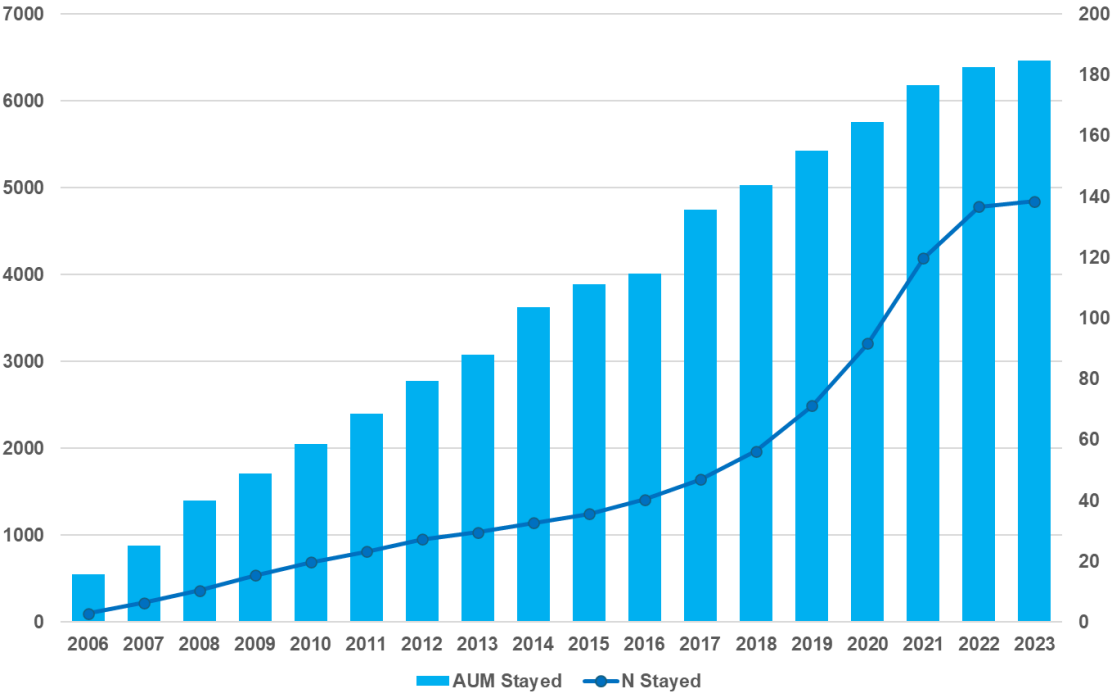
Figures

Figure 1
Signing and Delisting Trend

Panel A: Signing and Delisting Trend

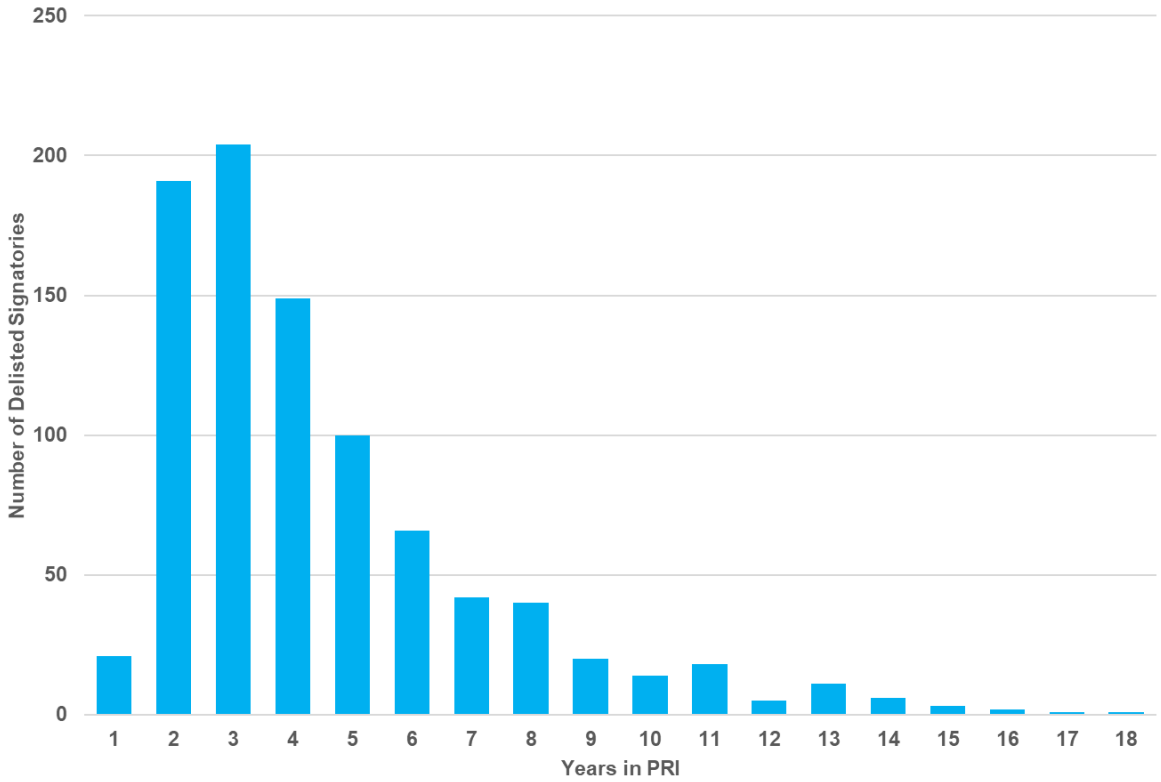


Panel B: Trend of Stayed Signatories



Notes: Figure 1 Panel A presents the annual cumulative number and assets under management (AUM) of institutional investors signed and delisted, for either restructuring or non-restructuring reasons, from PRI, between 2006 April and 2023 December. Figure 1 Panel B presents the annual cumulative number and AUM of institutional investors that have stayed at PRI since signing, between 2006 April and 2023 December.

Figure 2
Tenure Distribution of Delisted Signatories



Notes: Figure 2 presents the distribution of the number of years institutional investors signed the PRI before delisting for non-restructuring reasons.

Tables

Table 1
Population Delisting Statistics

Panel A: Distribution by Signatory Category

Signatory Category	Delisted for Non-Restructuring Reasons		Delisted for Restructuring Reasons		Stayed		Total
	N	%	N	%	N	%	N
Investment Manager	780	15%	417	8%	4,107	77%	5304
Asset Owner	114	12%	58	6%	741	81%	913
Total	894	14%	475	8%	4848	78%	6217

Panel B: Distribution by Reported Delisting Reason

Non-restructuring Reasons	N	%	Restructuring Reasons	N	%
Unclear	308	34%	Merged or taken over by another signatory	237	50%
Fees	215	24%	Ceased to operate	144	30%
Resource constraints	171	19%	Merging or splitting membership	63	13%
Reporting burden	146	16%	Merged or taken over by non-signatory	34	7%
Strategic fit	91	10%			
Dissatisfied	23	3%			
Minimum requirements	5	1%			

Notes: Table 1 Panel A reports delisting statistics for all institutional investors that signed the PRI between April 2006 and December 2023. A delisting is classified as non-restructuring when none of the restructuring reasons in Table 1 Panel B is cited, and restructuring when at least one restructuring reason in Table 1 Panel B is cited. Stayed signatories refer to PRI signatories that have never delisted since joining, as of December 2023. Signatories may join and delist more than once. The population statistics follow PRI's methodology to treat investors that rejoin after delisting as new signatories. Table 1 Panel B reports the recorded delisting reasons. Multiple reasons may be recorded for each delisting case.

Panel C: Distribution by Year

Year	New Signatories		Delisted for Non-Restructuring Reasons		Delisted for Restructuring Reasons		Stayed Signatories
	N	%	N	%	N	%	N
2006 (from April)	102						102
2007	122	120%					224
2008	140	63%					364
2009	186	51%	8	2%	5	1%	537
2010	173	32%	13	2%	8	1%	689
2011	188	27%	47	7%	18	3%	812
2012	185	23%	26	3%	17	2%	954
2013	147	15%	41	4%	24	3%	1036
2014	184	18%	56	5%	20	2%	1144
2015	172	15%	57	5%	14	1%	1245
2016	214	17%	33	3%	16	1%	1410
2017	301	21%	51	4%	16	1%	1644
2018	400	24%	47	3%	27	2%	1970
2019	609	31%	49	2%	36	2%	2494
2020	833	33%	78	3%	39	2%	3210
2021	1080	34%	46	1%	53	2%	4191
2022	769	18%	97	2%	77	2%	4786
2023	412	9%	245	5%	105	2%	4848

Notes: Table 1 Panel C reports joining and delisting trend by year for institutional investors that signed the PRI between April 2006 and December 2023. A delisting is classified as non-restructuring when none of the restructuring reasons in Table 1 Panel B is cited, and restructuring when at least one restructuring reason in Table 1 Panel B is cited. Stayed signatories refer to PRI signatories that have never delisted since joining, as of December 2023. Signatories may join and delist more than once. The population statistics follow PRI's methodology to treat investors that rejoin after delisting as new signatories.

Panel D: Distribution by Headquarter Country

Country	Delisted for Non-Restructuring Reasons		Delisted for Restructuring Reasons		Stayed Signatories		Total
	N	%	N	%	N	%	N
United States	228	18%	96	7%	959	75%	1283
United Kingdom	111	13%	77	9%	651	78%	839
France	37	8%	46	10%	381	82%	464
Australia	54	17%	42	14%	214	69%	310
Germany	20	7%	19	6%	268	87%	307
Canada	32	12%	17	6%	225	82%	274
Switzerland	38	15%	22	9%	195	76%	255
Netherlands	31	16%	20	10%	143	74%	194
Brazil	63	33%	12	6%	115	61%	190
Other Countries	42	23%	4	2%	135	75%	181
Sweden	11	7%	23	14%	128	79%	162
Spain	14	9%	12	8%	130	83%	156
Japan	7	5%	5	4%	116	91%	128
Luxembourg	16	14%	7	6%	94	80%	117
Italy	4	3%	6	5%	106	91%	116
China	9	8%	0	0%	100	92%	109
South Africa	24	23%	9	8%	73	69%	106
Denmark	14	14%	9	9%	75	77%	98
Hong Kong	17	18%	4	4%	76	78%	97
Singapore	8	8%	8	8%	80	83%	96
Finland	8	10%	12	15%	62	76%	82
Norway	7	11%	4	6%	51	82%	62
New Zealand	19	36%	3	6%	31	58%	53
India	6	14%	3	7%	33	79%	42
Mexico	6	15%	0	0%	35	85%	41
Belgium	6	15%	1	2%	34	83%	41
South Korea	12	30%	1	3%	27	68%	40
Colombia	5	13%	0	0%	34	87%	39
Ireland	0	0%	4	11%	34	89%	38
Austria	3	8%	3	8%	31	84%	37
Mauritius	3	11%	0	0%	24	89%	27
Portugal	1	4%	1	4%	24	92%	26
Chile	2	8%	0	0%	23	92%	25
Guernsey	5	21%	2	8%	17	71%	24
Cayman Islands	8	35%	1	4%	14	61%	23
Jersey	3	14%	0	0%	19	86%	22
Malaysia	2	11%	0	0%	17	89%	19
Iceland	0	0%	1	6%	17	94%	18
UAE	5	31%	0	0%	11	69%	16
Bermuda	1	6%	0	0%	15	94%	16
Liechtenstein	4	31%	0	0%	9	69%	13
Israel	1	9%	1	9%	9	82%	11
Turkey	6	60%	0	0%	4	40%	10
Greece	1	10%	0	0%	9	90%	10

Notes: Table 1 Panel D reports delisting prevalence by headquarter country for all institutional investors that signed the PRI between April 2006 and December 2023. *Other Countries* include countries with fewer than 10 institutional investors ever signed the PRI as of December 2023. A delisting is classified as non-restructuring when none of the restructuring reasons in Table 1 Panel B is cited, and restructuring when at least one restructuring reason in Table 1 Panel B is cited. Stayed signatories refer to institutional investors that remain PRI signatories as of December 2023. Signatories may join and delist more than once. The population statistics follow PRI's methodology to treat investors that rejoin after delisting as new signatories.

Table 2
Sample Construction

	Number of Signatories			
	Delisted	Stayed	Restructured	Total
All PRI institutional investor signatories	894	4848	475	6217
(Less: Duplicated signatories due to relisting, merging by existing signatories, or multiple subsidiary listings from the same parent firm)	(17)	(125)	(17)	(159)
Unique signatories in population	877	4,723	458	6,058
(Less: Signatories not covered by Morningstar open-end mutual fund database)	(502)	(2,427)	(240)	(3,173)
(Less: Signatories delisted by PRI due to Minimum Requirements)	(4)			
Unique signatories in sample	371	2296	218	2885

Notes: Table 2 summarizes the construction of the sample of PRI institutional investor signatories between April 2006 and December 2023. The starting population consists of all signatories classified in Table 1 as delisted (signatories delisted for non-restructuring reasons), restructured (signatories delisted for restructuring reasons), or stayed (never delisted as of December 2023). All counts are reported at the signatory level.

Table 3
Descriptive Statistics

Panel A: Main Variables

	Delisted Signatories			Stayed Signatories			Mean	Restructured Signatories			Mean
Variable	N	Mean	Median	N	Mean	Median	Difference	N	Mean	Median	Difference
Signatory-level											
Portfolio Sustainability Score	4008	0.27	0.27	67600	0.28	0.29	-0.01**	4251	0.30	0.31	-0.03***
Portfolio Dirty Holding	6985	1.94%	0.26%	102005	1.79%	0.62%	0.15%***	6475	2.58%	1.09%	-0.64%***
Collaborative Engagement	6985	0.24	0.00	102005	1.87	0.00	-1.63***	6475	1.40	0.00	-1.16***
Flow	6985	-0.40%	-0.13%	102005	0.06%	0.03%	-0.46%***	6475	-0.56%	-0.08%	0.16%*
Normalized Flow	6985	45.19	41.00	102005	49.99	50.00	-4.80***	6475	45.08	43.00	0.110
Star Rating	6985	2.36	2.32	102005	2.62	2.75	-0.26***	6475	2.45	2.55	-0.09***
Return	6985	0.33%	0.44%	102005	0.43%	0.53%	-0.10%*	6475	0.40%	0.51%	-0.06%
Volatility	6985	3.17	2.76	102005	2.47	1.96	0.70***	6475	2.63	2.09	0.54***
TNA	6985	19.74	19.63	102005	21.23	21.19	-1.50***	6475	20.29	20.38	-0.56***
Service Tier	6985	1.18	1.00	102005	1.64	1.00	-0.46***	6475	1.37	1.00	-0.19***
Index Funds Share	6985	6.13%	0.00%	102005	5.14%	0.00%	0.99%***	6475	7.43%	0.00%	-1.30%***
Number of Stocks	6985	2.83	3.26	102005	2.99	3.37	-0.16***	6475	2.88	3.18	-0.05*
Asset Owner	6985	0.11	0.00	102005	0.05	0.00	0.06***	6475	0.02	0.00	0.09***
Country-level											
EPI & Social Norm	6534	-0.02	0.14	96041	0.39	0.65	-0.42***	6239	0.40	0.59	-0.42***
GDP	6985	28.37	28.36	101981	28.38	28.54	0.00	6475	28.19	28.16	0.19***
Market Capitalization	6985	4.67	4.75	101617	4.63	4.68	0.04***	6475	4.60	4.67	0.07***

Notes: Table 3 Panel A reports descriptive statistics for signatory- and country-level characteristics of the delisted, stayed, and restructured signatories during their time as PRI signatories between 2006-2023. All continuous variables are winsorized at the 1st and 99th percentiles. Differences in means between the delisted group and each of the other two groups are tested using two-sided t-tests with unequal variances and Welch's approximation. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively. All variables are defined in Appendix A.

Panel B: Sustainable Investment Management Control Systems

	Delisted Signatories			Stayed Signatories			Mean	Restructured Signatories			Mean
Variable	N	Mean	Median	N	Mean	Median	Difference	N	Mean	Median	Difference
Topic Policy	3612	0.79	0.57	70809	0.98	1.73	-0.19***	3871	0.72	0.00	0.07***
Exclusion Policy	3612	0.39	0.00	70809	0.65	1.00	-0.26***	3871	0.51	1.00	-0.12***
Stewardship Policy	3612	0.40	0.00	70809	0.66	1.00	-0.26***	3871	0.51	1.00	-0.11***
Full Coverage	3612	0.51	1.00	70809	0.51	1.00	0.00	3871	0.58	1.00	-0.07***
Oversight	3612	0.82	0.60	70809	1.15	1.15	-0.32***	3871	1.04	1.15	-0.21***
Board Oversight	3612	0.39	0.00	70809	0.58	1.00	-0.19***	3871	0.55	1.00	-0.16***
Executive Oversight	3612	0.75	1.00	70809	0.88	1.00	-0.14***	3871	0.86	1.00	-0.11***
Dept Head Oversight	3612	0.27	0.00	70809	0.51	1.00	-0.24***	3871	0.37	0.00	-0.10***
Incentive	3612	-0.73	-1.64	70809	0.07	-0.04	-0.80***	3871	-0.52	-1.02	-0.21***
Executive Incentive	3612	0.34	0.00	70809	0.48	0.00	-0.13***	3871	0.34	0.00	0.00
Dept Head Incentive	3612	0.14	0.00	70809	0.40	0.00	-0.26***	3871	0.23	0.00	-0.09***
RI Staff Incentive	3612	0.17	0.00	70809	0.48	0.00	-0.31***	3871	0.31	0.00	-0.13***
Invest Staff Incentive	3612	0.48	0.00	70809	0.68	0.58	-0.20***	3871	0.51	0.00	-0.03**
Internal Assurance	3612	0.73	0.71	70809	0.90	0.71	-0.17***	3871	0.87	1.41	-0.14***
External Assurance	3612	0.09	0.00	70809	0.09	0.00	0.00	3871	0.09	0.00	0.00
Implementation	3612	0.93	1.05	70809	1.08	1.29	-0.16***	3871	1.17	1.29	-0.24***
Voluntary Reporter	3612	0.10	0.00	70809	0.14	0.00	-0.04***	3871	0.14	0.00	-0.05***

Notes: Table 3 Panel B reports descriptive statistics for reported sustainable investment management control systems of the delisted, stayed, and restructured signatories during their time as PRI signatories between 2014-2023. Observations are at signatory-month level. Differences in means between the delisted group and each of the other two groups are tested using two-sided t-tests with unequal variances and Welch's approximation. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively. All variables are defined in Appendix A.

Table 4
Time to Delist from PRI

	Time to Delist				
	(1)	(2)	(3)	(4)	(5)
Portfolio Sustainability Score	-1.745***	-1.580**		-1.609**	
	(0.578)	(0.692)		(0.709)	
Portfolio Dirty Holding			4.290**		4.297**
			(2.098)		(2.078)
Collaborative Engagement	-0.932***	-0.924***	-0.944***	-0.926***	-0.945***
	(0.172)	(0.191)	(0.194)	(0.193)	(0.196)
Flow	-3.202**	-4.282**	-4.485**		
	(1.437)	(1.929)	(1.896)		
Normalized Flow				-0.006**	-0.006**
				(0.003)	(0.003)
Star Rating	-0.133**	-0.152**	-0.155**	-0.144**	-0.147**
	(0.060)	(0.071)	(0.069)	(0.071)	(0.069)
Return	1.257	-0.717	-0.731	-0.788	-0.781
	(1.560)	(1.584)	(1.542)	(1.574)	(1.527)
Volatility	-0.044	-0.043	-0.059	-0.050	-0.065
	(0.046)	(0.056)	(0.055)	(0.057)	(0.055)
TNA	-0.166***	-0.213***	-0.201***	-0.219***	-0.206***
	(0.036)	(0.051)	(0.050)	(0.051)	(0.049)
Service Tier	-1.177***	-0.988***	-1.014***	-0.987***	-1.012***
	(0.220)	(0.238)	(0.236)	(0.243)	(0.241)
EPI & Social Norm	-0.224***				
	(0.055)				
Index Funds Share	1.248***	1.252***	1.019***	1.331***	1.096***
	(0.278)	(0.343)	(0.342)	(0.348)	(0.346)
Number of Stocks	-0.009	-0.011	-0.018	-0.009	-0.016
	(0.049)	(0.058)	(0.058)	(0.059)	(0.059)
Asset Owner	1.019***	1.387***	1.386***	1.349***	1.345***
	(0.357)	(0.361)	(0.371)	(0.367)	(0.376)
GDP	0.209***				
	(0.053)				
Market Capitalization	-0.029				
	(0.117)				
Portfolio Sustainability Score Missing	-0.668***	-0.587***		-0.607***	
	(0.167)	(0.211)		(0.210)	
Calendar Year Strata	Yes	Yes	Yes	Yes	Yes
Country Strata		Yes	Yes	Yes	Yes
N	102388	108990	108990	108990	108990
Pseudo R2	0.164	0.221	0.218	0.220	0.216

Notes: Table 4 reports results of Cox proportional hazard models with independent variables based on signatory- and country-level characteristics for the sample of delisted and stayed signatories during their time as PRI signatories. The dependent variable is *Time to Delist*, which measures the number of months from the date an institutional investor becomes a PRI signatory until delisting for non-restructuring reasons. All variables are defined in Appendix A. The model is stratified by calendar year in all columns, and additionally by headquarter country in columns (2)-(5). This table reports coefficients and includes robust standard errors clustered by signatory in the parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Table 5
Time to Delist from PRI Before and After Mandatory Reporting

Panel A: Overall Comparison

	Time to Delist					
	Pre	Post	Diff.	Pre	Post	Diff.
	(1)	(2)	P-value	(3)	(4)	P-value
Portfolio Sustainability Score	2.861	-1.945***	0.019**	3.193	-1.751**	0.045**
	(3.329)	(0.597)		(3.092)	(0.703)	
Collaborative Engagement	-2.247	-0.919***	0.919	-1.820	-0.900***	0.956
	(1.618)	(0.176)		(1.301)	(0.191)	
Flow	0.688	-3.229**	0.300	-0.500	-4.084**	0.347
	(2.831)	(1.471)		(2.819)	(1.977)	
Star Rating	-0.748**	-0.105*	0.063*	-0.848**	-0.128*	0.029**
	(0.327)	(0.060)		(0.378)	(0.071)	
Return	-7.553	1.634	0.105	-6.361	-0.193	0.015**
	(6.340)	(1.651)		(7.008)	(1.635)	
Volatility	-0.075	-0.036	0.684	-0.051	-0.044	0.964
	(0.310)	(0.048)		(0.262)	(0.058)	
TNA	-0.358**	-0.157***	0.631	-0.365*	-0.212***	0.178
	(0.166)	(0.037)		(0.209)	(0.053)	
Service Tier	-0.446	-1.253***	0.080*	-0.196	-1.164***	0.050**
	(1.163)	(0.241)		(0.793)	(0.250)	
EPI & Social Norm	0.167	-0.231***	0.660			
	(0.337)	(0.056)				
Control Variables	Yes	Yes		Yes	Yes	
Calendar Year Strata	Yes	Yes		Yes	Yes	
Country Strata				Yes	Yes	
N	11079	91309		11666	97324	
Pseudo R2	0.432	0.162		0.412	0.218	

Notes: Table 5 Panel A reports results of Cox proportional hazard models with independent variables based on signatory- and country-level characteristics for the sample of delisted and stayed signatories before and after the launch of PRI mandatory reporting framework in October 2013. The models in columns (1) and (3) compare signatories delisted before the launch to stayed signatories, including those delisted after the launch. The models in columns (2) and (4) compare signatories delisted and stayed after the launch. The dependent variable is *Time to Delist*, which measures the number of months from the date an institutional investor becomes a PRI signatory until delisting for non-restructuring reasons. Control variables in all columns include *Index Funds Share, Number of Stocks, Asset Owner,* and *Portfolio Sustainability Score Missing*. In addition, columns (1) and (2) include *GDP,* and *Market Capitalization.* The model is stratified by calendar year in all columns, and additionally by headquarter country in columns (3)-(4). All variables are defined in Appendix A. This table reports coefficients with robust standard errors clustered by signatory in the parentheses, and p-values for tests of pre-post differences in coefficients of each interested explanatory variable. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel B: Dynamic Analysis		
	(1)	(2)
Portfolio Sustainability Score x 2011-2013	0.157	0.615
	(1.998)	(2.641)
Portfolio Sustainability Score x 2014-2015	-3.262**	-3.764**
	(1.655)	(1.861)
Portfolio Sustainability Score x 2016-2020	-1.608**	-1.955**
	(0.731)	(0.793)
Portfolio Sustainability Score x 2021-2023	-3.526***	-3.425***
	(0.801)	(0.813)
Collaborative Engagement x 2011-2013	-0.747	-0.461
	(0.532)	(0.281)
Collaborative Engagement x 2014-2015	-1.121	-1.274*
	(0.682)	(0.727)
Collaborative Engagement x 2016-2020	-0.760***	-0.959***
	(0.253)	(0.320)
Collaborative Engagement x 2021-2023	-1.111***	-0.958***
	(0.264)	(0.228)
Control Variables	Yes	Yes
Calendar Year Strata	Yes	Yes
Country Strata		Yes
N	102388	108990
Pseudo R2	0.158	0.216

Notes: Table 5 Panel B reports results of the dynamic analysis of sustainable investment performance. Years 2011-2013 are the pre-mandate consultation period. Years 2014-2015, 2016-2020, and 2021-2023 are the effective years of the three versions of reporting frameworks. The benchmark (omitted) period is the voluntary reporting period, including years 2006-2010. The dependent variable is *Time to Delist*, which measures the number of months from the date an institutional investor becomes a PRI signatory until delisting for non-restructuring reasons. Control variables in all columns include *Flow*, *Star Rating*, *Return*, *Volatility*, *TNA*, *Service Tier*, *Index Funds Share, Number of Stocks, Asset Owner* and *Portfolio Sustainability Score Missing*. In addition, column (1) includes *EPI & Social Norm*, *GDP,* and *Market Capitalization.* The model is stratified by calendar year in all columns, and additionally by headquarter country in column (2). All variables are defined in Appendix A. This table reports coefficients with robust standard errors clustered by signatory in the parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Table 6
Time to Delist from PRI - Reported Management Control Systems

	Time to Delist					
	(1)	(2)	(3)	(4)	(5)	(6)
Topic Policy	0.015			-0.150		
	(0.189)			(0.222)		
Exclusion Policy	-0.066			-0.902**		
	(0.341)			(0.460)		
Stewardship Policy	-1.348***			-1.007**		
	(0.416)			(0.481)		
Full Coverage	0.407			0.328		
	(0.350)			(0.400)		
Oversight	-1.123***			-0.745*		
	(0.377)			(0.431)		
Incentive	-0.385**			-0.476**		
	(0.176)			(0.210)		
Internal Assurance	-0.525			-0.340		
	(0.342)			(0.342)		
External Assurance	0.632			1.406*		
	(0.813)			(0.779)		
Implementation	-0.147			0.190		
	(0.338)			(0.368)		
Board Oversight		-0.356			-0.291	
		(0.331)			(0.382)	
Executive Oversight		-1.001***			-0.790**	
		(0.332)			(0.366)	
Dept Head Oversight		-2.471***			-2.053***	
		(0.708)			(0.740)	
Executive Incentive			0.173			-0.047
			(0.362)			(0.336)
Dept Head Incentive			-0.574			-0.074
			(0.732)			(0.734)
RI Staff Incentive			-0.865			-0.515
			(0.598)			(0.540)
Invest Staff Incentive			-0.736**			-0.910*
			(0.370)			(0.474)
Voluntary Reporter	-1.498***	-1.486***	-1.493***	-1.639***	-1.661***	-1.707***
	(0.276)	(0.254)	(0.267)	(0.346)	(0.356)	(0.354)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Calendar Year Strata	Yes	Yes	Yes	Yes	Yes	Yes
Country Strata				Yes	Yes	Yes
N	112085	112085	112085	119607	119607	119607
Pseudo R2	0.286	0.279	0.274	0.374	0.362	0.357

Notes: Table 6 reports results of Cox proportional hazard models with independent variables based on reported management control systems for sustainable investment. The sample includes delisted and stayed signatories during their time as PRI signatories between 2014 and 2023 when mandatory standardized sustainability reports are available. The dependent variable is *Time to Delist*, which measures the number of months from the date an institutional investor becomes a PRI signatory until delisting for non-restructuring reasons. Control variables in all columns include *TNA, Index Funds Share, Number of Stocks, Asset Owner, Service Tier,* and *Report Missing*. Columns (1)-(3) additionally control for *EPI & Social Norm*, *GDP,* and *Market Capitalization.* The model is stratified by calendar year in all columns, and additionally by headquarter country in columns (4)-(6). All variables are defined in Appendix A. This table reports coefficients and includes robust standard errors clustered by signatory in the parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Table 7
Sustainable Investment Performance and Management Control Systems

Panel A: Overview

	Portfolio Sustainability Score	Portfolio Dirty Holding	Collaborative Engagement	Sustainability Funds Share
	(1)	(2)	(3)	(4)
Topic Policy	0.002	-0.001	0.219***	0.016***
	(0.004)	(0.001)	(0.084)	(0.004)
Exclusion Policy	0.006	-0.003**	0.492***	0.009
	(0.007)	(0.001)	(0.132)	(0.006)
Stewardship Policy	0.015**	0.003***	0.564***	0.010
	(0.007)	(0.001)	(0.103)	(0.007)
Full Coverage	0.003	-0.001	0.018	0.006
	(0.006)	(0.001)	(0.147)	(0.006)
Oversight	-0.001	0.001	0.242*	0.008
	(0.007)	(0.001)	(0.143)	(0.006)
Incentive	-0.001	-0.000	0.435***	0.003
	(0.002)	(0.000)	(0.072)	(0.002)
Internal Assurance	0.005	-0.000	-0.052	-0.006
	(0.006)	(0.001)	(0.121)	(0.005)
External Assurance	0.017*	-0.003***	0.850**	0.009
	(0.009)	(0.001)	(0.368)	(0.013)
Implementation	-0.004	-0.000	0.161	-0.005
	(0.006)	(0.001)	(0.114)	(0.006)
Voluntary Reporter	0.002	0.002	2.859***	0.076***
	(0.011)	(0.001)	(0.467)	(0.015)
Control Variables	Yes	Yes	Yes	Yes
Calendar Year Fixed Effects	Yes	Yes	Yes	Yes
Country Fixed Effects	Yes	Yes	Yes	Yes
N	68657	119607	119607	119607
Adjusted R2	0.417	0.135	0.371	0.114

Notes: Table 7 Panel A reports regression results of sustainable investment performance on reported management control systems for sustainable investment at the overview level. The sample includes delisted and stayed signatories during their time as PRI signatories during 2014-2023 when mandatory standardized sustainability reports are available. *Portfolio Sustainability Score* is the monthly value-weighted average LSEG ESG Combined Scores of all portfolio companies held by each signatory. *Portfolio Dirty Holding* is the monthly value-weighted average percentage of portfolio invested in oil, gas, and coal industries by each signatory. *Collaborative Engagement* is the monthly number of PRI collaborative engagements participated in by each signatory. *Sustainability Funds Share* is the percentage of sustainability-labelled funds among all open-end mutual funds managed by each signatory per month. Control variables in all columns include *TNA, Index Funds Share, Number of Stocks, Asset Owner, Service Tier,* and *Report Missing*. Calendar year and headquarter country fixed effects are controlled in all regressions. All variables are defined in Appendix A. Intercepts are not reported. Robust standard errors clustered by signatory are reported in the parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel B: Oversight and Incentives

	Portfolio Sustainability Score		Portfolio Dirty Holding		Collaborative Engagement		Sustainability Funds Share	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Board Oversight	-0.006		0.001		0.495***		0.008	
	(0.007)		(0.001)		(0.155)		(0.006)	
Executive Oversight	0.012		-0.001		0.384***		0.014*	
	(0.008)		(0.001)		(0.124)		(0.007)	
Dept Head Oversight	0.006		-0.000		0.804***		0.011*	
	(0.006)		(0.001)		(0.139)		(0.006)	
Executive Incentive		0.006		0.000		0.515***		0.030***
		(0.006)		(0.001)		(0.181)		(0.007)
Dept Head Incentive		-0.008		-0.000		0.672***		-0.003
		(0.007)		(0.001)		(0.182)		(0.008)
RI Staff Incentive		0.002		-0.000		0.890***		0.002
		(0.006)		(0.001)		(0.146)		(0.007)
Invest Staff Incentive		0.003		-0.001		-0.047		-0.003
		(0.006)		(0.001)		(0.158)		(0.007)
Voluntary Reporter	0.005	0.005	0.001	0.002	3.189***	2.979***	0.081***	0.081***
	(0.012)	(0.012)	(0.001)	(0.001)	(0.474)	(0.465)	(0.016)	(0.016)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Calendar Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	68657	68657	119607	119607	119607	119607	119607	119607
Adjusted R2	0.416	0.415	0.132	0.132	0.336	0.360	0.110	0.112

Notes: Table 7 Panel B reports results of cross-sectional time-series regressions of sustainable investment performance on the reported management control systems for senior oversight and performance incentives for sustainable investment. The sample includes delisted and stayed signatories during their time as PRI signatories during 2014-2023 when mandatory standardized sustainability reports are available. *Portfolio Sustainability Score* is the monthly value-weighted average LSEG ESG Combined Scores of all portfolio companies held by each signatory. *Portfolio Dirty Holding* is the monthly value-weighted average percentage of portfolio invested in oil, gas, and coal industries by each signatory. *Collaborative Engagement* is the monthly number of PRI collaborative engagements participated in by each signatory. *Sustainability Funds Share* is the percentage of sustainability-labelled funds among all open-end mutual funds managed by each signatory per month. Control variables in all columns include *TNA, Index Funds Share, Number of Stocks, Asset Owner, Service Tier,* and *Report Missing*. Calendar year and headquarter country fixed effects are controlled in all regressions. All variables are defined in Appendix A. Intercepts are not reported. Robust standard errors clustered by signatory are reported in the parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Table 8
Market Reaction to Delisting

	Flow			Flow	
	(1)	(2)		(3)	(4)
Delisted Signatory * Post Delist	-0.005		Delisted Signatory * Post Disclose	-0.008**	
	(0.003)			(0.003)	
Delisted Signatory * Post Delist Year 1		-0.004	Delisted Signatory * Post Disclose Year 1		-0.008**
		(0.003)			(0.003)
Delisted Signatory * Post Delist Year 2		-0.010**	Delisted Signatory * Post Disclose Year 2		-0.009**
		(0.004)			(0.004)
Delisted Signatory * Post Delist Year 3		-0.005	Delisted Signatory * Post Disclose Year 3		-0.002
		(0.005)			(0.009)
Post Delist	-0.002		Post Disclose	0.001	
	(0.002)			(0.002)	
Post Delist Year 1		-0.002	Post Disclose Year 1		0.002
		(0.002)			(0.002)
Post Delist Year 2		-0.001	Post Disclose Year 2		0.000
		(0.002)			(0.002)
Post Delist Year 3		-0.002	Post Disclose Year 3		-0.006
		(0.003)			(0.005)
Control Variables	Yes	Yes		Yes	Yes
Calendar Year x Month Fixed Effects	Yes	Yes		Yes	Yes
Signatory Fixed Effects	Yes	Yes		Yes	Yes
N	24724	24724		24724	24724
Adjusted R2	0.126	0.127		0.126	0.126

Notes: Table 8 reports regression results of flow reactions to delisting from PRI. The sample includes delisted signatories and stayed signatories matched on signature year, headquarter country, and closest TNA in the month prior to delisting from PRI, observed between three years before to three years after the delisting month, or for the stayed signatories, the pseudo delisting month of the matched stayed signatory. The dependent variable is *Flow*, which is the monthly sum of net flows scaled by total net assets from the prior month across all open-end mutual funds managed by each signatory. Net flow at the fund level is the change in total net assets adjusted for the prior-month return net of fees. *Post Delist* indicates the period after (pseudo) delisting from PRI, while *Post Delist Year N* indicates the Nth year after (pseudo) delisting. *Post Disclose* indicates the period after (pseudo) delisting is disclosed in PRI's Annual Report, while *Post Disclose Year N* indicates the Nth year after the disclosure of (pseudo) delisting. Control variables in all columns include *TNA, Index Funds Share,* and *Number of Stocks.* Calendar year x month fixed effects and signatory fixed effects are controlled in all regressions. All variables are defined in Appendix A. Intercepts are not reported. Robust standard errors clustered by signatory are reported in the parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Table 9
Sustainable Investment Performance Post Delisting

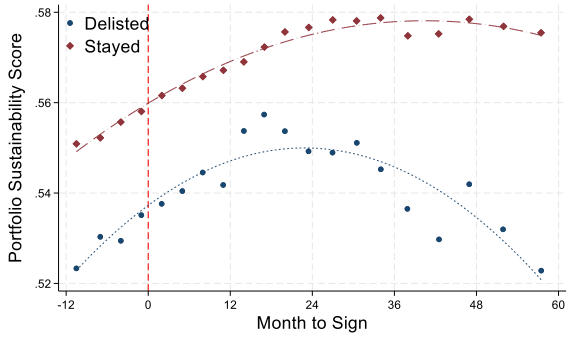
	Portfolio Sustainability Score		Portfolio Dirty Holding		Sustainability Funds Share	
	(1)	(2)	(3)	(4)	(5)	(6)
Delisted Signatory * Post Delist	-0.025**		0.004*		-0.030**	
	(0.012)		(0.002)		(0.015)	
Delisted Signatory * Post Delist Before Mandate		0.001		-0.006*		0.017
		(0.021)		(0.004)		(0.021)
Delisted Signatory * Post Delist After Mandate		-0.027**		0.006**		-0.034**
		(0.012)		(0.002)		(0.017)
Post Delist	0.016*		-0.001		0.021	
	(0.009)		(0.001)		(0.014)	
Post Delist Before Mandate		0.009		0.001		-0.028
		(0.015)		(0.002)		(0.019)
Post Delist After Mandate		0.016*		-0.001		0.027*
		(0.009)		(0.001)		(0.015)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Calendar Year x Month Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Signatory Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
N	23278	23278	39721	39721	39721	39721
Adjusted R2	0.825	0.826	0.628	0.629	0.626	0.627

Notes: Table 9 reports regression results of sustainable investment performance on delisted signatories interacted with post-delisting periods. The sample includes delisted signatories and stayed signatories matched on signature year, headquarter country, and closest TNA in the month prior to delisting from PRI. The dependent variables are *Portfolio Sustainability Score,* which is the monthly value-weighted average LSEG ESG Combined Scores of all portfolio companies held by each signatory; *Portfolio Dirty Holding,* which is the monthly value-weighted average percentage of portfolio invested in oil, gas, and coal industries by each signatory; *Sustainability Funds Share* is the percentage of sustainability-labelled funds among all open-end mutual funds managed by each signatory per month. *Delisted Signatory* is an indicator for signatories delisted from PRI for non-restructuring reasons by December 2023. *Post* indicates the period after delisting, or pseudo delisting for matched stayed signatories. In even columns, *Post Delist* is replaced with *Post Delist Before Mandate* and *Post Delist After Mandate*, which are indicators for the period after (pseudo) delisting before or after the launch of mandatory reporting in October 2013. Control variables in all columns include *TNA, Index Funds Share,* and *Number of Stocks.* Calendar year x month fixed effects and signatory fixed effects are controlled in all regressions. All variables are defined in Appendix A. Intercepts are not reported. Robust standard errors clustered by signatory are reported in the parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

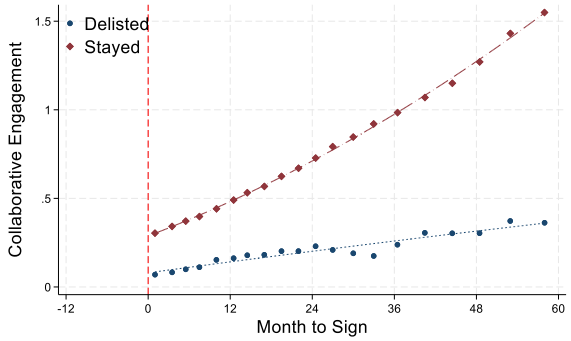
Online Appendix

Figure OA1
Financial and Sustainable Investment Performance Over Time in PRI

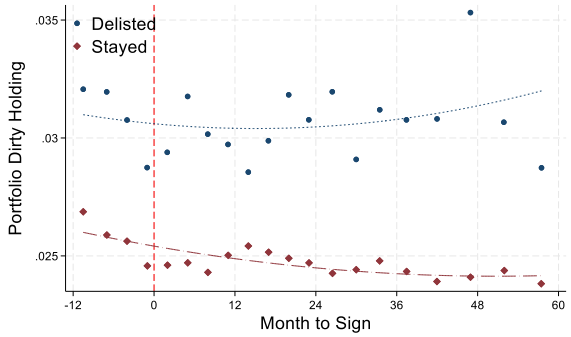
Panel A: Portfolio Sustainability Score



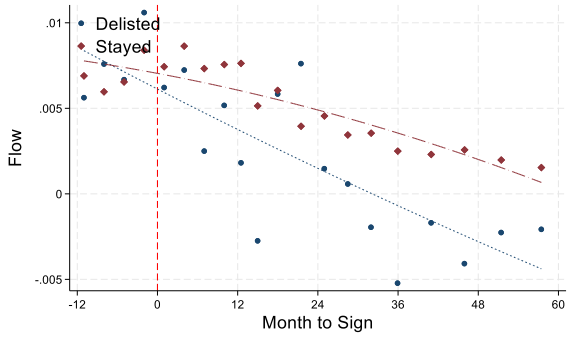
Panel B: Collaborative Engagement



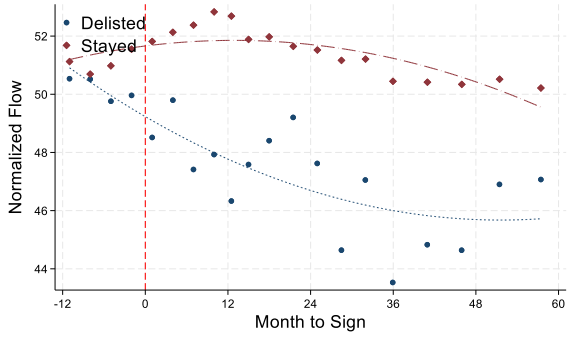
Panel C: Portfolio Dirty Holding



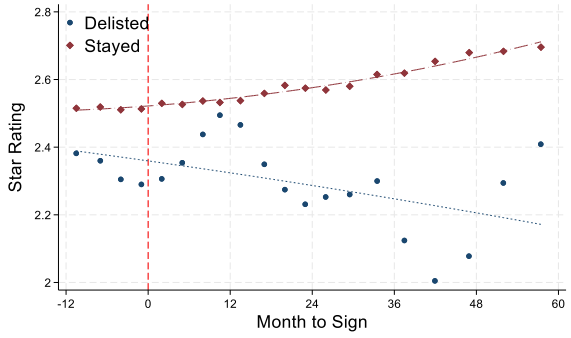
Panel D: Flow



Panel E: Normalized Flow



Panel F: Star



Notes: Figure OA1 presents the scatter plots of sustainable investment and financial performance of PRI signatories from 12 months before to 60 months after signing. Signatories that have delisted for non-restructuring reasons by December 2023 are shown in blue circles with a blue dotted quadratic fit line, while stayed signatories are shown in red diamonds with a red dash-dot quadratic fit line. The red dashed vertical line marks the signing month. Panels A to C display sustainable investment performance, with *Portfolio Sustainability Score* in Panel A, *Collaborative Engagement* in Panel B, and *Portfolio Dirty Holding* in Panel C. Panels D to F display financial performance, with *Flow* in Panel D, *Normalized Flow* in Panel E, and *Star* in Panel F.

Table **OA1**

Release Time of PRI Annual Report and Disclosed Delisting Coverage

Year	Annual Report Release Month	Disclosed Delisting	
		From	To
2013	2013-August	2012-July	2013-June
2014	2014-August	2013-July	2014-June
2015	2015-July	2014-July	2015-June
2016	2016-September	2015-April	2016-March
2017	2017-August	2016-April	2017-March
2018	2018-September	2017-April	2018-March
2019	2019-August	2018-April	2019-March
2020	2020-September	2019-April	2020-March
2021	2021-August	2020-April	2021-March
2022	2022-September	2021-April	2022-March
2023	2023-August	2022-April	2023-March

Notes: Table OA1 lists the release time of each PRI Annual Report between 2013 and 2023 and the coverage of delisting disclosed in the Annual Report. PRI did not disclose delisted signatories in Annual Reports before 2013 and discontinued such disclosures from 2024.

Table OA2
Time to Delist from PRI for Restructuring Reasons

	Time to Restructure				
	(1)	(2)	(3)	(4)	(5)
Portfolio Sustainability Score	0.316	0.124		0.122	
	(0.751)	(0.809)		(0.802)	
Portfolio Dirty Holding			-2.084		-0.913
			(3.809)		(3.405)
Collaborative Engagement	-0.141	-0.123	-0.123	-0.123	-0.124
	(0.111)	(0.124)	(0.125)	(0.125)	(0.126)
Flow	-3.422*	-3.623	-4.133*		
	(1.920)	(2.308)	(2.368)		
Normalized Flow				-0.006	-0.006
				(0.004)	(0.004)
Star Rating	-0.110	-0.097	-0.091	-0.092	-0.087
	(0.095)	(0.096)	(0.095)	(0.099)	(0.097)
Return	2.785	1.804	1.499	1.407	1.215
	(2.769)	(2.876)	(2.970)	(2.869)	(2.978)
Volatility	-0.055	-0.046	-0.048	-0.043	-0.049
	(0.076)	(0.089)	(0.088)	(0.089)	(0.088)
TNA	-0.089*	-0.107*	-0.088	-0.113**	-0.095*
	(0.048)	(0.057)	(0.058)	(0.057)	(0.057)
Service Tier	-0.621***	-0.474**	-0.460**	-0.454**	-0.444**
	(0.210)	(0.196)	(0.194)	(0.191)	(0.190)
EPI & Social Norm	0.095				
	(0.122)				
Control Variables	Yes	Yes	Yes	Yes	Yes
Calendar Year Strata	Yes	Yes	Yes	Yes	Yes
Country Strata		Yes	Yes	Yes	Yes
N	102080	108466	108466	108466	108466
Pseudo R2	0.067	0.085	0.083	0.085	0.082

Notes: Table OA2 reports results of Cox proportional hazard models with independent variables based on signatory- and country-level characteristics for the sample of restructured and stayed signatories during their time as PRI signatories. The dependent variable is *Time to Restructure*, which measures the number of months from the date an institutional investor becomes a PRI signatory until delisting for restructuring reasons. Control variables in all columns include *Index Funds Share, Number of Stocks,* and *Asset Owner*. Column (1) additionally includes *Portfolio Sustainability Score Missing, GDP,* and *Market Capitalization.* Columns (2) and (4) additionally include *Portfolio Sustainability Score Missing.* The model is stratified by calendar year in all columns, and additionally by headquarter country in columns (2)-(5). All variables are defined in Appendix A. This table reports coefficients and includes robust standard errors clustered by signatory in the parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Table OA3
Time to Delist from PRI for Restructuring Reasons - Reported Management Control Systems

	Time to Restructure	
	(1)	(2)
Topic Policy	-0.386	-0.546
	(0.269)	(0.339)
Exclusion Policy	0.218	0.237
	(0.483)	(0.611)
Stewardship Policy	-0.357	0.005
	(0.514)	(0.508)
Full Coverage	0.223	0.240
	(0.424)	(0.509)
Oversight	-1.345***	-0.961
	(0.431)	(0.589)
Incentive	-0.096	-0.025
	(0.176)	(0.178)
Internal Assurance	-0.222	0.004
	(0.479)	(0.551)
External Assurance	-0.382	-0.884
	(1.123)	(0.718)
Implementation	1.174**	1.015*
	(0.460)	(0.589)
Voluntary Reporter	-0.510	-0.452
	(0.344)	(0.538)
Control Variables	Yes	Yes
Calendar Year Strata	Yes	Yes
Country Strata		Yes
N	110657	118069
Pseudo R2	0.289	0.356

Notes: Table OA3 reports results of Cox proportional hazard models with independent variables based on reported management control systems for sustainable investment. The sample includes restructured and stayed signatories during their time as PRI signatories between 2014 and 2023 when mandatory standardized sustainability reports are available. The dependent variable is *Time to Restructure*, which measures the number of months from the date an institutional investor becomes a PRI signatory until delisting for restructuring reasons. Control variables in all columns include *TNA, Index Funds Share, Number of Stocks, Asset Owner, Service Tier,* and *Report Missing*. Columns (1) additionally controls for *EPI & Social Norm*, *GDP,* and *Market Capitalization.* The model is stratified by calendar year in all columns, and additionally by headquarter country in column (2). All variables are defined in Appendix A. This table reports coefficients and includes robust standard errors clustered by signatory in the parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.