

Does Paying Passive Managers to Engage Improve ESG Performance?

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July 2023

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Abstract

The paper studies a natural experiment in responsible investment conducted by the Japanese Government Pension Investment Fund (GPIF), the largest public pension fund in the world. In 2018 GPIF gave its largest passive manager a remunerated mandate to improve the environmental (E), social (S) and governance (G) performance of portfolio companies. In the previous year the fund had adopted two best-in-class indexes, rewarding companies with high ESG scores through additional equity investment. We use private data and difference-in-differences analysis to show that engagement by the asset manager has resulted in improvements in some of the ESG scores for mid- and large cap companies; small-cap companies were rarely engaged. In an event study, we find evidence that GPIF's portfolio tilt towards ESG indexes has created financial incentives to improve ESG scores. We note that under GPIF's programme conditional portfolio tilting is a complement to engagement, while it is usually regarded as a substitute.

Keywords: ESG, active ownership, investor stewardship, engagement, ESG indexes, passive managers, portfolio tilting

JEL Classifications: G34, G38, K20

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Abstract

The paper studies a natural experiment in responsible investment conducted by the Japanese Government Pension Investment Fund (GPIF), the largest public pension fund in the world. In 2018 GPIF gave its largest passive manager a remunerated mandate to improve the environmental (E), social (S) and governance (G) performance of portfolio companies. In the previous year the fund had adopted two best-in-class indexes, rewarding companies with high ESG scores through additional equity investment. We use private data and difference-in-differences analysis to show that engagement by the asset manager has resulted in improvements in some of the ESG scores for mid- and large cap companies; small-cap companies were rarely engaged. In an event study, we find evidence that GPIF's portfolio tilt towards ESG indexes has created financial incentives to improve ESG scores. We note that under GPIF's programme conditional portfolio tilting is a complement to engagement, while it is usually regarded as a substitute.

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1. Introduction

There are over 4,900 investors and service providers that have signed the Principles of Responsible Investment (PRI, 2022, p. 36). The main strategies employed are divestment, portfolio tilting, engagement, and voting. Engagement is considered essential in equity investment, but direct evidence on its impact is scarce because it is usually conducted in private.¹ In addition, the commitments to engage from passive managers are often viewed as lacking in substance (see Bebchuk and Hirst, 2019). The main issue revolves around cost and incentives: passive managers hold many positions and compete by offering lower fees. In contrast, engaging companies through private contacts and meetings is expensive and ESG requires diverse expertise, for example on energy, biodiversity, human rights, and supply chain management. The practice of bundling engagement and portfolio management gives rise to a potential conflict of interest between beneficial owners and asset managers; for example, passive managers have an incentive to minimise stewardship efforts while beneficial owners would like them to monitor and engage.² This hypothesis of active ownership passivity is supported by evidence that a lack of outcomes; investment from US PRI signatories has not improved the ESG scores of target companies (Krueger et al., 2020).³

Divestment and portfolio tilting are also viewed sceptically. The central argument is that the required portfolio shift is too large to depress the prices of equities of companies with low ESG scores, and as a result prevents any effective signal to management of investor dissatisfaction. Moreover, investors that place little value on ESG, or have a higher ESG risk tolerance, will purchase the shares on any price decline, and mitigate or even eliminate any price effect. The result is that the impact on company behaviour will be minimal (Broccardo et al., 2022; Heinkel et al., 2001), an effect accentuated with traditional remuneration contracts (Davies and Van Wesep, 2018). Calibration on U.S. data suggests that to increase the cost of capital by at least 1% would require at least 84% of investors to hold “clean stocks” only, in this case by investing in the FTSE 4 Good Select USA Index (Berk and van Binsbergen, 2021).

Empirical evidence on demand shocks from inclusion or exclusion in best-in-class indexes like the FTSE4Good is consistent with the theoretical prediction; returns are generally insignificant (Berk and

¹ Votes against management, that are publicly observable, are a misleading measure of engagement. When engagement is successful no negative voting is necessary (Becht et al., 2009).

² We deliberately distinguish between engagement and voting. It is relatively cheap and easy to comply with the PRI commitment to exercise voting rights by employing a voting manager or by outsourcing to a proxy adviser; engagement that involves time consuming research, contacts, meetings, and specialized staff is a separate and more cost intensive activity. Engagement can be outsourced to equity ownership services, but these operate rather differently from proxy advisors (Becht et al., 2021). In the divestment literature, both empirical and theoretical, “engagement” is often treated as synonymous with voting and can be a source of confusion; see below.

³ There is some evidence that an equity ownership service achieved engagement outcomes when measured in “milestone progress”, a measure devised by the asset manager for self-assessment and client reporting that pre-dates ESG scores (Dimson, Karakaş, and Li 2015).

van Binsbergen, 2021; Curran and Moran, 2007; Hawn et al., 2018).⁴ The consensus of this literature is that divestment and portfolio tilting is inferior to engagement, despite the lack of evidence on the efficacy of engagement. The evidence on index inclusion is also far from conclusive because the amounts invested in “best-in-class” indexes are usually quite small.

The objective of this paper is to provide new evidence on ESG engagement and index tilting in the context of a natural experiment conducted by the Government Pension Investment Fund (GPIF) of Japan, the largest pension fund in the world. In 2018 GPIF gave its largest passive manager and an active manager a mandate to “improv[e] the overall market through stewardship activities” by setting medium- to long-term goal for engagement activities, engage and achieve ESG milestone progress.⁵ The instruction is separate from the asset management contract that was already in place to invest and manage equity securities. The asset managers are remunerated separately for engagement. In 2017 GPIF had already adopted two best-in-class indexes from FTSE and MSCI that reward improvements in ESG performance with index inclusion resulting in additional equity investment through portfolio tilting.⁶ Index inclusion and exclusion is determined by ESG scores produced by the index providers. The engagement mandate required the asset manager to improve the ESG performance of TOPIX constituents in terms of milestones; it was not linked explicitly to the best-in-class indices.⁷

We use private data from the passive asset manager to evaluate the impact of the engagement programme using difference-in-differences (DiD), a technique that is widely used in impact evaluation, because it allows us to draw causal inferences (Gertler et al., 2016). We compare the difference in ESG scores between companies that were engaged (the treatment group) with companies that were never engaged by GPIF’s asset manager (the control group) before and after the beginning of the engagement programme. If the treatment was successful, we would expect to see a change in the wedge between these two differences. The technique eliminates two potential biases in simple “before and after” impact studies; it controls for fixed effects that might influence the responsiveness to treatment and, for potential times series changes that are unrelated to the treatment but might nevertheless improve the outcome, leading the observer to falsely attribute the improvement to the treatment (Angrist and Pischke, 2009).

⁴ The number of related studies is large and most arrive at similar conclusions (Yilmaz et al., 2020). A recent theory paper argues that tilting is superior to divestment because it provides a financial incentive to take corrective action (Edmans et al., 2022).

⁵ GPIF Stewardship Activities Report 2020-21, pg. 30.

⁶ GPIF also adopted a thematic “best-in-class” index promoting gender diversity, the MSCI Japan Empowering Women Index (WIN). WIN “aims to include companies that lead their respective [...] sector groups in terms of supporting women’s participation and advancement in the workforce and adopting diversity policies” (MSCI WIN Factsheet, 31 January 2023). The index is organized as a tournament; it ranks the companies in each sector using MSCI diversity scores and includes the top 50% from each sector in the index. The WIN index has been studied separately (Mehrotra et al., 2023).

⁷ In September 2018 GPIF adopted additional climate related thematic indices, the S&P/JPX Carbon Efficient Index for domestic equities and the S&P Global Ex-Japan LargeMid Carbon Efficient Index for foreign equities. These target indexes use portfolio tilting by overweighting and underweighting the constituents of the underlying index (GPIF, 2018). Best-in-class carbon leader indexes were available at the time (Andersson et al., 2016), but not adopted by GPIF. It is much harder to measure the incentive effects created by target indexes compared to leader indexes.

An important assumption of our definition of treatment relies is that the companies in the control group were not engaged by other asset managers. In the event they were, our comparison of the difference in means scores between the treated and the control group would understate the impact that is due to remunerated engagement. Also, we do not account for potential anticipation or “spillover” effects that have been observed in the hedge fund activism literature (Gantchev et al., 2019). Companies that were not engaged might have responded to the treatment of other companies without having been treated at all, which would reduce the difference in the differences between the treated and the control group.

Most importantly, our current definition of the control group requires refinement; we do not consider that engagements were staggered, and that some companies were engaged earlier than others. The practice of ignoring staggered treatment is very common (de Chaisemartin and D’Haultfoeuille, 2022) but relies on a misclassification, that units which have not been treated early in the time series are assumed to be treated over the entire time series. In many studies this has resulted in biased results (Baker et al., 2022). There are new estimators specifically devised for staggered treatment (Callaway and Sant’Anna, 2021; Sun and Abraham, 2021) and we have applied the former as a robustness check.

In addition, we investigate the price reaction of demand shocks caused by ESG index inclusion and exclusion. This allows us to assess if the adoption of best-in-class incentives has provided a financial benefit that would make engagement more likely to persuade management to agree to the demands of the engagement. Note that index inclusion provides an incentive to improve scores for all companies with scores below the inclusion threshold. The difference-in-differences approach allows us to distinguish between the two effects. All companies with low scores should have an incentive to increase their scores, but low score companies that were engaged should have a larger increase in scores than low score companies that were not engaged. We use difference-in-differences quantile regressions to check if companies with low, median and high scores responded differently (Meyer et al., 1995).

The remunerated engagement mandate was awarded to AM One, a large Japanese asset manager, in 2018. The program is based on 20 ESG engagement themes that were classified into E, S, G and a fourth category “ESG”, where the latter is some combination of the three separate categories and includes topics like corporate misconduct, digital transformation and CSR/ESG management. Progress is self-assessed by the asset manager and measured through an eight-stage milestone system. These range from identifying ESG issues (1), to issues being recognised by senior management (4) to plans being implemented (7) and completing the engagement (8). The asset manager is assessed on milestone progress.

One year prior to the remunerated engagement programme, GPIF adopted the aforementioned “best-in-class” ESG indexes for Japanese domestic equities provided by FTSE and MSCI: the FTSE Blossom Index and the MSCI ESG Leaders Index Japan. The FTSE Blossom Sector Relative Index was added in

2022. These indexes require companies to have an ESG score above a certain threshold for inclusion.⁸ GPIF conditionally tilted its portfolio to companies with low ESG risk, as measured by FTSE and MSCI. The amounts invested are significant and increased from approximately 1,200 billion yen in 2017 to 3,900 billion Yen by the end of fiscal 2021 (approximate investment of 32 billion USD).⁹

The MSCI ESG Leaders Index Japan was new; the Blossom was based on the established FTSE4Good Select Japan index. However, unlike the FTSE4Good, the Blossom index does not have an ethics filter; tobacco and fossil fuel companies are eligible for inclusion provided they exceed the required ESG scoring threshold. This modification was necessary because GPIF does not have an ethics or principle-based exclusion list.¹⁰ In this respect GPIF's purely risk based approach is similar to the average PRI signatory from the United States (Krueger et al., 2020) and is different from the university endowments and faith-based organisations that spearheaded the fossil free divestment movement (Becht et al., 2023).

There is no global consensus on the definition of good ESG performance, even when taking a risk-based approach. In addition, there is some confusion between the risk management and ethics-based approaches to ESG. As a result, ESG scores from major providers have adopted different methodologies and exhibit a low degree of correlation (Berg et al., 2022). We use ESG metrics from FTSE and MSCI as our measure of ESG performance because these scores were chosen by GPIF when it adopted the FTSE Blossom and MSCI Leaders indexes.¹¹

There are some differences between the FTSE and MSCI scores and index methodologies that complicate the analysis. FTSE scores rely on public information, and they capture the degree of corporate disclosures. ESG scores are generally based on layering. The overall score is derived from three pillar scores (E, S and G). Each pillar score is again derived from theme scores; for example, the MSCI E pillar score is a weighted average of four theme scores: climate change, natural capital, pollution and waste, and environmental opportunities. In turn, each theme score is based on key issue scores, for example, carbon emissions and product carbon footprint.¹² In the case of MSCI there are 3 pillars, 10 themes and 35 ESG key issues; for FTSE there are 3 pillars, 14 themes and 300+ underlying indicators. FTSE scores are based on publicly available data and non-disclosure of a required indicator is penalised with a zero score (Ratsimiveh and Haalebos, 2021); pillar, theme and indicator scores are weighted with a four level "exposure" score (high, medium, low and negligible, or not applicable). In

⁸ Index inclusion also requires the absence of "controversies".

⁹ In addition, GPIF had invested about 1,246 billion Yen in the thematic MSCI-WIN index at the end of fiscal 2021 (approximately 10 billion USD), a substantial increase from the initial amount in 2017 (388.4 billion Yen).

¹⁰ The absence of principle-based exclusions sets GPIF apart from other large pension funds. For example, Norway's Government Pension Fund Global, the second largest public pension fund in the World has an ethics committee and was forced to divest from coal by an act of parliament; CalPERS and CalSTERS were forced to divest from coal by a similar law passed by the state of California and a second law instructing the funds to divest from the 200 largest listed fossil fuel companies ranked by the carbon of proven oil, gas, and coal reserves, was introduced in January 2023.

¹¹ Inclusion in the MSCI and FTSE ESG indexes also requires the absence of controversies; we will explore the resolution of controversies through engagement in future research.

¹² Going down further each key issue has sub-scores; in the case of MSCI there are described in a separate methodology document for each key issue.

contrast, MSCI scores rely on a mixture of public disclosure with company research. ESG risk is measured through materiality weights that adjust dynamically and capture industry and company specific factors. E and S factors that are unlikely to create significant risks and opportunities for a company have a low or zero weight. G is considered ubiquitous. The next higher level score reflects exposure and materiality. Finally, the top or overall ESG score is industry-weighted and transposed into a letter scale (AAA, AA leader; B, CCC laggard).

The index methodologies also differ. FTSE index inclusions and exclusions are announced publicly, and many companies repeat the announcement through press releases and via social media. In contrast, modifications to the MSCI index are communicated privately to index subscribers, not to the public or the relevant companies. Companies can obtain inclusion and exclusion information from their broker and MSCI will provide an MSCI Leaders Index member with a logo, but only upon request. This might suggest that inclusion in the FTSE Blossom involves a demand shock and a publicity effect; inclusion in the MSCI index may produce primarily a demand shock.¹³

The asset manager (AM One) received the mandate to improve the ESG performance of TOPIX index constituents, the main investment benchmark for the GPIF's passive portfolio. AM One focused its engagement efforts on the most valuable companies in the portfolio. As a result, almost all TOPIX 100 large cap constituents were engaged at least once on E, S or G; G was the most frequent engagement category. Over half of TOPIX Mid400 companies were also engaged, but small caps (TOPIX Small 1 or 2) were rarely engaged. AM One recorded significant progress in terms of "milestones", a form of self-assessment and a key performance indicator (KPI).

To assess the impact of engagement on ESG performance, we sorted the portfolio into two groups for each index segment: companies that were engaged at least once and companies that were never engaged by the asset manager. The ESG scores for the FTSE evolved in parallel before AM One started its engagement programme.¹⁴ The overall FTSE scores for the group of companies that were engaged increased significantly relative to companies that were not engaged. In absolute terms E engagements had the largest impact on FTSE E pillar scores, and the treatment effect was most pronounced for the companies with the lowest scores. Overall, there was little or no significant impact on MSCI scores from the engagements. To assess if the improvement in FTSE E scores associated with the engagement was reflected in real outcomes, we compared the difference in differences for Scope 1, 2 and 3 carbon emissions. There was no statistically significant effect.

To explore the question of why AM One's pillar engagements are reflected so inconsistently in MSCI and FTSE pillar scores we undertook two case studies that map the engagement agendas to the theme scores that are then aggregated into pillar scores. We found that in some cases AM One engaged on

¹³ In addition, many FTSE constituents issue a press release when FTSE confirms their continued inclusion.

¹⁴ MSCI for companies that were never engaged showed a slightly divergent trend.

issues that were considered as relatively unimportant by MSCI. Therefore, progress on these topics is not reflected in improved MSCI scores. We also found that FTSE E scores improve more strongly from better disclosure than MSCI. This could explain the difference in the impact on E scores. We also found that MSCI materiality weights were inversely correlated with milestone progress and higher theme scores. As a result, successful engagement was not reflected in higher pillar scores. The case studies confirm our conjecture that the difference in results between FTSE and MSCI at the pillar level are likely to be influenced by the particular scoring methodologies.

Finally, we assess if GPIF's adoption of the FTSE Blossom and the MSCI ESG Leaders Index provides financial incentives to improve ESG scores for Japanese companies. We use event study methodology to analyse the extent to which inclusion in the Blossom index and the MSCI Leader index generated positive returns. We also analyse exclusions to determine if they generated negative returns. We show abnormal returns to index inclusion and exclusions of around 2%, although the results for exclusions are less robust. In each case we split the sample into origin and destination indexes from the TOPIX universe. For the Blossom index the effect is most pronounced for inclusions from the TOPIX Small index; for MSCI it is most pronounced from the TOPIX Midcap 400.

GPIF's approach of adopting best-in-class indexes in combination with remunerating an asset manager to engage sets an important precedent.¹⁵ There are potential synergies between engagement and the inclusion in indexes that use ESG scores to determine index inclusion. There are financial and non-financial rewards from responding positively to the suggestions of the asset manager and reputation penalties for falling back relative to other companies, especially competitors in the same sector.¹⁶

It is also possible to extend the programme beyond the TOPIX 500 index. Since MSCI and FTSE scores are now available for small cap companies, there is an opportunity to engage productively with this market segment; small cap companies have relatively low ESG scores, and they have much to gain from ESG index inclusion. There could be positive spill-over effects for larger companies too, since small caps might be included in their supply chains.

The remainder of the paper is structured in six parts. Section 2 provides additional information about GPIF and a short history of its responsible investment programme, with emphasis on passive equity investment. Section 3 sets out the engagement programme put in place by AM One and reports descriptive statistics. Section 4 investigates the impact of engagements on ESG performance using difference-in-differences analysis. It shows that engagement had a measurable impact on FTSE scores, but hardly on MSCI. Section 5 provides a case study to explore why the AM One engagement programme had a different impact on FTSE and MSCI scores. Section 6 explores potential financial

¹⁵ An important question for AM One is whether the engagement agenda should be integrated more closely with the index providers' assessment of E and S risk and the corresponding weights and scores, at least at the beginning of the engagement. This will require an assessment of the value of those risks.

¹⁶ The same logic applies to "best-in-class" thematic indexes like the MSCI-WIN index or Carbon Leader Indexes.

incentives from “best-in-class” index inclusion. Section 7 concludes. Each sub-section contains of the description of the relevant data and methodology.

2. GPIF’s Responsible Investment Programme

GPIF is the largest pension fund in the world with an asset value of about USD 1,7 trillion at the end of 2020.¹⁷ It provides supplementary finance for the Japanese public employee pensions system by aiming “to secure a long-term real return [...] of 1.7% with minimal risks”.¹⁸ GPIF has been instrumental in promoting responsible investment and ESG (environmental, social and governance) in Japan.¹⁹

GPIF has traditionally sought to achieve this goal through an asset allocation that was heavily skewed to Japanese government bonds. In 2013 the late Prime Minister Abe’s cabinet office (*Kantei*) published a Revitalization Strategy for Japan (“Japan is Back”)²⁰ that prompted the review of GPIF’s organization and investment policies by an expert committee.²¹ Following recommendations from the committee,²² GPIF’s board changed the fund’s asset mix and today GPIF has invested half of its portfolio outside of Japan and holds half in publicly listed equities.

In 2014 GPIF also started to take a more direct approach to responsible investment.²³ The fund adopted Japan’s Stewardship Code and adopted measures that supplemented its monitoring of external managers (Exhibit 1). In 2015 GPIF became a signatory to The Principles of Responsible Investment (PRI) promoting its commitment to investor stewardship.²⁴ In 2016 it created a business and asset owners’ forum and initiated a survey of listed companies. The survey provides GPIF with direct feedback from portfolio companies about their external asset managers’ ESG-related dialogue with portfolio companies, voting and other issues.²⁵

The law that created GPIF does not allow the fund to engage directly with portfolio companies. Hence the fund exercises its investment and stewardship mandate through external asset managers. In 2020 over 80 percent of its portfolio was managed by passive managers that receive a fixed fee of less than 1 basis points (Table 10).²⁶ Active managers receive a base fee equivalent to what passive managers

¹⁷ <https://www.pionline.com/interactive/worlds-largest-retirement-funds-2021> (accessed 9 February 2022). Norway’s Government Pension Fund was a close second with \$1,305,920 millions. GPIF was more than three times the size of the largest U.S. pension fund, California Public Employees (CalPERS) with assets valued at \$426,247 millions on 20 September 2020.

¹⁸ GPIF Annual Report 2020, pg. 18.

¹⁹ GPIF’s evolution from a traditional investor to an ESG leader is well documented in a recent Harvard Business School case (Henderson et al., 2019). GPIF’s former Chief Investment Officer and Executive Director, Hiromichi Mizuno, played a crucial role. He joined GPIF in 2015.

²⁰ https://www.kantei.go.jp/jp/singi/keizaisaisei/pdf/saikou_jpn.pdf

²¹ <https://www.mhlw.go.jp/stf/shingi/0000013751.html>

²² Published in November 2013 (https://www.cas.go.jp/jp/seisaku/koutekisikin_unyourisk/houkoku/h251120.pdf).

²³ GPIF has issued annual Stewardship and ESG reports since 2017.

²⁴ PRI classifies responsible investment into portfolio integration where signatories consider ESG issues when building a portfolio and active ownership or stewardship, where investors seek to improve the ESG performance of portfolio companies, for example through engagement and voting (<https://www.unpri.org/an-introduction-to-responsible-investment/what-is-responsible-investment/4780.article>; accessed 27 February 2022).

²⁵ GPIF ESG Report 2017, pg. 13.

²⁶ GPIF Annual Report 2020, pg. 77.

receive plus a performance fee linked to target excess returns.²⁷ The average fee paid to external managers in 2020, both active and passive, was 4 basis points.²⁸ GPIF asks external managers to “establish a detailed proxy voting policy (guideline) and to report the voting results to the GPIF”.²⁹

In 2017 GPIF reallocated some of its domestic passive portfolio to companies with a high ESG rating by adopting a group of “best-in-class” ESG indices. Since all these companies were already included in the index portfolios invested in by their passive managers, investment in the ESG indexes would increase both the dollar investment and the weighting of these companies in the GPIF portfolio. An important characteristic of the best-in-class indexes is that they do not screen out companies or sectors based on their activities or sectors, such as tobacco or coal.³⁰ All companies in the TOPIX All Share Index are eligible for inclusion in these ESG indices providing they exceed certain ESG metrics. GPIF expected “that the use of those selected ESG indices will provide an incentive for Japanese companies to enhance responses to ESG issues so as to lead to an improvement of their corporate value in the long term”.³¹ It initially invested 4.2 percent of its domestic passive portfolio in three ESG indices in 2017, followed by a carbon “tilted” index (S&P-C) in 2018 (Table 9).³² In March 2022 (the end of the 2021 fiscal year), about 14 percent of the domestic passive portfolio was invested in the ESG indices.

Also, in 2017 the fund reinforced its commitment to active ownership and stewardship. It shifted its stance towards external managers from monitoring to engagement. GPIF “proactively held dialogues with external asset managers on matters such as exercise of proxy voting rights” to “evaluate that external asset managers are exercising proxy voting rights in compliance with GPIF Proxy Voting Principles by integrating ESG factors into the investment process”.³³ GPIF also engaged in a dialogue with ESG analysts that supply the ratings for the ESG indices it adopted. Through the dialogue GPIF sought to positively influence the methods employed by the evaluators and to encourage them to engage in a dialogue with GPIF portfolio companies during the evaluation process (ESG Report 2017, pg. 12).

In 2018 GPIF further promoted its active ownership stance by paying two of its passive managers separately for engaging with companies in the Japanese TOPIX index, Asset Management One (AM One) and Fidelity International (FIL).³⁴ AM One’s asset management mandate is the larger one, managing 25.7 percent of GPIF’s passive equity portfolio in 2020, compared with 0.3 percent for FIL

²⁷ GPIF Annual Report 2020, pg. 77.

²⁸ GPIF Annual Report 2020, pg. 29, the fee was reduced to 2bp in FY 2021.

²⁹ GPIF Annual Report 2013, pg. 19.

³⁰ ESG Report 2018, pg. 4.

³¹ GPIF Annual Report 2017, pg. 40.

³² The “best in class” indices were FTSE Blossom, MSCI-ESG and MSCI-WIN), the “tilted” index was S&P-C.

³³ ESG Report 2017, pg. 11.

³⁴ The arrangement is like the mandate given by other foreign and domestic investors to the Japan Engagement Consortium run by Governance for Owners Japan; see Becht, Franks, Mijajima and Suzucki (2022).

(Table 9).³⁵ In the next sections, we present empirical analysis of the impact of GPIF's engagement initiative.

3. The AM One Engagement Programme

In this section we focus on AM One, the external manager that received the mandate to develop a dedicated engagement programme focused on ESG in 2018.³⁶ The intention by GPIF was to “diversify and enhance our approach to stewardship and improve the quality of the entire market through these [engagement] activities”.³⁷ Our analysis of active ownership is based on private information provided to us by AM One. It contains records of the contacts with portfolio companies between the inception of the programme in 2018 and March 2022.³⁸

AM One's approach is based on 20 ESG engagement items that are classified into six vertical E, five S, four G and five horizontal ESG categories (see Figure 1). Progress is self-assessed and measured through an eight stage “milestone” system (Figure 1). The engagements are conducted in writing, through personal meetings and video conferences; the latter became the dominant form of communication in 2020 due to the Covid pandemic. Contacts are often with senior management and board members.

AM One started its engagement programme in its fiscal year 2018 (starting in April 2018) and has engaged with 571 companies by the end of their most recent fiscal year (March 31, 2022). The total number of engagements by theme is 2,292 (Table 1 Panel A). These were divided into “base engagements” when an issue was raised and “follow-up engagements” with multiple contacts and progress measured through the “milestones”. The total number of contacts was 3,785 (Table 1 Panel A) and there were up to 17 contacts per company (Panel B). The total number of companies engaged was 571; almost all TOPIX100 large-cap and three quarters of the Mid400 segment (Panel C).

The most common theme was “G” (1,266), followed by “ESG” (726), “E” (176) and “S” (124). Contacts with the company were often at the senior management or board level and might involve the President or the CEO (Table 1 Panel A).

It is possible to measure the impact of engagement on ESG performance through milestone progress, but only for follow-up engagements.³⁹ There are eight milestone levels (Table 2): (1) identifying an ESG

³⁵ AMOne has also been the largest external manager of GPIF's domestic passive equities portfolio since 2017, both as a fraction of the domestic passive portfolio and in terms of the absolute amount under management. AMOne also manages the FTSE Blossom ESG index portfolio.

³⁶ In addition to providing stewardship services, AM One is also GPIF's largest passive fund manager. In this capacity AM One also votes the GPIF holdings it manages, like all external managers, in close alignment with GPIF's proxy voting policies.

³⁷ GPIF ESG Report 2020, pg. 25

³⁸ AM One provided these records under a non-disclosure agreement that gave the asset manager the right to comment on drafts of this paper, but not to censor any of the results. In parallel GPIF was kept informed of our research findings.

³⁹ The milestone methodology was introduced in 1999 by Friends, Ivory & Sime and formed the backbone of its Responsible Engagement Overlay (reo®) engagement service; today the service is owned and provided by BMO Global Asset Management. Milestone progress was also used in previous studies to measure the impact of engagement on ESG (Dimson et al., 2015). (<https://www.bmogam.com/uploads/2021/06/67799ebe74f49324b5dfa32bbeed98fb/influencing-for-good-lessons->

issue; (2) raising concerns/suggestions; (3) issues recognized; (4) issues recognized by senior management; (5) initiatives taken; (6) plans formulated; (7) plans implemented; and, (8) completing the engagement. Progress is not linear. Level (3) is progress from Level (2) because the company starts to recognize the issue. Level (4) is material progress because it indicates that the company's senior management has recognized that there is an issue. Similarly, Level (5) indicates that initiatives have started to be taken and Level (6) indicates that the company is formulating plans to improve the situation. Levels (7) and (8) show that the engagement is basically complete; for almost 40% of engagements these highest milestones were reached by March 2022 (Table 2).

Table 2 also allows us to monitor milestone progress from the start of the engagement to March 2022. There are very few cases where no action was taken after an ESG issue was identified with no initial progress (3.1%). The most common initial milestone was set at levels 3 and 4, with the ESG issue being recognised by management (54.2%). Finally, Panels B and C of Table 2 provide a cohort view by conditioning on the start date of the engagement. Panel B shows that the start dates are spread relatively evenly over the year for base and follow-up engagements. Panel C shows that the fraction of completed follow-up engagements is 55 percent (139/251) for the 2018 cohort. Contacts were often with senior management, board members, the CEO and/or the President.

The initial analysis raises some questions. Was progress fast because the issues identified by AM One were uncontroversial? For example, it might be relatively easy to recognize that there are Board Governance and Accountability or CSR/ESG Management issues and take some form of action. A second question is: Did base engagements have impact? For base engagements it is not possible to measure progress in terms of milestones, but we can measure their impact on ESG scores. If there was an impact on ESG scores, did it lead to inclusion in the best-in-class indices chosen by GPIF? Most importantly, did the scores increase more rapidly for companies that were engaged by AM One compared with those that were not engaged by the asset manager, i.e., a control group? Was progress in terms of scores more rapid after the creation of the engagement programme, than before it? We investigate these questions in the next section.

4. The Impact of Engagements on ESG Performance

In this section we evaluate the potential impact of AM One's engagement on ESG performance. Our sample is drawn from all shares listed on the Japan Exchange Group (JPX) markets between 2009 and the end of March 2022. This includes companies in the TOPIX all shares index (listed on "1st Section") or listed on the 2nd Market ("2nd Section"), the TSE Growth Section ("Mothers"), JASDAQ ("Standard" and "Growth") and Real Estate Investment Trusts.⁴⁰ We provide descriptive statistics for all JPX

[from-20-years-of-engagement-.pdf](#)). A four stage milestone system is also used by the Federated Hermes Equity Ownership Service (Hermes EOS) (<https://sustainability.hermes-investment.com/uploads/2021/02/b69dc219bdbedc8a5188ea7b61bf6569/eos-engagement-plan-2021-2023-public-1.pdf>)

⁴⁰ There is also a small group of companies that will be included in the TOPIX, but have not been assigned to a segment yet.

segments, but the focus of the study is on the TOPIX index. The TOPIX is GPIF's main benchmark index, and it is GPIF's declared goal to improve the ESG performance of TOPIX constituents.

To perform the engagement analysis, we matched the AM One data with JPX segment information followed by FTSE and MSCI ESG scores. In a second step we split the sample into companies that have been engaged by AM One and those that were not engaged by them. In each case we distinguish between ESG, E, S and G engagements and scores.

To assess the FTSE and MSCI coverage by JPX segment we used the list of JPX companies on the last trading date of March of each year, the end of the fiscal year in Japan for most of Japanese listed companies as well as for GPIF, and matched it with the most recent ESG scores available: the FTSE scores from the beginning of December of the previous year and the MSCI scores from the beginning of March of the same year.⁴¹

Table 3 shows the number of JPX companies by segment, the availability of ESG scores by year and the average score by segment. Panel A shows that the TOPIX index is divided into five segments: The Core 30 and Large 70 that together make up the TOPIX 100, the Midcap 400, the Small 1 with around 500 additional constituents and the Small 2 with over 1,000 further constituents after 2017.

FTSE and MSCI ESG scores are available for almost all TOPIX 100 companies. The availability of FTSE scores is almost 80 percent for the Midcap 400 in 2015/16 and just over 50 percent for MSCI; coverage increases to over 90 percent in 2017 for both providers. The variation for small caps is much larger. There are hardly any scores in 2015/16 for the Small 1 segment but coverage increases to almost 90 percent in 2022; for Small 2 the coverage was sparse throughout (Table 3, Panels D and E).

Average ESG scores correlate with market capitalisation; they were higher for the Core 30 throughout the sample period for both FTSE and MSCI (Table 3, Panels F and G). Average FTSE scores for Mid-Caps are lower, while the difference in MSCI scores is less pronounced. We confirmed MSCI Mid-cap scores suffer from sample selection in 2015 and 2016; companies with a higher score were more likely to be rated, resulting in higher average scores. The average scores for small caps are not representative in earlier years because of sparse coverage. FTSE only extended its scoring in 2020 from the FTSE Japan Large-Midcap Index with approximately 500 constituents to the Japan All Cap Index with over 1,000 constituents. Without the ESG scores it would have been impossible for FTSE to determine Blossom index inclusion (see below). MSCI covered 86 percent of the TOPIX Small 1 in 2020.⁴² The lack of scores for small-caps in the pre-engagement period and the lack of subsequent engagement lead to us limiting the analysis to the TOPIX 500. AM One does not use ESG scores to select engagement

⁴¹ GPIF portfolio holdings are reported once a year on 31 March. The data includes the number of shares held by GPIF and their market value, but not the fraction of shares issued and outstanding held by GPIF.

⁴² The MSCI Japan index and the TOPIX All Share index do not overlap perfectly.

targets, but we still wished to know if the mean and median scores for the companies that were engaged were above or below the FTSE and MSCI index inclusion threshold.

Table 4 shows FTSE and MSCI ESG scores for companies that were engaged at the start of each engagement.⁴³ We performed the match at the pillar level for E, S and G engagements and used the overall score for ESG engagements. FTSE scores are updated twice a year in June and December. Although the MSCI is reported at monthly intervals we use six monthly data from June and December to make it comparable with FTSE. To make sure AM One could observe the score before starting the engagement, we always used the FTSE and MSCI score from the previous period. For the E pillar a score was available for all engagements, but not for S, G and ESG. For reference, an overall ESG score of 3.1 was required for inclusion in the Blossom index until December 2019 and a score of 3.3 thereafter.⁴⁴ For MSCI the required score for inclusion was BB or above; to avoid exclusion the score had to remain above CCC.⁴⁵ The table shows that AM One engaged companies with relatively low scores initially; later engagement cohorts had higher average scores.

Finally, we wanted to know what fraction of companies was engaged in each index segment and how engagements evolved over time. Figure 2 shows the fraction of each index segment that was engaged over time on any of the twenty AM One themes. Figure 3 shows the same evolution for E, S and G themes separately. Engagements started in June 2018 and increased rapidly over time. For the TOPIX 100 over 50 percent of the constituents had at least one contact by the beginning of 2019 and nearly all companies had been engaged by the end of the sample period. For the Mid400 over 60 percent of companies were engaged, but only 10 percent for the small cap indexes. There were substantial differences across the E, S and G themes even for the large-cap segments; fewer than 50 percent of TOPIX100 constituents were engaged on S themes and just over half on environmental topics. This analysis confirmed that a sufficiently large number of TOPIX500 companies were never engaged and could be used as a control group; we exploit this fact in the difference-in-differences analysis described below.

Difference-In-Differences

We assess the potential impact of engagement on ESG performance by analysing the differences in differences, a method that is widely used in programme evaluation when it is not possible to assign a treatment randomly (Gertler et al. 2016; Angrist and Pischke 2009). It is not possible to draw causal inferences about the impact of engagement on ESG scores from simple “before and after” comparisons because there are time varying influences that affect the scores of all companies in the TOPIX500 index,

⁴³ FTSE scores go from 0 to five, while MSCI uses scores from 0 to 10. To put the scores on a similar scale we halved the MSCI score. We did not change the distribution of scores.

⁴⁴ MSCI uses a letter rating as a threshold for index inclusion.

⁴⁵ In 2017 a B rating translated into an industry adjusted score between 1.5 and 2.8; a BB to 2.9 to 4.2 and a CC to 0 to 1.2; the original MSCI scale is from 0-10. For comparability with FTSE all other MSCI scores were linearly projected onto a scale from 0 to 5.

such as changes in government policy. Other companies might have time invariant characteristics that make the improvement in ESG independent from treatment.

To control for time varying factors that influence the outcomes for all companies, we compare the difference scores between those that were engaged with those that were never engaged. For example, the adoption of best-in-class ESG indexes in 2017 affects both groups. In contrast, engagement only affects the treatment group. Without the control group we could not draw causal inferences about the impact of the engagement programme. The difference in the differences also eliminates the influence of factors that are time invariant, including those that are unobserved. Left uncontrolled we might falsely attribute a change in scores to engagement, although the change may be driven by company characteristics. The technique provides a good estimate of the counterfactual, what would be the change in scores for the engaged in the absence of an engagement?

To make valid inferences it is necessary that the scores of the treatment and the control group evolved in parallel before the start of the treatment and would have continued to evolve in tandem in its absence. If not, the difference in differences would simply pick up the continued divergence in trends. We performed a visual inspection of data availability and of parallel trends by plotting the evolution of the total number of scores and of mean ESG scores for FTSE and for MSCI. The analysis revealed that the pre-treatment period had to be shortened to ensure consistent data coverage.⁴⁶ We also noted that there was a discontinuity in the raw MSCI G score that was caused by a change in methodology in November 2020. This resulted in a distorting of the unweighted MSCI ESG score. Hence, we use MSCI scores for the shorter period.

The sample is limited to firms that were included in the TOPIX500 at some point during the sample period because small-cap firms were hardly engaged and ESG scores were largely unavailable before 2020 (Table 3). The FTSE sample spans the period 2015 to 2021 and includes two rating updates, one in June and one in December. The MSCI time series is slightly shorter and only starts in June 2016 when scores were available for most TOPIX500 companies. For G scores and unweighted ESG scores the sample ends in December 2020.

After these exclusions we proceeded to plot the mean scores for the selected sub-samples. The analysis confirmed that the means of the engaged and those that were never engaged evolved in parallel before engagement for FTSE (Figure 4, Panel A) and for MSCI (Figure 4, Panel B). However, the MSCI series is significantly shorter due to lower data availability prior to 2017 and a material change in methodology in 2020. To test for statistical significance, we estimate the difference in the differences using ordinary least squares with robust standard errors.

⁴⁶ MSCI scores were sporadic before June 2016 and the coverage was low. This is a factor that the differences in differences methodology cannot control for.

We set a dummy variable *Treated* equal to one if a company had been engaged at some point between 2018 and 2022 and to zero if it was never engaged. Similarly, we create a time dummy *After* set to one for observations in the period 2018 and 2022 and to zero otherwise.

The main regression equation is:

$$Y_i = \beta_0 + \beta_1 \times After + \beta_2 \times Treated + \beta_3 \times [After \times Treated] + \varepsilon_i$$

Where Y_i are ESG scores from FTSE and MSCI respectively that are available at half-yearly intervals. We run separate regressions for five different types of treatment as defined by AM One (Figure 1): (1) overall ESG scores on any type of engagement (E, S, G or ESG); (2) E scores on environmental engagements (E1-E6); (3) S scores on social engagements (S0-S4); (4) G scores on governance engagements (G0-G3); and (5) ESG scores on ESG engagements (ESG1-ESG5).

The overall FTSE scores for the group of companies that were engaged increased significantly relative to companies that were not engaged (Table 5). The effect is positive and significant at the 1% level where treatment is defined as any type of engagement (Panel A, Column 1). In absolute terms AM One E-engagements have the largest significant effect on FTSE E scores; the difference in the difference between the engaged and the never engaged increased by 0.3 on the five-point scale (Table 5, Panel A, Column 1). The effect is driven by the impact of the engagement on those companies with low E-scores; the difference improved significantly by 0.5 for scores at the 10th and 0.5 for the 25th percentile (Table 6, Panel 2). The impact of engagements on MSCI scores is negligible, except for G (Table 6, Panel B, Column 4). Again, the result is driven by the impact of the engagement on the companies with the lowest G-scores (Table 6, Panel 4, Column 6).

Why is the impact of engagement larger in FTSE ESG scores compared with MSCI scores? Although the raw scores increased during the engagement period, the weights for E and S for the engaged sample declined more than for the control sample. The decline in weights largely offset the improvements in raw scores, leaving the overall ESG scores largely unchanged. We formally show this by replacing MSCI scores with materiality weights in the difference-in-differences regressions (Table 5, Panel B, Columns 6-8). The mean materiality E weight for the engaged was 40 before treatment and 37 afterwards; for companies that were never engaged the E weight was 26 before treatment and 23 thereafter. There was a decline in materiality for both groups, but the difference in the differences was more pronounced for the treated. However, the decline is not statistically significant.

We explore this question further in the next section where we analyse an engagement with 7&i Holdings and an anonymous utility company (Figure 5 to 8). We show that the materiality weighted-average methodology of MSCI ratings makes it more difficult for the impact of E and S engagements to be captured. Materiality weights adjust dynamically over time at the company level. Hence, paradoxically, engagement success results in lower materiality weights and there lowers the weighted scores at the next higher level. In contrast we show that FTSE scores improved significantly on E and the exposure scores

were stable over time. A company targeted by AM One with a high FTSE exposure score that shows an increase in the E score will also show a higher overall score. In contrast, the same company will have an increasing MSCI E score and a decreasing materiality E weight (risk), resulting in an overall score that is barely changed. In addition, FTSE scores consider non-disclosure as a negative signal. Since AM One's engagements often focused on Climate-Related Financial Disclosures (TCFD) and E disclosure improved, it is not surprising that the FTSE E score increased.

5. Case Studies

To investigate the underlying reasons for the observed divergence in the response of FTSE and MSCI scores to AM One engagements in more detail, we conducted an analysis of two specific engagements conducted by AM One. Through these case studies, we can better understand the impact of the distinct methodologies employed by each scoring system. We chose one engagement with a high S exposure and one company with a high E exposure; in both cases AM One recorded milestone progress.

Our analysis confirmed that there are several key factors that contribute to the sensitivity of FTSE scores to engagement outcomes. Firstly, FTSE assigns a zero score to items that are not disclosed, resulting in a reduction of the average score. Conversely, MSCI attributes a missing value to non-disclosure, which has no effect on the average score. This important disparity in scoring methodology influences the sensitivity of FTSE scores to engagement outcomes.

Secondly, MSCI's materiality weights are company-specific and involve significant fluctuations over time. In contrast, FTSE's exposure scores (equivalent to materiality) tend to be more stable. Moreover, improvements in engagement scores may coincide with lower materiality weights according to MSCI's approach, thereby dampening the effect of a successful engagement on their scores. The lower weights may reflect a lower perceived risk, and this may be negatively correlated with improvements in the scores. We show that this issue does not arise with FTSE, that keeps exposure scores relatively constant.

While we have not undertaken a comprehensive comparison of FTSE and MSCI, we believe that for asset managers constructing engagement agendas, FTSE scores may offer some advantages over MSCI scores. However, we report both for completeness. For a comparison of the FTSE and MSCI scoring methodologies, see the Internet Appendix. We now turn to the two case studies.

5.1 Case Study 1: 7&i Holdings

Figure 5 and Figure 6 establish a connection between the engagement agendas pursued by AM One for Seven & i Holdings, a prominent retail operator in Japan known as "7&i," and the corresponding FTSE and MSCI scores. In these figures, we focus specifically on the company's engagements at the theme level pertaining to three areas: E5 Water and Pollution, S2 Labour Practices / Health and Safety, and ESG4 CSR Supply Chain Management. These engagements were initiated in July, November, and January 2019, respectively.

The company responded immediately regarding S2, as reported by AM One. According to their assessment, the milestone of 7, denoting the successful implementation of plans, was swiftly achieved. Also, by March 2021, the issues relating to E5 and ESG4 also reached a milestone of 7. Our examination of AM One's engagement records suggests that their evaluation for a milestone of 7 is primarily based on the retailer's disclosure of their response to each agenda item.

The FTSE scores relating to the three engagement areas show significant improvements. Specifically, within the "Pollution and Resources" category, which falls under the E pillar, there was an increase from 3 in March 2019 to 4 in December 2021. The corresponding exposure measure for this theme was 2, denoting a medium level. However, despite this positive change, the overall E score exhibited a smaller proportionate change between March 2019 and December 2021, rising from 3.3 to 3.7. This is primarily because the "Climate Change" score, an aspect that AM One did not engage on, declined from 4 to 3. The exposure measure for this theme was also medium.

The S score, which encompasses both the "Labour Standards" (AM One's S2 theme) and the "Social Supply Chain" (ESG4 theme), both showed an improvement, rising from 3 to 4 and 3 to 5, respectively. Consequently, the overall S score experienced an increase from 3.2 to 4.5. Given the nature of 7&i's business, the exposure scores for both themes were 3, signifying a high level of importance. As a result of these developments, the company's FTSE overall ESG rating rose from 3.2 to 4.2 between March 2019 and December 2021. It is important to note that the progress in pillar scores can be attributed to AM One improving S theme scores rated as having high exposure: a theme score of 5 with high exposure results in 71-100% of the indicator points feeding through to the pillar score. Importantly, the exposure to the theme stayed high throughout the engagement period; the S performance of 7&i improved but given the nature of its business, there is high exposure to S risk.

Figure 6 focuses on MSCI scores. As previously explained, MSCI assigns weights to each theme level score based on the company and the industry. In the case of 7&i the (latest) weight assigned by MSCI to the E score at the beginning of the engagement period was relatively low at 18%, while the weight assigned to the S score was significantly higher at 63%.

For the agenda items associated with the three engagement themes of AM One, for the S pillar, S2 is linked to the MSCI theme "human capital theme score." In January 2019, this score stood at 3.8, carrying a weight of 21%, but by December 2021, the score had declined to 1.5, with a weight of 15%. The large decline in the score was mitigated by its lower weight in the overall score. The overall S score only experienced a slight change, decreasing from 4.3 (with a weight of 63%) to 4.1 (weight of 52%).

As for the E5 engagement theme that focused on waste and pollution, MSCI's related theme is "natural resource usage" and showed an improvement in scores from 2.4 to 2.7. However, this change had limited influence on the overall ESG index due to MSCI's allocation of less than 10% weight to this theme. For

AM One's ESG4 theme, this relates to the MSCI theme, CSR supply chain management, but this was assigned zero weight by MSCI, thereby having no impact on their scores.

The overall weighted average MSCI ESG score for the retailer changed only marginally from 4.4 in January 2019 to 4.5 in December 2021, a much smaller increase than that reported by FTSE.

5.2 Case Study 2: A Utility Company

Figures 7 and 8 provide an overview of the scores for an anonymous utility company, highlighting the outcomes of its engagement with AM One in relation to a single theme, E1 Climate Change. The engagement commenced in June 2018 and reached a milestone of 7, denoting the implementation of plans, by September 2019. The primary focus of this engagement revolved around enhancing the disclosure practices concerning climate change-related matters, such as the company's roadmap towards achieving carbon neutrality by 2025 and its increased use of renewable energy sources.

Even after reaching milestone 7, AM One chose to continue the engagement and the ongoing dialogue with the company, extending beyond September 2019. This suggests a continued interest in furthering improvements and progress in the area of climate change.

The FTSE scores for the company shown in Figure 7 demonstrate significant improvement in June 2019, coinciding with AM One reaching the milestone of 7. Notably, the Theme Score for "Climate Change" showed a large increase from 3 in December 2018 to 5 in June 2019. Given the industry's nature, the exposure score for this theme was rated as 3, indicating a high level. Given the theme score carried a high exposure it contributed significantly to the significant increase in the E Pillar score, which rose from 2.8 to 3.5.

Upon examining the indicators that made up the climate change score, we find that the improvement in the theme score stemmed from enhanced disclosure practices. Indicators that previously received a zero-score denoting "no-disclosure", with disclosure showed a significant improvement, reaching a score of 3, representing "good practice" or higher. The percentage of indicators disclosed under the "Climate Change" Theme increased from 69% in December 2018 to above 80% in June 2019, consistent with AM One's emphasis on raising the company's commitment to transparency and disclosure practices. Given the nature of the utility's business, the exposure measure was high throughout the period.

Figure 8 focuses on MSCI scores, and shows a more pronounced pattern compared with the FTSE scores, discussed above. Initially, MSCI assigned a high materiality weight of 74% to the E pillar for this utility company. The E pillar comprises five E themes, with two themes directly relevant to AM One's E1 Climate Change engagement: the MSCI "Climate Change" Theme and the "Natural Resource Use" Theme.

In 2018, the climate change score was recorded at 6.9, accompanied by a theme weight of 20%. Similarly, the natural resource use score stood at 5.7, with a materiality weight of 17%. The climate change score

decreased from 6.9 to 5.7 by July 2021, while the natural resource use score experienced an increase, from 5.7 to 6.4. However, both theme scores suffered a decline in materiality, dropping to 14% for both themes. The result was that, although the E Pillar score rose from 5.8 to 6.0 during the period, the pillar weight declined from 74% to 54%. This contributed to a decline in the weighted ESG score from 5.1 to 4.9.

The MSCI methodology emphasizes the variable nature of its materiality map, which is tailored to specific industries and companies. This reduced the underlying impact of the engagement.⁴⁷

6. ESG Index Inclusion and Exclusion

In this section we estimate the impact of index inclusion and exclusion on stock returns. As we described above, GPIF adopted two FTSE ESG indexes, the Blossom Index and the Blossom Sector Relative Index, and in addition a third index, the MSCI Japan ESG Select Leaders Index. All three are “best-in-class” and use ESG scores to determine inclusion or exclusion.⁴⁸ Since the adoption of the Blossom Sector Relative Index falls outside of our sample period, we concentrate on the MSCI ESGL and the FTSE Blossom index.⁴⁹ We also study the FTSE4Good Japan index, the predecessor of the Blossom index.

Data and Methodology

An important incentive for portfolio companies to engage with AM One is that inclusion in an index will increase GPIF’s holdings in the company and, also potentially the holdings of other asset managers that use the indexes for investment purposes. An assumption is that extra investment in companies in the index will be associated with positive excess returns and this would provide a tangible incentive for companies to improve their MSCI and FTSE scores. Equally if exclusion is linked to negative returns, there will be a potential penalty from falling below the inclusion threshold and being ejected from the index. FTSE inclusions and exclusions are announced publicly so there is also a potential reputation effect. Although MSCI does not make public announcements, companies have an incentive to announce inclusion in the MSCI ESG Leaders Index.⁵⁰ Finally, the Blossom index is almost identical to the

⁴⁷ We refer to the actual corporate action of carbon emissions related to the E (environment) score improvement of the utility company. From Trucost database for carbon emissions statistics, between 2017 and 2020, absolute Scope 1 emissions reduced by 5%, while Scope 2 emissions increased by 65%. The intensity of Scope 1 and Scope 2 reduced by 24% and increased by 32%, respectively during the same period. The results for carbon emissions are mixed at best.

⁴⁸ See Section 11 for further details about the indexes.

⁴⁹ GPIF also adopted two further domestic ESG indexes, an S&P Carbon index and the MSCI WIN index. However, we do not include them in our study because they are more like a theme-based index, the former being about carbon emissions and the latter about gender diversity; see Mehrotra et al. 2023 for a study on the effects of inclusion using the WIN index. In addition the S&P Carbon is a target index that tilts by changing weights, not a leader index that tilts portfolios through inclusions and exclusions.

⁵⁰ Many companies also report the continued inclusion in the FTSE and/or the MSCI index.

FTSE4Good index that was started in 2004. This allowed us to compare inclusions and exclusions before and after the adoption of the Blossom index by GPIF.⁵¹

We use constituent data from FTSE and MSCI to identify the dates when stocks were included or excluded from the relevant indexes. We concentrate on the window twenty days before the effective date of the inclusion/exclusion and the five subsequent days. For FTSE and MSCI the announcement date is nine business days before the effective date.

For the FTSE4Good Japan, Blossom and MSCI index we have daily constituent data for individual companies in the indexes going back to the respective inception dates.⁵² Daily data on stock price returns, index returns, and the number of shares issued and outstanding comes from the Quick Astra Database. We merged the daily data for the three ESG indexes to daily data on JPX market segments (1st Section “一部”, 2nd Section “二部”, JASDAQ) and TOPIX index sub-segments using local identifier codes.

For inclusions we dropped IPO companies included between index revisions and companies that moved from one TOPIX sub-index to another within 50 days of the effective date for inclusion in one of the ESG indexes. For exclusions, we dropped takeovers or bankruptcies that resulted in delisting. Finally, we restricted inclusions to companies that were constituents of the TOPIX All Share index, the engagement universe of AM One. Hence, we excluded REITs and a small number of JASDAQ and 2nd Section market segment companies.

ESG Index Constituents

The MSCI ESG Select Leaders index was launched on 3 July 2017 with 251 constituents that came from the IMI 500 universe (GPIF, 2017, p. 16).⁵³ The MSCI ESG Leaders index was first revised on 1 September 2017 with one inclusion (NTT Corporation). The total number of inclusions between September 2017 and June 2022 were 178; there were 190 exclusions during the same period.

The FTSE Blossom index was also launched on 3 July 2017 with 151 constituents (GPIF 2017, p. 15) that came from the FTSE Japan Index universe. The mapping with JPX segments confirmed the focus on large and mid-cap companies, with some exceptions: 20 came from the TOPIX Core 30, 35 from the Large 70, 91 from the Mid400, four from the TOPIX Small 1 and, one from the “2nd Section”. We could identify the first revision in June 2018 from the daily constituent files when eight companies were included, all from the TOPIX 500. The first public announcement of revisions was in September 2019.

⁵¹ There is no obvious control group in Japan, so we could not perform a difference-in-differences analysis.

⁵² For the FTSE index we also had index inclusion and exclusion announcements from September 2018 to March 2023 that contained the name of the company, the Japanese securities code, the announcement, and the effective date. We compared these announcements to the inclusion/exclusion history we had built from the daily constituent file.

⁵³ The mapping into the JPX segment and TOPIX was mixed: 241 were TOPIX companies, seven were REITs, two came from the JASDAQ Standard segment and one from the “2nd Section” (二部) segment; the latter three were part of the IMI 500 but not part of the TOPIX all share index. Among the TOPIX companies 16 belonged to the Core 30, 41 Large 70, 173 Mid400 and 11 to the Small 1 subindex.

Two companies were included, and none excluded. The included companies were Nippon Steel & Sumitomo Metal and Recruit Holdings following an ESG Rating recalculation; they were both TOPIX Large 70 companies. The public announcement was on Tuesday 11 September 2018 and the effective date was after close of business on Friday 21 September 2018.

The FTSE4Good was launched in 2004. We consider inclusions and exclusions from 2009 onwards, to be consistent with the TOPIX index sample. There were 61 inclusions during this period; 40 came from the TOPIX Mid400, 16 from the TOPIX 100 and 5 from the TOPIX Small subsegment.

ESG Index Inclusion and Exclusion Returns

We estimate four different types of abnormal returns around effective inclusion and exclusion dates: raw returns, constant mean adjusted, market adjusted and market model adjusted (MacKinlay 1997). Results are reported in Table 7 and Table 8. They suggest that returns from inclusion are positive for the Blossom index and for the MSCI Leader index and symmetrically negative for exclusions. There are no inclusion and exclusion returns for the FTSE4Good Japan in the period pre-ceding the GPIF programme (2009-2016). Returns are larger for MSCI ESGL than for the FTSE Blossom.

For FTSE Blossom inclusions we find statistically significant abnormal returns of about 1.5% relative to the TOPIX 500, and raw returns and mean adjusted returns of almost 3% for 103 “clean” events (Table 7, Panel A).⁵⁴ The result is largely driven by 18 inclusions from the TOPIX Small index; for these events the average abnormal return is 9% for the constant mean model, 5% for the market adjusted and the market model (Table 7, Panel B). The abnormal inclusion returns for the FTSE4Good are indistinguishable from zero between 2009 and 2016.

For MSCI ESGL inclusions abnormal returns are 2% for the full sample of 81 “clean” events and significant. The effect is driven by 35 inclusions from the TOPIX Mid Cap 400 segment with large and significant returns of almost 4% for all models (Table 8, Panel A). Surprisingly, inclusions from the TOPIX Small segment (Panel A4) were not significant.

Given the additional publicity we would have expected the inclusion effect to be larger for FTSE than for MSCI; we interpret the larger returns for MSCI as evidence in favour of a pure demand shock effect. This is corroborated by the relatively larger amounts GPIF has invested in the MSCI ESGL (Table 9) and the larger returns when relatively smaller companies are included in the ESG indexes; TOPIX Midcap400 for MSCI and TOPIX Small Caps for FTSE.

Exclusion returns for the MSCI ESGL are negative at around 2% for the market adjusted model and the market model. The number of “clean” exclusion events for the MSCI ESGL is larger than inclusions. For MSCI exclusions look symmetric to inclusions (Figure 10) and larger than inclusions for FTSE

⁵⁴ The return is different from zero with 1% significance, except for the market model where the return is significant at the 5% level. The return is over a window from 20 days before the effective inclusion date to 5 days after inclusion. We do not consider the large number of simultaneous inclusions when the Blossom index was created in July 2017.

(Figure 9). MSCI ESGL exclusions are far more numerous; there are only 20 exclusions from the Blossom Index but 100 from the MSCI ESGL over the same period (Table 7, Panel B; Table 8; Panel B). The difference is due to a combination of factors: One, for the Blossom there is an exclusion “buffer zone”, so it is difficult to be excluded once a company is included; two, MSCI ESG scores are relatively stable but the exclusion threshold was raised from CCC in September 2017 to BB in May 2022, resulting in more exclusions; three, FTSE scores increase over the period, making exclusions less likely.

Index exclusion provided an incentive for all companies that were included in the MSCI ESGL and the Blossom Index as of 2017 to maintain or improve their scores; index inclusion provided an incentive for companies that were not included in the ESG indexes to improve their scores. In the case of the MSCI ESGL companies compete for inclusion at the sector level. Progress by competitors threatens the inclusion status of incumbents.

ESG index inclusion/exclusion is a complement to engagement that affects the treatment and the control group. We do not have a control group of Japanese companies that was not eligible for index inclusion, so we cannot establish causality. However, a financial return for index inclusion is consistent with the increase in average ESG scores we observe for all TOPIX companies. There are cases when companies made a “leap” from the lowest ESG score decile into the index. In the previous section we showed that impact of remunerated engagement was even stronger, although it was not specifically targeted at low score companies.

7. Conclusion

GPIF pursues a dual strategy to improve the ESG performance of Japanese listed companies. The fund provides financial incentives by rewarding companies with high ESG scores with additional equity investment and encourages its asset managers to engage. The programme successfully addresses one of the main criticisms of active ownership by passive managers, the absence of remuneration for stewardship services beyond a standard asset management fee. FTSE ESG scores in Japan have increased significantly since 2017. Our evidence suggests that GPIF’s natural experiment in responsible investment has contributed to this improvement in scores.

Some changes might be considered to the current programme. The engagement programme is not linked explicitly to ESG scores and thus to inclusion or exclusion from GPIF’s chosen ESG indexes. On the other hand, the current scoring methodologies are complex and raise significant issues. One solution is for GPIF to commission a simpler scoring method than can be used to set engagement objectives and measure engagement outcomes. These engagement compatible scores could then be used as the basis for the additional investment GPIF makes in the equity Japanese companies.

We also found an inconsistency between the portfolio tilting and the engagement portion of GPIF’s programme. GPIF’s main investment universe is the TOPIX index, yet the parent indexes for index

inclusion do not fully overlap with each other or the TOPIX. In addition, the current engagement programme is mostly concentrated although not limited to the constituents of the TOPIX 500 index. It would be more consistent if ESG index inclusion was based on TOPIX all share membership, and the engagement programme put more emphasis on the TOPIX Small 1 and 2 subindexes.

The complementary between remunerated engagement and portfolio tilting also extends to other index categories. For example, the Blossom Sector Relative has a third inclusion filter that we did not consider in this paper; it captures companies' exposure to and management of carbon risk. This raises the question if GPIF should invest a relatively small proportion of its portfolio in best-in-class indexes that make a special allowance for carbon risk, or conditionally decarbonise its entire passive portfolio. This could be achieved by adopting carbon free indexes that are aligned with the Paris agreement and thus with Japan's own net-zero commitment.⁵⁵ In this case engagement would aim to persuade high-carbon emitters to avoid exclusion; and encourage excluded companies to reduce emissions sufficiently to benefit from re-inclusion, and a much lower cost of capital. Again, this could be linked explicitly to GPIF's remunerated engagement programme.

⁵⁵ For example, FTSE JPX Net Zero Japan Index Series, the MSCI World Climate Paris Aligned Index or the S&P Paris-Aligned & Climate Transition (PACT) Indexes; see Bolton, Kacperczyk, and Samama (2022).

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9. Tables

Table 1. AM One Engagements – Number of Themes and Contacts

Panel A shows the number of themes AM One engaged on and the total number of contacts per theme. The table also shows the level of the contact at the company: A+ - CEO and/or President; A – board member or senior management; B – middle management; C – employee. There were 7 contacts where the contact level was not recorded; these are not reported in the table. Panel B shows the number of engagements per company distinguishing between any engagement, base engagements and milestone engagements. The total number of companies engaged per category do not add up because the many companies have base and follow-up engagements.

Panel A – Engagement Themes and Level of Contact

Engagement Theme		Number of Themes	Number of Contacts	Level of Contact				Total
				A+	A	B	C	
E1:	Climate Change							
E2:	Deforestation							
E3:	Water Resource Management							
E4:	Biodiversity							
E5:	Waste & Pollution							
E6:	Resource & Energy Management							
E1-E6:	Subtotal	176	482	55	146	274	7	482
S0:	Diversity							
S1:	Human Rights							
S2:	Labour Practices / Health & Safety							
S3:	Product Liability & Safety							
S4:	Local Community							
S0-S4:	Subtotal	124	253	29	84	136	4	253
G0:	Board Governance & Accountability							
G1:	Capital Efficiency							
G2:	Takeover Defence Measures							
G3:	Risk Management							
G0~G3	Subtotal	1,266	1,617	225	638	714	34	1,611
ESG1:	CSR/ESG Management							
ESG2:	Corporate Misconduct							
ESG3:	Regional Revitalization							
ESG4:	CSR Supply Chain Management							
ESG5	Digital Transformation (DX)							
ESG1~5	Subtotal	726	1,433	160	419	845	8	1,432
Total		2,292	3,785	469	1,287	1,969	53	3,778
Engagement Type								
	Base	1,670	1,686	241	651	757	33	1,682
	Follow-up (with milestones)	622	2,099	228	636	1,212	20	2,096
Total		2,292	3,785	469	1,287	1,969	53	3,778

Panel B – Number of Engagements per Company

Panel C – Engagements per JPX Segment

Number of Engagements		Engagement Type			JPX Segment	Total
		Any	Base	Follow-up		
	1	117	148	64	TOPIX Core30	30
	2	98	109	120	TOPIX Large70	68
	3	94	74	68	TOPIX Mid400	264
	4	74	58	22	TOPIX Small 1	127
	5	46	36	4	TOPIX Small 2	75
	6	34	30	1	TSE_2nd	1
	7	36	25		Mothers	1
	8	18	9		JASDAQ_S	1
	9	23	10		REIT	4
	10	12	4			
	11	7	4			
	12	2	2			
	13	4				
	14	2	1			
	15	2	1			
	16	1	1			
	17	1				
Total		571	512	279	Total	571

Table 2. AM One Engagements – Milestone Progress and Start Dates

Panel A shows a matrix of initial milestones and the highest milestone achieved by the end of the engagement or the end of the sample period. In more than 90% of all cases the issue raised by AM One was immediately recognised. In 50% of all cases plans had been implemented or the engagement was completed in the observation window. Singular engagements to not have milestones, by definition. Panels B and C show engagement start dates, completion status and the date of the last contact. Panel B reports the year and the month of the first contact. Panel C splits the sample into ongoing engagements and completed engagements. An ongoing engagement has a Milestone of 1-6; a completed engagement has a Milestone of 7 or 8. Year refers to the year of the last contact with the company when the engagement theme was discussed.

Panel A – Date of Base Engagements by Year and Month

Initial Milestone level		Highest Milestone level reached								Total	%
		1	2	3	4	5	6	7	8		
identifying ESG issue	1	19		3	1			3	1	27	4.3
raising concern/suggestions	2		3		1	3	4	12	2	25	4.0
issues recognised	3			34	21	13	21	34	8	131	21.1
issues rec. by senior management	4				62	35	28	63	18	206	33.1
initiatives taken	5					31	30	55	16	132	21.2
plans formulated	6						14	12	9	35	5.6
plans implemented	7							26	27	53	8.5
completing engagement	8								13	13	2.1
Total		19	3	37	85	82	97	205	94	622	
%		3.1	0.5	5.9	13.7	13.2	15.6	33.0	15.1		

Panel B – Start of Follow-Up Engagements by Year and Month

Start Year	Start Month (First Contact)												Total
	1	2	3	4	5	6	7	8	9	10	11	12	
2018				10	33	34	8	26	19	29	37	55	251
2019	23	27	22	13	12	10	4	8	5	12	11	8	155
2020	6	3	4	3	9	6	1	12	13	7	13	21	98
2021	16	12	21	2	4	3	1		7	8	6	21	101
2022	5	6	6										17
Total	50	48	53	28	58	53	14	46	44	56	67	105	622

Panel C – Engagement Completion Status and Date of Last Contact

	Ongoing Engagements						Total	Completed Engagements (Milestone 7 or 8)						All
	2018	2019	2020	2021	2022			2018	2019	2020	2021	2022	Total	
Start Year														
2018	30	20	8	28	26	112		6	17	11	62	43	139	251
2019		44	3	13	14	74			5	8	43	25	81	155
2020			6	39	11	56				2	22	18	42	98
2021				48	19	67					15	19	34	101
					14	14						3	3	17
Total	30	64	17	128	84	323		6	22	21	142	108	299	622

Table 3. TOPIX Index Segments and ESG Scores

The table shows the number of TOPIX index constituents over time for the last trading day in March, the last opportunity to adjust the portfolio before the end of the fiscal year. Panel A reports the number of constituents by subindex. Panel B reports the number of FTSE ESG scores available by subindex and Panel C the average FTSE score from the beginning of December of the previous year, the most recent FTSE score available. Panel D and Panel E report the number of MSCI scores and the average score from the beginning of March of the same year, the most recent MSCI score available.

	2015	2016	2017	2018	2019	2020	2021	2022
Panel A: Number of TOPIX Constituents by Subindex								
TOPIX Sub-Index								
TOPIX Core 30	30	30	30	30	30	30	29	30
TOPIX Large 70	70	70	70	70	71	70	70	70
TOPIX Midcap 400	402	403	399	401	399	399	397	400
TOPIX Small 1	499	498	496	498	495	500	493	496
TOPIX Small 2	857	936	1,002	1,062	1,129	1,160	1,197	1,179
TSE 2nd Section	538	538	529	512	491	478	471	470
Mothers	199	212	225	235	271	311	343	424
REIT	50	53	58	60	62	63	61	61
JASDAQ Standard	786	735	707	700	675	662	660	651
JASDAQ Growth	45	44	42	40	37	37	37	34
TOPIX Unassigned	18	10	11	19	13	5	1	1
Total	3,494	3,529	3,569	3,627	3,673	3,715	3,759	3,816
Panel B: Number of FTSE Scores								
TOPIX Sub-Index								
TOPIX Core 30	30	30	30	30	30	30	29	30
TOPIX Large 70	68	68	70	70	70	70	70	70
TOPIX Midcap 400	332	328	385	394	393	395	394	397
TOPIX Small 1	20	18	196	227	224	410	432	432
TOPIX Small 2	1	1	12	19	19	175	190	214
TSE 2nd Section			8	8	5	11	10	11
REIT								40
Total	451	445	701	748	741	1,091	1,125	1,194
Panel C: Number of MSCI Scores								
TOPIX Sub-Index								
TOPIX Core 30	30	30	30	30	30	30	29	30
TOPIX Large 70	70	70	70	70	71	70	70	70
TOPIX Midcap 400	206	210	372	386	394	384	395	398
TOPIX Small 1	18	19	67	153	183	181	261	427
TOPIX Small 2	23	22	33	34	44	25	56	163
TSE 2nd Section	16	13	18	21	19	5	3	7
Mothers	3	1	3	4	4	6	9	31
REIT	8	8	35	38	41	41	43	52
JASDAQ Standard	9	8	16	21	19	7	7	17
TOPIX Unassigned					1			
Total	383	381	644	757	806	749	873	1,195
Panel D: FTSE Coverage								
TOPIX Sub-Index								
TOPIX Core30	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
TOPIX Large70	0.97	0.97	1.00	1.00	0.99	1.00	1.00	1.00
TOPIX Mid400	0.83	0.81	0.96	0.98	0.98	0.99	0.99	0.99
TOPIX Small 1	0.04	0.04	0.40	0.46	0.45	0.82	0.88	0.87
TOPIX Small 2	0.00	0.00	0.01	0.02	0.02	0.15	0.16	0.18
Panel E: MSCI Coverage								
TOPIX Sub-Index								
TOPIX Core30	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
TOPIX Large70	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
TOPIX Mid400	0.51	0.52	0.93	0.96	0.99	0.96	0.99	1.00
TOPIX Small 1	0.04	0.04	0.14	0.31	0.37	0.36	0.53	0.86
TOPIX Small 2	0.03	0.02	0.03	0.03	0.04	0.02	0.05	0.14
Panel F: Average FTSE Score								
TOPIX Sub-Index								
TOPIX Core30	2.6	2.6	2.8	3.1	3.0	3.3	3.4	3.5
TOPIX Large70	2.3	2.3	2.6	2.8	2.9	3.3	3.2	3.3
TOPIX Mid400	1.6	1.7	1.8	2.0	2.0	2.3	2.4	2.5
TOPIX Small 1	1.3	1.4	1.3	1.5	1.3	1.6	1.6	1.7
TOPIX Small 2	0.8	0.8	1.1	1.2	1.1	1.4	1.5	1.5
Panel G: Average MSCI Score								
TOPIX Sub-Index								
TOPIX Core30	2.4	2.4	2.4	2.5	2.5	2.6	2.5	2.7
TOPIX Large70	2.4	2.5	2.5	2.5	2.5	2.6	2.5	2.6
TOPIX Mid400	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.4
TOPIX Small 1	2.3	2.2	2.2	2.3	2.2	2.3	2.1	2.1
TOPIX Small 2	2.3	2.4	2.4	2.4	2.3	2.0	2.0	1.9

Table 4. Engagements and ESG Scores

The table shows the number of companies engaged by engagement category and the respective ESG score at the start of the engagement. E, S and G engagements were matched with the respective FTSE and MSCI pillar scores; ESG engagements were matched with the aggregate score. In the temporal dimension, the start of the engagement was matched with the most recent available score; for FTSE the beginning of June and December; for MSCI the beginning of each month. As a reference, an ESG score of 3.1 was required for inclusion in the Blossom index until December 2019 and a score of 3.3 thereafter. For MSCI the required score for inclusion BB or above; to avoid exclusion the score had to remain above CCC. A MSCI score of 2 in the table would translate to a BB; a score of 2.5 to a BBB and a score of 3 into an A; a 0.5 would be CCC.

Year	Engagements		FTSE		MSCI		
	Count	Scores	Mean	Median	Scores	Mean	Median
Environmental Engagements and Scores							
2018	39	39	2.9	3.0	39	2.8	2.8
2019	43	43	3.2	3.3	42	2.7	2.7
2020	21	21	3.6	3.9	21	2.7	2.7
2021	52	51	3.0	3.0	52	2.6	2.7
2022	21	21	2.9	3.0	21	2.7	2.9
<i>Total</i>	<i>176</i>	<i>175</i>	<i>3.1</i>	<i>3.2</i>	<i>175</i>	<i>2.7</i>	<i>2.8</i>
Social Engagements and Scores							
2018	17	17	1.2	0.9	17	2.8	2.8
2019	19	19	2.9	3.0	19	2.4	2.4
2020	35	35	2.8	3.1	34	2.5	2.5
2021	36	36	2.6	2.8	36	2.6	2.5
2022	17	17	3.2	3.4	17	2.6	2.7
<i>Total</i>	<i>124</i>	<i>124</i>	<i>2.6</i>	<i>2.8</i>	<i>123</i>	<i>2.6</i>	<i>2.6</i>
Governance Engagements and Scores							
2018	108	90	2.5	2.5	90	1.9	2.0
2019	285	231	2.8	2.9	229	2.0	2.1
2020	335	304	3.0	3.0	255	2.1	2.2
2021	353	306	3.1	3.2	289	2.0	2.0
2022	185	165	3.2	3.3	158	2.1	2.1
<i>Total</i>	<i>1,266</i>	<i>1,096</i>	<i>3.0</i>	<i>3.0</i>	<i>1,021</i>	<i>2.0</i>	<i>2.1</i>
ESG Engagements and Scores							
2018	151	146	2.0	2.0	144	2.4	2.4
2019	159	139	2.7	2.8	137	2.4	2.4
2020	189	182	2.9	3.1	169	2.5	2.5
2021	170	164	3.0	3.3	164	2.4	2.5
2022	57	55	3.0	3.3	54	2.5	2.5
<i>Total</i>	<i>726</i>	<i>686</i>	<i>2.7</i>	<i>2.9</i>	<i>668</i>	<i>2.4</i>	<i>2.5</i>
<i>Total</i>	<i>2,292</i>	<i>2,081</i>			<i>1,987</i>		

Table 5. ESG Scores Difference-in-Differences Linear Regressions

The table shows difference-in-differences estimates for companies that were TOPIX500 constituents (Core30, Large70, Mid400) at any one point over the sample period. TOPIX500 companies were AM One's main engagement. In Column 1 treated is defined as any engagement by AM One in the period 2018-2022. In Columns 2 and 6 treatment is confined to E engagements; in Columns 3 and 7 to S engagements; in Columns 4 and 8 to G engagements and in Column 5 to horizontal ESG engagements as defined by AM One. The dependent variables match the treatment. MSCI were rescaled from 0-10 to 0-5 to match the FTSE scores; MSCI materiality weights range from 0 to 100. FTSE scores are measured on a scale from zero to five (0 no disclosure, 3 good practice, 5 best practice); exposure scores are measured on a scale from zero to three ("negligible" or not available, low, medium, high). FTSE scores are for the period January 2015 to March 2022; for MSCI the sample is confined to December 2016 to October 2020, due to insufficient data coverage in the preceding quarters and a disruptive change in methodology in November 2020. Means and Standard Errors are estimated by linear regression with robust standard errors. Inference: *** p<0.01; ** p<0.05; * p<0.1. Estimation was carried out with the Stata diff module Villa (2016).

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dependent Variable	ESG Score	E Score	S Score	G Score	ESG Score	E Weight	S Weight	G Weight
Treatment	Any	E	S	G	ESG	E	S	G
Panel A: FTSE								
Diff-in-Diff	0.21*** (0.049)	0.29*** (0.064)	0.09 (0.074)	0.01 (0.043)	0.16*** (0.046)	-0.02 (0.029)	0.01 (0.027)	0.00 (0.010)
Observations	6,609	6,609	6,609	6,609	6,609	6,609	6,609	6,609
R-squared	0.10	0.10	0.07	0.12	0.09	0.09	0.01	0.01
Mean control t(0)	1.81	1.99	1.61	2.20	1.89	2.20	2.43	2.18
Mean treated t(0)	2.11	2.70	1.87	2.36	2.12	2.62	2.51	2.21
Diff t(0)	0.30	0.71	0.25	0.16	0.23	0.42	0.07	0.03
Mean control t(1)	2.14	2.16	2.17	2.81	2.29	2.32	2.47	2.17
Mean treated t(1)	2.65	3.15	2.50	2.98	2.67	2.72	2.55	2.21
Diff t(1)	0.50	0.99	0.34	0.17	0.39	0.39	0.08	0.03
Panel B: MSCI								
Diff-in-Diff	0.02 (0.028)	-0.08 (0.064)	-0.00 (0.064)	0.10*** (0.035)	0.03 (0.026)	-0.56 (1.344)	-0.82 (1.218)	0.64 (0.804)
Observations	4,241	4,241	4,241	4,241	4,241	4,241	4,241	4,241
R-squared	0.02	0.01	0.01	0.00	0.01	0.10	0.01	0.01
Mean control t(0)	2.25	2.48	2.40	2.04	2.30	26.07	41.93	27.99
Mean treated t(0)	2.35	2.73	2.45	1.99	2.34	39.76	46.26	27.44
Diff t(0)	0.10	0.26	0.05	-0.06	0.04	13.69	4.34	-0.55
Mean control t(1)	2.28	2.56	2.53	1.99	2.33	23.80	42.13	30.32
Mean treated t(1)	2.41	2.74	2.57	2.03	2.40	36.93	45.65	30.41
Diff t(1)	0.13	0.18	0.04	0.04	0.08	13.13	3.52	0.09

Table 6. ESG Scores Difference-in-Differences Quantile Regressions

The table shows difference-in-differences using quantile regressions with bootstrap standard errors. The sample, score and treatment definitions are the same as in the linear regressions table. The table shows for which values of the ESG scores (very low, low, median, high, very high) the treatment had the largest effect, if any. Inference: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$. Estimation was carried out with the Stata `diff` module and the `qdid` option that calls on `qreg` and `bsqreg` (Villa, 2016).

Panel 1. ESG Scores, Any Engagement

Percentile	FTSE					MSCI				
	(1) 10th	(2) 25th	(3) Median	(4) 75th	(5) 90th	(1) 10th	(2) 25th	(3) Median	(4) 75th	(5) 90th
Diff-in-diff	0.40***	0.30	0.30	0.00	0.00	0.05	0.05	0.05	0.00	0.10
S.Err.	(0.130)	(0.197)	(0.228)	(0.197)	(0.129)	(0.068)	(0.099)	(0.117)	(0.100)	(0.070)
Observations	6,609	6,609	6,609	6,609	6,609	4,241	4,241	4,241	4,241	4,241
Mean control t(0)	0.90	1.20	1.70	2.30	3.00	1.75	2.00	2.25	2.50	2.75
Mean treated t(0)	0.90	1.40	2.10	2.80	3.30	1.80	2.05	2.35	2.60	2.85
Diff t(0)	0.00	0.20	0.40	0.50	0.30	0.05	0.05	0.10	0.10	0.10
Mean control t(1)	0.90	1.40	2.00	2.90	3.60	1.80	2.05	2.25	2.55	2.75
Mean treated t(1)	1.30	1.90	2.70	3.40	3.90	1.90	2.15	2.40	2.65	2.95
Diff t(1)	0.40	0.50	0.70	0.50	0.30	0.10	0.10	0.15	0.10	0.20

Panel 2. E Scores, E Engagement

Percentile	FTSE					MSCI				
	(1) 10 th	(2) 25th	(3) Median	(4) 75th	(5) 90 th	(1) 10th	(2) 25th	(3) Median	(4) 75 th	(5) 90 th
Diff-in-diff	0.50***	0.50**	0.30	0.20	-0.10	-0.00	-0.15	-0.05	-0.05	-0.15
S.Err.	(0.136)	(0.196)	(0.230)	(0.202)	(0.137)	(0.070)	(0.106)	(0.122)	(0.106)	(0.178)
Observations	6,609	6,609	6,609	6,609	6,609	4,241	4,241	4,241	4,241	4,241
Mean control t(0)	0.30	1.00	2.00	2.90	3.50	1.15	1.65	2.55	3.20	3.70
Mean treated t(0)	1.20	2.00	2.70	3.40	4.10	1.70	2.30	2.75	3.20	3.70
Diff t(0)	0.90	1.00	0.70	0.50	0.60	0.55	0.65	0.20	0.00	0.00
Mean control t(1)	0.30	1.00	2.30	3.20	3.90	1.25	1.80	2.55	3.25	3.85
Mean treated t(1)	1.70	2.50	3.30	3.90	4.40	1.80	2.30	2.70	3.20	3.70
Diff t(1)	1.40	1.50	1.00	0.70	0.50	0.55	0.50	0.15	-0.05	-0.15

Panel 3. S Scores, S Engagement

Percentile	FTSE					MSCI				
	(1) 10th	(2) 25th	(3) Median	(4) 75th	(5) 90th	(1) 10th	(2) 25 th	(3) Median	(4) 75 th	(5) 90 th
Diff-in-diff	0.20	0.20	0.10	0.10	-0.20	0.10	0.15	0.05	-0.00	-0.05
S.Err.	(0.151)	(0.224)	(0.259)	(0.221)	(0.148)	(0.124)	(0.119)	(0.138)	(0.119)	(0.165)
Observations	6,609	6,609	6,609	6,609	6,609	4,241	4,241	4,241	4,241	4,241
Mean control t(0)	0.30	0.80	1.50	2.40	3.10	1.55	2.00	2.40	2.85	3.30
Mean treated t(0)	0.40	0.90	1.70	2.90	3.50	1.50	1.90	2.40	2.90	3.50
Diff t(0)	0.10	0.10	0.20	0.50	0.40	-0.05	-0.10	0.00	0.05	0.20
Mean control t(1)	0.50	1.20	2.30	3.00	3.80	1.65	2.05	2.50	2.95	3.45
Mean treated t(1)	0.80	1.50	2.60	3.60	4.00	1.70	2.10	2.55	3.00	3.60
Diff t(1)	0.30	0.30	0.30	0.60	0.20	0.05	0.05	0.05	0.05	0.15

Table 6 - Difference-in-Differences Quantile Regressions continued ...

Panel 4. G Scores, G Engagement

Percentile	FTSE					MSCI				
	(1) 10th	(2) 25th	(3) Median	(4) 75th	(5) 90th	(1) 10th	(2) 25th	(3) Median	(4) 75th	(5) 90th
Diff-in-diff	0.10	0.10	-0.20	0.10	-0.20*	0.15**	0.05	0.10	-0.00	0.10
S.Err.	(0.120)	(0.166)	(0.203)	(0.160)	(0.115)	(0.063)	(0.092)	(0.108)	(0.094)	(0.063)
Observations	6,609	6,609	6,609	6,609	6,609	4,241	4,241	4,241	4,241	4,241
Mean control t(0)	1.10	1.50	2.00	3.00	3.30	1.40	1.70	2.05	2.35	2.70
Mean treated t(0)	1.30	1.70	2.30	3.00	3.50	1.30	1.70	1.95	2.30	2.65
Diff t(0)	0.20	0.20	0.30	0.00	0.20	-0.10	0.00	-0.10	-0.05	-0.05
Mean control t(1)	1.70	2.00	2.90	3.50	4.00	1.30	1.65	2.05	2.40	2.65
Mean treated t(1)	2.00	2.30	3.00	3.60	4.00	1.35	1.70	2.05	2.35	2.70
Diff t(1)	0.30	0.30	0.10	0.10	0.00	0.05	0.05	-0.00	-0.05	0.05

Panel 5. ESG Scores, ESG Engagement

Percentile	FTSE					MSCI				
	(1) 10th	(2) 25th	(3) Median	(4) 75th	(5) 90th	(1) 10th	(2) 25th	(3) Median	(4) 75th	(5) 90th
Diff-in-diff	0.30***	0.30*	0.30	0.10	0.10	0.05	0.05	0.05	0.00	0.10*
S.Err.	(0.116)	(0.178)	(0.206)	(0.177)	(0.118)	(0.063)	(0.089)	(0.106)	(0.091)	(0.061)
Observations	6,609	6,609	6,609	6,609	6,609	4,241	4,241	4,241	4,241	4,241
Mean control t(0)	0.90	1.30	1.80	2.50	3.10	1.80	2.00	2.30	2.55	2.90
Mean treated t(0)	0.90	1.40	2.10	2.80	3.30	1.80	2.05	2.35	2.60	2.85
Diff t(0)	0.00	0.10	0.30	0.30	0.20	0.00	0.05	0.05	0.05	-0.05
Mean control t(1)	1.00	1.50	2.20	3.10	3.60	1.85	2.05	2.30	2.60	2.85
Mean treated t(1)	1.30	1.90	2.80	3.50	3.90	1.90	2.15	2.40	2.65	2.90
Diff t(1)	0.30	0.40	0.60	0.40	0.30	0.05	0.10	0.10	0.05	0.05

Table 7. FTSE Blossom Index Inclusion Returns

The table shows event study returns for inclusions and exclusions in the FTSE Blossom ESG index and the FTSE4Good index. The event window starts 15 days before the effective inclusion/exclusion date and spans to five trading days after. Public announcements of index inclusions and exclusions are made nine business days before the effective date. Each panel reports raw returns, and cumulative average abnormal returns from a constant mean return model, a market adjusted model and a (one factor) market model using the TOPIX 500 index as the benchmark. The estimation window for the market model was [-280,-30]. Panel A1 reports inclusions from the TOPIX All Shares Index; Panel A2 from the TOPIX 100, Panel A3 from the TOPIX Mid 400 and Panel A4 from the TOPIX Small Caps index (Small 1 or Small 2). Panel 5 shows FTSE4Good inclusions from 2009 to 2016, the period prior to GPIF's ESG Index investment. Panel B1 shows Blossom exclusions and Panel B2 FTSE4Good exclusions. ESG inclusions/exclusions that are preceded by a change in the TOPIX segment within 50 days prior to the effective date were dropped, as were exclusions due to delisting. The estimation was carried out with the Stata `eventstudy2` module (Kaspereit, 2022). RAW denotes raw returns; COMEAN constant mean adjusted returns; MA market adjusted returns, and MM the market model. Inference: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

PANEL A.: INCLUSIONS						
MODEL	Window	Events	CAAR	T-Test	P-Value	Inference
PANEL A1.: BLOSSOM 2017-2022						
RAW	[-15;5]	103	0.031	3.17	0.002	***
COMEAN	[-15;5]	103	0.033	3.39	0.001	***
MA	[-15;5]	103	0.016	1.95	0.052	*
MM	[-15;5]	103	0.019	2.43	0.016	**
PANEL A2.: FROM TOPIX 100						
RAW	[-15;5]	28	0.021	1.33	0.186	
COMEAN	[-15;5]	28	0.019	1.19	0.236	
MA	[-15;5]	28	0.008	0.64	0.521	
MM	[-15;5]	28	0.009	0.72	0.475	
PANEL A3.: FROM TOPIX MID 400						
RAW	[-15;5]	57	0.022	1.66	0.098	*
COMEAN	[-15;5]	57	0.025	1.93	0.055	*
MA	[-15;5]	57	0.013	1.13	0.261	
MM	[-15;5]	57	0.018	1.60	0.110	
PANEL A4.: FROM TOPIX SMALL						
RAW	[-15;5]	18	0.079	2.83	0.005	***
COMEAN	[-15;5]	18	0.087	3.10	0.002	***
MA	[-15;5]	18	0.046	1.90	0.059	*
MM	[-15;5]	18	0.052	2.18	0.030	**
PANEL A5.: FTSE4GOOD 2009-2016						
RAW	[-15;5]	50	-0.048	-2.65	0.009	***
COMEAN	[-15;5]	50	-0.041	-2.27	0.024	**
MA	[-15;5]	50	-0.004	-0.26	0.794	
MM	[-15;5]	50	-0.005	-0.36	0.716	
PANEL B.: EXCLUSIONS						
MODEL	Window	Events	CAAR	T-Test	P-Value	Inference
PANEL B1.: BLOSSOM 2017-2022						
RAW	[-15;5]	19	-0.044	-1.86	0.065	*
COMEAN	[-15;5]	18	-0.046	-1.93	0.055	*
MA	[-15;5]	20	-0.040	-1.91	0.057	*
MM	[-15;5]	20	-0.030	-1.51	0.131	
PANEL B2.: FTSE4GOOD 2009-2016						
RAW	[-15;5]	73	-0.048	-3.07	0.002	***
COMEAN	[-15;5]	73	-0.036	-2.33	0.021	**
MA	[-15;5]	73	-0.008	-0.59	0.559	
MM	[-15;5]	73	-0.012	-0.99	0.324	

Table 8. MSCI ESG Leaders Index Inclusion and Exclusion Returns

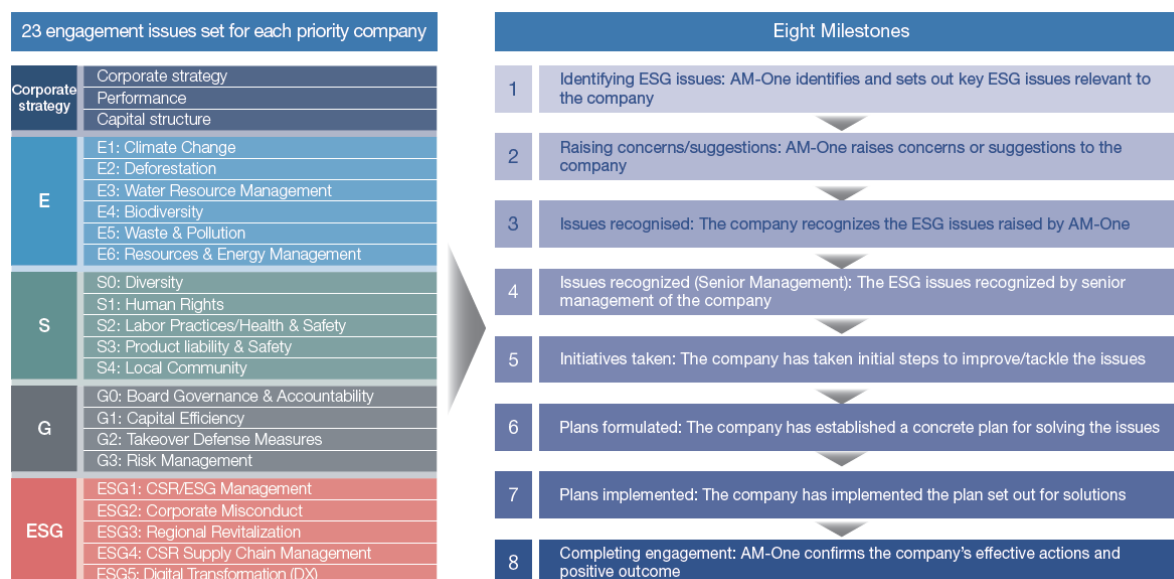
The table shows event study returns for inclusions in and exclusions from the MSCI ESG Leaders Index that GPIF adopted in 2017. The event window spans 15 days before the effective inclusion/exclusion date and five days after the inclusion/exclusion. The estimation window for the market model was [-280,-30]. Panel A1 reports inclusions from the TOPIX All Shares Index; Panel A2 from the TOPIX 100, Panel A3 from the TOPIX Mid 400 and Panel A4 from the TOPIX Small Caps index (Small 1 or Small 2). Panel B reports exclusions. The event study does not include cases that involve the simultaneous inclusion in or exclusion from any one of the TOPIX indexes. All other parameters were described in the header of Table 7. Inference: *** p<0.01; ** p<0.05; * p<0.1.

PANEL A.: INCLUSIONS						
MODEL	Window	Events	CAAR	T-Test	P-Value	Inference
PANEL A1.: ALL INCLUSIONS						
RAW	[-15;5]	81	0.018	1.77	0.078	*
COMEAN	[-15;5]	81	0.008	0.80	0.425	
MA	[-15;5]	81	0.026	2.85	0.005	***
MM	[-15;5]	81	0.021	2.37	0.019	**
PANEL A2.: FROM TOPIX 100						
RAW	[-15;5]	19	0.004	0.24	0.813	
COMEAN	[-15;5]	19	0.001	0.04	0.965	
MA	[-15;5]	19	0.011	0.66	0.512	
MM	[-15;5]	19	0.016	1.01	0.313	
PANEL A3.: FROM TOPIX MID CAP 400						
RAW	[-15;5]	35	0.029	1.99	0.048	**
COMEAN	[-15;5]	35	0.026	1.79	0.075	*
MA	[-15;5]	35	0.040	3.09	0.002	***
MM	[-15;5]	35	0.033	2.60	0.010	***
PANEL A4.: FROM TOPIX SMALL-CAP						
RAW	[-15;5]	27	-0.007	-0.38	0.703	
COMEAN	[-15;5]	27	-0.015	-0.79	0.429	
MA	[-15;5]	27	0.025	1.41	0.160	
MM	[-15;5]	27	0.011	0.62	0.533	
PANEL B.: EXCLUSIONS						
MODEL	Window	Events	CAAR	T-Test	P-Value	Inference
PANEL B1.: ALL EXCLUSIONS						
RAW	[-15;5]	100	-0.023	-2.62	0.009	***
COMEAN	[-15;5]	100	-0.019	-2.19	0.030	**
MA	[-15;5]	100	-0.023	-2.95	0.003	***
MM	[-15;5]	100	-0.018	-2.43	0.016	**
PANEL B2.: FROM TOPIX 100						
RAW	[-15;5]	12	-0.034	-1.61	0.109	
COMEAN	[-15;5]	12	-0.039	-1.82	0.070	*
MA	[-15;5]	12	-0.025	-1.44	0.150	
MM	[-15;5]	12	-0.025	-1.50	0.136	
PANEL B3.: FROM TOPIX MID CAP 400						
RAW	[-15;5]	81	-0.029	-2.88	0.004	***
COMEAN	[-15;5]	81	-0.020	-2.04	0.043	**
MA	[-15;5]	81	-0.024	-2.75	0.006	***
MM	[-15;5]	81	-0.020	-2.33	0.021	**
PANEL B4.: FROM TOPIX SMALL-CAP						
RAW	[-15;5]	7	0.023	0.64	0.522	
COMEAN	[-15;5]	7	0.032	0.91	0.362	
MA	[-15;5]	7	-0.001	-0.03	0.978	
MM	[-15;5]	7	0.015	0.47	0.638	

10. Figures

Figure 1 – Asset Management One ESG Issues and Milestones

The left part of the Figure shows the 23 engagement categories adopted by AM One; they are divided into “E”, “S”, “G” and a horizontal category “ESG” that combines issues from multiple themes. For example, ESG4 “CSR Supply Chain Management” could involve “E” and/or “S” issues in the supply chain. The right-hand side shows the milestones AM One uses to measure progress. Progress is not linear and reaching Level 4 “issue recognised by senior management” is an important threshold marker. Level 8 marks the completion of an engagement agenda item.



Source: Asset Management One Sustainability Report 2021, pg. 46

Figure 2. The Evolution of All Engagements over Time

The figure shows the evolution of engagements of TOPIX all-share constituents on any issue (E,S,G or ESG) over time in terms of absolute numbers and as a fraction of the respective index segment. Figure (a) traces the TOPIX 100, Figure (b) the TOPIX 400 midcap index and Figure (c) the small cap 1 and small cap 2 indexes. The indicator variable “engaged” was set to one when the first contact with a TOPIX company took place.

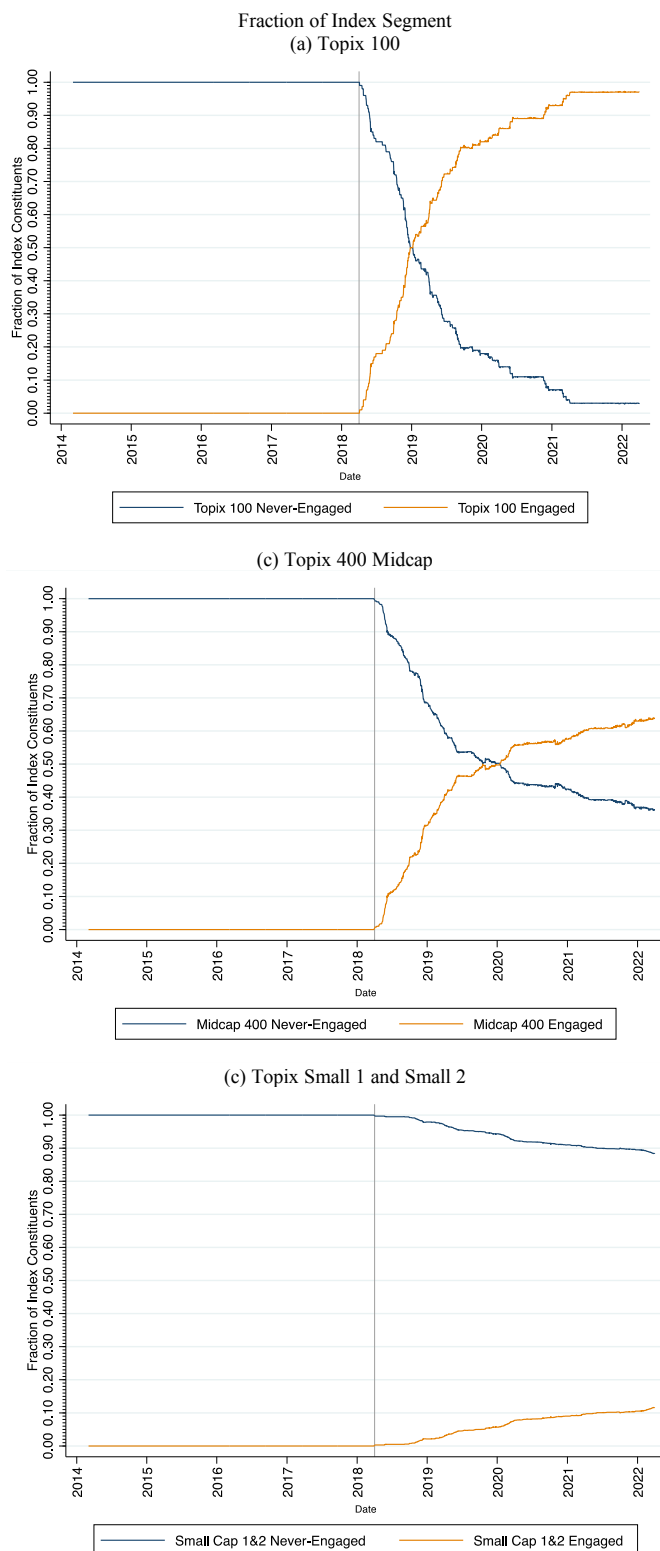
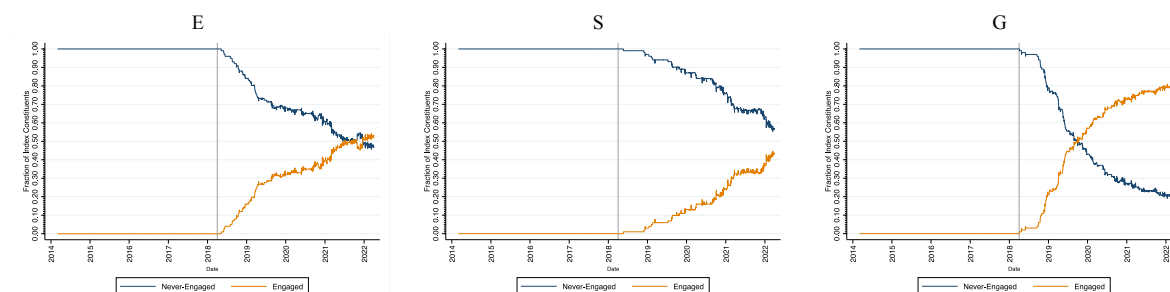


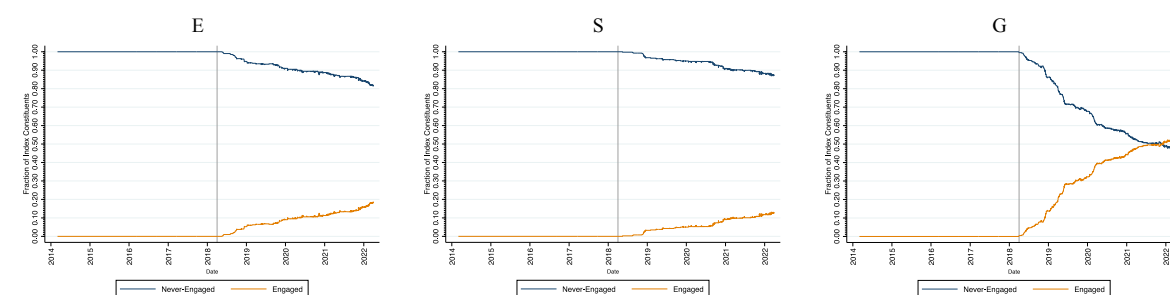
Figure 3. The Evolution of E,S and G Engagements over Time

The figure shows the evolution of engagement of TOPIX all-share constituents on environmental (E), social (S) and governance (G) issues over time as a fraction of all companies in the respective sub-index segment. Figure (a) traces the TOPIX 100, Figure (b) the TOPIX 400 midcap index and Figure (c) the Smallcap 1 and Smallcap 2 indexes. The indicator variable “engaged” was set to one when the first contact on an environmental issue with a TOPIX company took place.

(a) Topix 100



(b) Topix 400 Midcap



(c) Topix Small 1 and Small 2

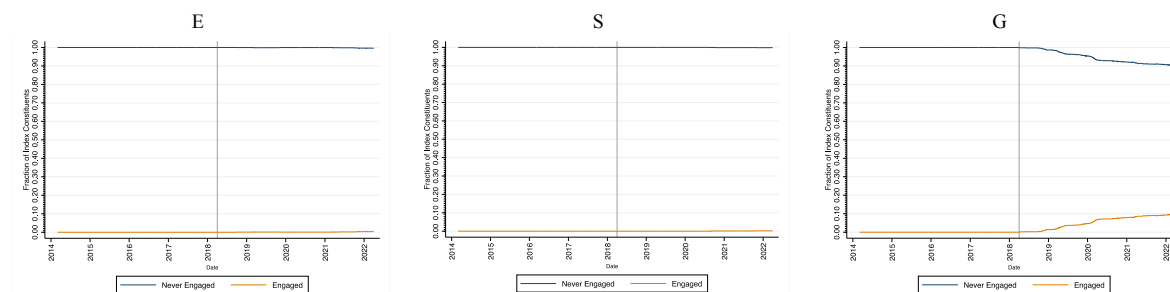
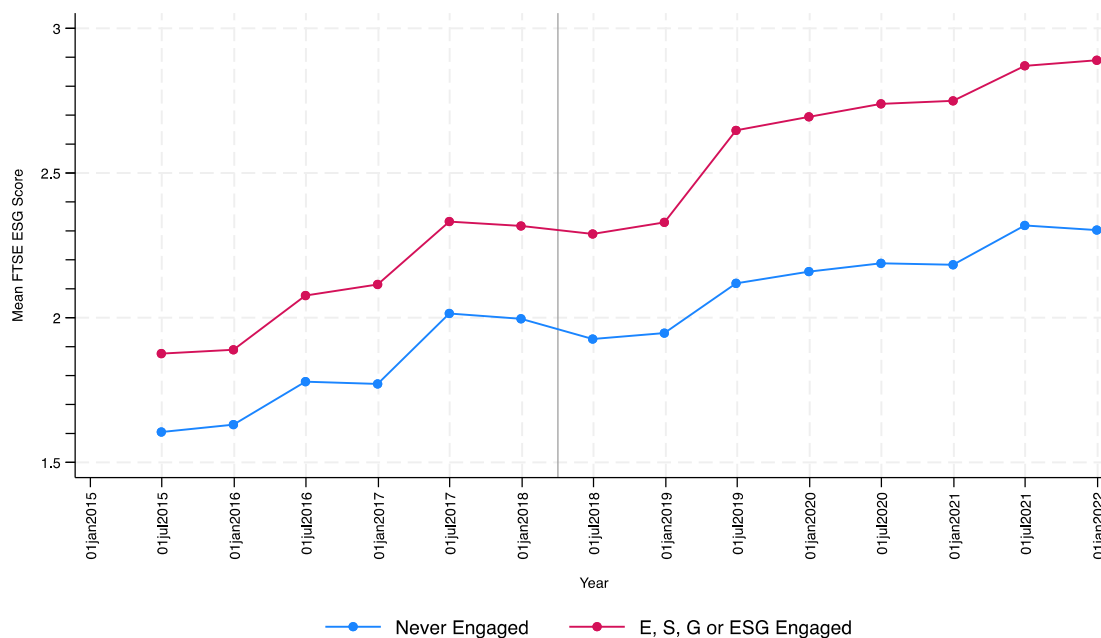


Figure 4. Engagement and Evolution of ESG Scores

The Figure shows the evolution in the mean FTSE and MSCI ESG scores for companies that were included at least once between 2016 and the end of 2022 in the TOPIX500 index. The index is split into groups: One, companies that were engaged on any topic (E,S,G or ESG) at some point between 2018 and 2022; two, companies that were never engaged. During the pre-engaged period (January 2016 to June 2018) the lines exhibit parallel trends, which is a necessary pre-condition for applying formal difference-in-differences tests. FTSE ESG scores are reported bi-annually; they are not industry weighted. MSCI ESG scores are also reported for June and December. The methodology for the G pillar score changed at the end of 2020 resulting in a discontinuity for the unweighted score; hence the plot in panel (b) stops at the end of 2020.

(a) FTSE ESG Scores – Not Industry Adjusted



(b) MSCI ESG Scores – Not Industry Adjusted

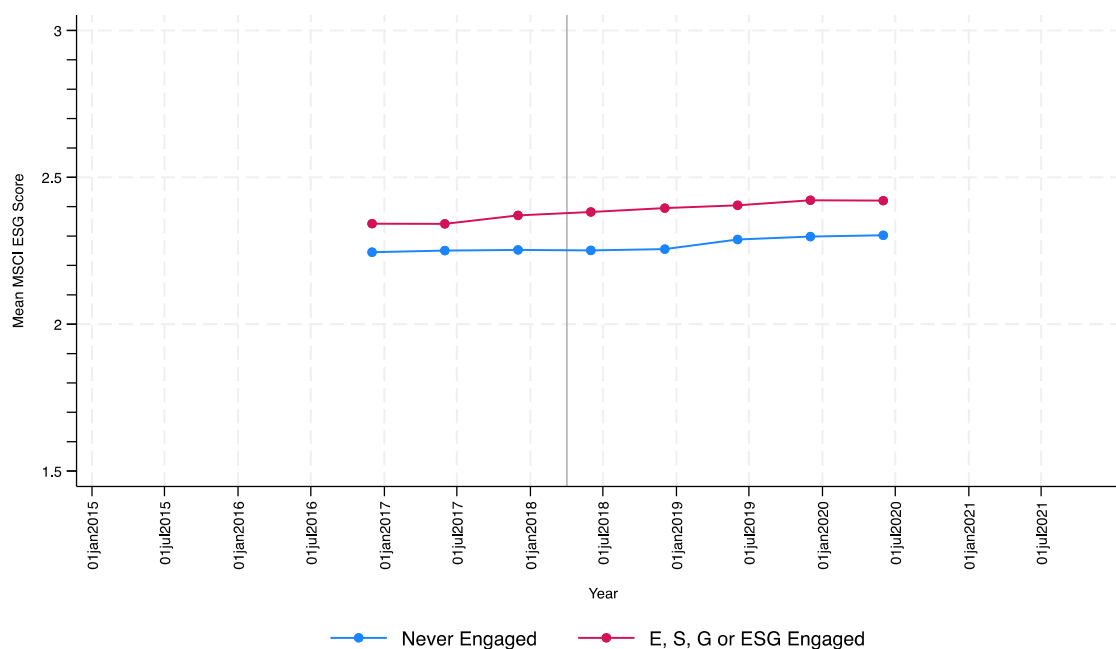


Figure 5. FTSE ESG Theme Scores and AM One Engagement: Seven & i Holdings

The figure shows the evolution of the theme level, pillar level and over ESG scores a major retail company.

	Mar-19	Jun-19	Dec-19	Dec-20	Dec-21
ESG Rating	3.2	3.8	3.8	3.6	4.2
Environment Score	3.3	4	4	3.6	3.7
Environment Exposure	2.3	2.3	2.3	2.3	2.3
Climate Change Score	4	5	5	5	3
Climate Change Exposure	M	M	M	M	M
Environmental Supply Chain Score	3	4	4	3	4
Environmental Supply Chain Exposure	H	H	H	H	H
Pollution & Resources Score	3	3	3	3	4
Pollution & Resources Exposure	M	M	M	M	M
Water Security Score					
Water Security Exposure	NA	NA	NA	NA	NA
Social	3.2	3.7	3.7	3.3	4.5
	2.8	2.8	2.8	2.8	2.8
Customer Responsibility Score	3	4	4	3	5
Customer Responsibility Weight	H	H	H	H	H
Human Rights & Community Score	4	4	4	3	4
Human Rights & Community Weight	M	M	M	M	M
Labour Standards Score	3	3	3	3	4
Labour Standards Exposure	H	H	H	H	H
Social Supply Chain Score	3	4	4	4	5
Social Supply Chain Exposure	H	H	H	H	H
Governance Score	3	3.5	3.5	4	4.3
Governance Exposure	2	2	2	2	2
Anti-Corruption Score	2	3	3	3	4
Anti-Corruption Exposure	M	M	M	M	M
Corporate Governance Score	4	4	4	5	5
Corporate Governance Exposure	M	M	M	M	M
Tax Transparency Score				4	4
Tax Transparency Exposure	NA	NA	NA	M	M
Engagement Agenda Item	Date				
E5 Waste & Pollution			Jul-19		Mar-21
S2 Labor Practices / Health & Safety			Nov-19		Mar-21
ESG4 CSR Supply Chain Management			Jan-19		Mar-21
	Milestone				
E5 Waste & Pollution			5		7
S2 Labor Practices / Health & Safety			7		7
ESG4 CSR Supply Chain Management			4		7

Figure 6. MSCI ESG Theme Scores and AM One Engagement: Seven & i Holdings

The figure shows the evolution of the theme level, pillar level and over ESG scores for a major retail company.
 *Note that AM One's ESG4 CSR Supply Chain Management is not included in the scoring of MSCI ESG scores.

			Jan-19	Jun-19	Dec-19	Dec-20	Dec-21
Overall	IVA Company Rating		BBB	BBB	BBB	BB	BBB
	Industry Adjusted Score		5.0	5.0	4.8	3.5	5.4
	Weighted Average Score		4.4	4.2	4.4	4.6	4.5
Pillar	E	Environmental Pillar Score	3.7	3.7	3.8	3.8	3.4
		Environmental Pillar Weight	18.0	18.0	20.0	15.0	15.0
	S	Social Pillar Score	4.3	4.0	4.3	4.9	4.1
		Social Pillar Weight	63.0	63.0	60.0	52.0	52.0
	G	Governance Pillar Score	5.6	5.5	5.4	4.5	5.6
		Governance Pillar Weight	19.0	19.0	20.0	33.0	33.0
Theme	E	Climate Change Theme Score	4.9	4.9	4.5	4.5	4.0
		Climate Change Theme Weight	9.0	9.0	10.0	8.0	8.0
	E	Natural Res Use Theme Score	2.4	2.4	3.1	3.1	2.7
		Natural Res Use Theme Weight	9.0	9.0	10.0	7.0	7.0
	E	Waste Mgmt Theme Score					
		Waste Mgmt Theme Weight	0.0	0.0			
	E	Environmental Opps Theme Score					
		Environmental Opps Theme Weight					
	S	Human Capital Theme Score	3.8	3.8	4.6	2.3	1.5
		Human Capital Theme Weight	21.0	21.0	20.0	15.0	15.0
	S	Product Safety Theme Score	5.1	4.3	4.3	6.4	5.5
		Product Safety Theme Weight	21.0	21.0	20.0	30.0	30.0
	S	Social Opps Theme Score	3.9	3.9	3.9	3.9	3.9
		Social Opps Theme Weight	21.0	21.0	20.0	7.0	7.0
	G	Corporate Gov Theme Score	5.6	5.5	5.4	5.6	6.4
		Corporate Gov Theme Weight	19.0	19.0	20.0	0.0	0.0
	G	Business Ethics Theme Score				4.6	5.8
		Business Ethics Theme Weight	0.0	0.0	0.0	0.0	0.0

Engagement Agenda Item		Date	
E5	Waste & Pollution	Jul-19	Mar-21
S2	Labor Practices / Health & Safety	Nov-19	Mar-21
ESG4	CSR Supply Chain Management	Jan-19	Mar-21
		Milestone	
E5	Waste & Pollution	5	7
S2	Labor Practices / Health & Safety	7	7
ESG4	CSR Supply Chain Management	4	7

Figure 7. FTSE ESG Theme Scores and AM One Engagement: Large Utility Company

	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21
ESG Rating	1.8	2.5	3.0	3.5	3.2
Environment Score	2.4	2.8	3.5	4.0	3.5
Environment Exposure	2.8	2.8	2.8	2.8	2.8
Biodiversity Score	2	3	3	4	3
Biodiversity Exposure	M	M	M	M	M
Climate Change Score	3	3	5	5	5
Climate Change Exposure	H	H	H	H	H
Environmental Supply Chain	0	2			
Environmental Supply Exposure	H	H	NA	NA	NA
Pollution & Resources Chain	4	3	4	4	4
Pollution & Resources Exposure	H	H	H	H	H
Water Security Score	3	3	2	3	2
Water Security Exposure	H	H	H	H	H
Social Score	1.0	1.5	2.3	3.0	2.7
Social Exposure	3	3	3	3	3
Health & Safety Score	1	1	2	4	3
Health & Safety Exposure	H	H	H	H	H
Human Rights & Community Score	2	2	2	2	2
Human Rights & Community Exposure	H	H	H	H	H
Labour Standards Score	1	3	3	3	3
Labour Standards Exposure	H	H	H	H	H
Social Supply Chain Score	0	0			
Social Supply Chain Exposure	H	H	NA	NA	NA
Governance Score	2.0	3.3	3.3	3.6	3.6
Governance Exposure	2.3	2.3	2.3	2.3	2.3
Anti-Corruption Score	0	3	3	4	4
Anti-Corruption Exposure	M	M	M	M	M
Corporate Governance Score	4	4	4	4	4
Corporate Governance Exposure	M	M	M	M	M
Risk Management Score	2	3	3	3	3
Risk Management Exposure	H	H	H	H	H
Engagement Agenda Item	Date				
E1 Climate Change		Jun-18	Sep-19	Jun-20	Mar-21
		5	7	7	7

Figure 8. MSCI ESG Theme Scores and AM One Engagement: Large Utility Company

			Jan-18	Jul-18	Jan-19	Jan-20	Jan-21	Jul-21
Overall	IVA Company Rating		BBB	BBB	BBB	BBB	BBB	BBB
	Industry Adjusted Score		4.80	4.80	4.60	4.70	4.60	4.60
	Weighted Average Score		5.10	4.90	5.00	5.00	4.90	4.90
Pillar	E	Environmental Pillar Score	5.80	5.50	5.80	5.60	6.00	6.00
		Environmental Pillar Weight	74	74	69	64	54	54
	S	Social Pillar Score	3.20	3.20	3.80	3.80	3.80	3.80
		Social Pillar Weight	10	10	15	16	13	13
	G	Governance Pillar Score	3.00	3.30	3.10	4.00	3.40	3.40
		Governance Pillar Weight	16	16	16	20	33	33
Theme	E	Climate Change Theme Score	6.90	5.60	5.50	5.60	5.70	5.70
		Climate Change Theme Weight	20	20	18	16	14	14
	E	Natural Res Use Theme Score	5.70	5.70	6.30	5.50	6.40	6.40
		Natural Res Use Theme Weight	17	17	18	16	14	14
	E	Waste Mgmt Theme Score	7.70	7.70	6.80	6.90	6.80	6.80
		Waste Mgmt Theme Weight	20	20	18	16	13	13
	E	Environmental Opps Theme Score	2.50	2.50	4.20	4.30	5.10	5.10
		Environmental Opps Theme Weight	17	17	15	16	13	13
	S	Human Capital Theme Score	3.20	3.20	3.80	3.80	3.80	3.80
		Human Capital Theme Weight	10	10	15	16	13	13
	S	Product Safety Theme Score						
		Product Safety Theme Weight			0	0	0	0
	S	Social Opps Theme Score						
		Social Opps Theme Weight						
G	Corporate Gov Theme Score	3.00	3.30	3.10	4.00	3.80	3.80	
	Corporate Gov Theme Weight	16	16	16	20	0	0	
G	Business Ethics Theme Score					5.60	5.60	
	Business Ethics Theme Weight			0	0	0	0	
Engagement Agenda Item			Date					
	E1	Climate Change	Jun-18			Jun-20		Mar-21
			Milestone					
	E1	Climate Change	5			7		7

Figure 9. Returns from Blossom Index Inclusions and Exclusions

The figure shows cumulative average abnormal returns for FTSE Blossom inclusions and exclusions between 2017 and 2022 for the market model and the market adjusted model. Event time is set at $t=0$ for the effective date. Inclusions and exclusions are announced to companies and the market nine trading days in advance. See the event study return table for further details.

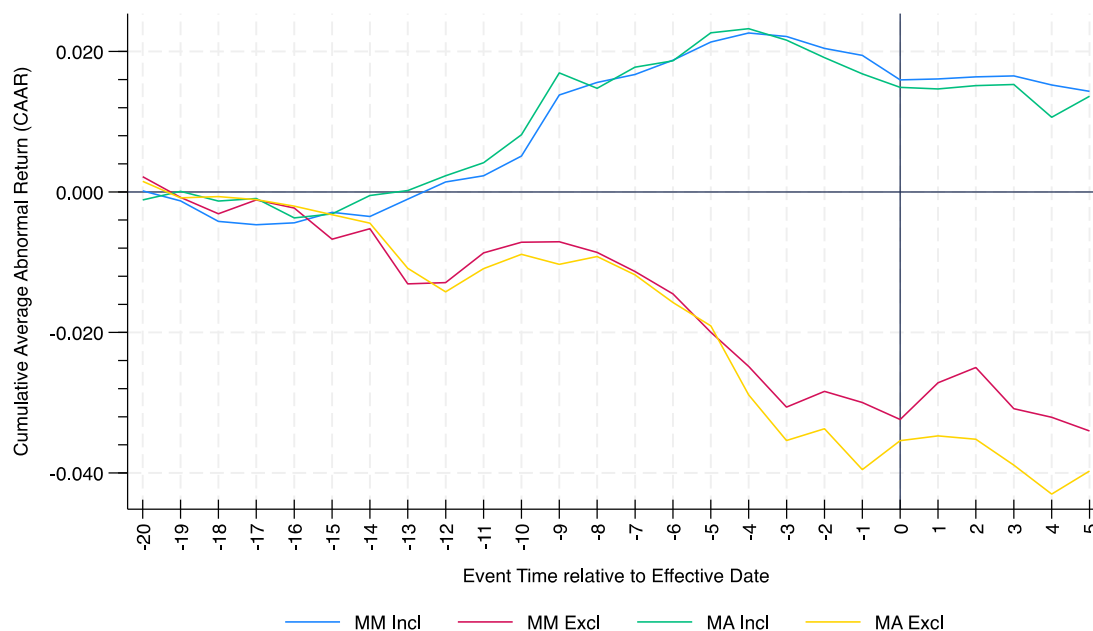
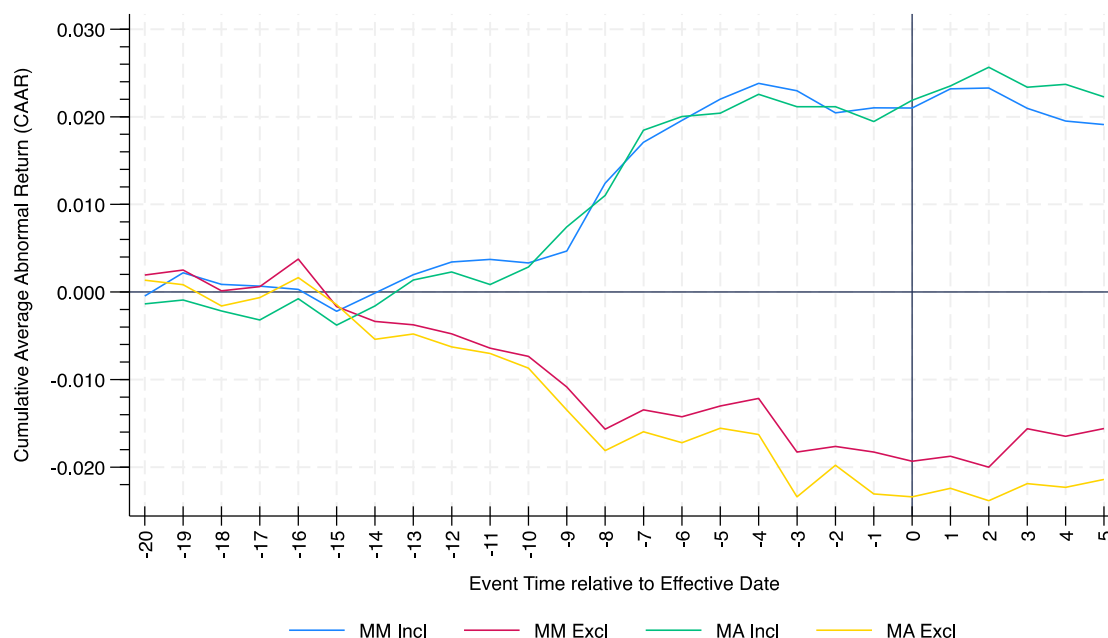


Figure 10. Returns from MSCI ESG Leaders Index Inclusions and Exclusions

The figure shows cumulative average abnormal returns MSCI ESG Leader inclusions and exclusions between 2017 and 2022 for the market model and the market adjusted model. Event time is set at $t=0$ for the effective date. Inclusions and exclusions are announced to clients nine trading days in advance. See the event study return table for further details.



11. Appendix: ESG Indexes

FTSE Blossom and FTSE4Good Indexes

In this subsection we provide further details on the FTSE ESG indexes: The FTSE4Good Japan, the FTSE Blossom Index, and the FTSE Blossom Sector Relative Index. GPIF adopted the Blossom in July 2017 and the Blossom Sector Relative in March 2022 (GPIF, 2022, 2017).⁵⁶ All FTSE indexes use “best in class” selection, which means that constituent companies must exceed an absolute scoring threshold to be eligible for inclusion. In addition, they must be free from ESG related controversies (FTSE Russell, 2017a).

The FTSE Blossom was launched on 3 July 2017 (FTSE Russell, 2017b). At inception the constituents were selected from FTSE All World Japan Index that contains the 500 largest and most liquid companies listed on the Japanese markets. In December 2020 the selection universe was broadened to the FTSE All Cap Japan Index that also includes small cap companies.

The inclusion and exclusion thresholds also changed over time. From inception to December 2019, companies with an overall ESG Rating of 3.1 were added to the index; subsequently only companies with a rating above 3.3 were included. Conversely, at inception the exclusion threshold was 2.5; in December 2017 it rose to 2.7 and in December 2019 to 2.9. Companies that fall below these thresholds are not excluded immediately but they are provided a grace period. The market can observe which companies are in the buffer zone because investors have access to the underlying ESG scores.

In addition, a company cannot be added if it has a zero score in a “high exposure theme” that contributes significantly to the E, S, and G pillar score. Significant ESG related controversies can also lead to barring a highly rated company from inclusion or force its exclusion.

The Blossom index is closely related to the global FTSE4Good index family, but the Blossom has fewer sector or product exclusion screens. For example, the Blossom can include tobacco companies, provided they have a sufficiently high ESG rating. In contrast, the FTSE4Good can include real estate investment trusts (REITs); the Blossom does not. Industry coverage and weighting also differ. The FTSE4Good Japan index was introduced in 2004.

Initially, the constituents of the FTSE4Good Japan and the Blossom were almost identical. In December 2020 the Blossom started to deviate more significantly because its inclusion universe was broadened to small caps, while the inclusion universe of the FTSE4Good remained unchanged. As a result, the Blossom had 22 additional inclusions in 2020-2021.

The FTSE Blossom Sector Relative Index was launched on 30 March 2022 with 494 constituents; again, this included small-cap companies from the FTSE Japan All Cap Index with 1,391 constituents. Hence

⁵⁶ GPIF did not adopt the FTSE4Good because it wanted different selection criteria, which is why FTSE developed the Blossom index in collaboration with GPIF (FTSE Russell, 2018).

the Blossom Relative differed substantially from the FTSE4Good that continued to draw on the narrower FTSE All World Japan, as well as from the Blossom.

MSCI ESG Leaders Index

The MSCI Japan ESG Select Leaders Index was also launched on 3 July 2017 (MSCI, 2017a).⁵⁷ The index aimed “to reflect the relative sector weights of the MSCI Japan IMI Top 500 Index (the “Parent Index”) with an aim to limit the systematic risk introduced by the ESG selection process. Overall the index targets coverage of 50% of the Parent Index” (MSCI, 2017b). The methodology is closer to the Blossom Sector Relative than the Blossom because eligible securities are only added until 50% of the target sector value is reached; for the Blossom there are no sector limits.

The selection universe for the MSCI ESG Leaders Index is defined by the constituents of the parent index. The index is reconstituted annually in May to coincide with the semi-annual review of the parent index. The index is also reviewed on a quarterly basis to coincide with the regular index reviews of the parent index in February, August, and November. Like the Blossom index, the selection universe was broadened from the IMI 500 large-mid cap index to the broader MSCI Japan IMI Top 700 Index in December 2018 and further to the MSCI Japan Investable Market Index (IMI) index in June 2022. Companies leave the index at any point due to a takeover, a bankruptcy, or a voluntary delisting.⁵⁸

To determine inclusion and exclusion the Leaders Index “uses MSCI ESG Ratings to identify companies that have demonstrated an ability to manage their ESG risks and opportunities. Existing constituents of the Index are required to have an MSCI ESG rating above CCC to remain in the Index, while companies that are currently not constituents of the Index are required to have an MSCI ESG rating above B to be considered eligible for addition” (MSCI, 2017b, p. 5).

The Index also uses MSCI ESG Controversies Scores as an additional eligibility criterion. Again, the inclusion and exclusion rules are not symmetric: “Existing constituents of the Index are required to have an MSCI ESG Controversies Score above 0 to remain in the index, while companies that are currently not constituents of the Index are required to have an MSCI ESG Controversies Score above 2 to be considered eligible for addition” (MSCI, 2017b).

⁵⁷ The MSCI Japan Empowering Women Index (WIN) was launched on the same day and equally adopted by GPIF (Mehrotra et al., 2023; MSCI, 2017a).

⁵⁸ For example, NTT Docomo was delisted on 25 December 2020 and dropped out of all MSCI indexes.

12. Appendix: GPIF

Table 9. GPIF Domestic Equities by Benchmark

The table shows the market value of active and passive domestic equity portfolios managed by GPIF's external asset managers. Panel A reports the actively management portfolios and the name of the respective asset managers. Panel B reports the passively managed portfolio. Panel C breaks out ESG assets from Panel B. Acronyms: TOPIX - TOPIX (incl. dividends); RN-P - RUSSELL/NOMURA Prime Index (incl. dividends); RN-V - RUSSELL/NOMURA Large Cap Value Index (incl. dividends); RN-S - RUSSELL/NOMURA Small Cap Index (incl. dividends); RN-SG - RUSSELL/NOMURA Small Cap Growth Index (incl. dividends); MSCI-JS - MSCI Japan Small (incl. dividends); MSCI-IR - MSCI Japan IMI Equity REITS Index (incl. dividends); MSCI-ESG - MSCI Japan ESG Select Leaders Index; MSCI-WIN - MSCI Japan Empowering Women Index (WIN); FTSE-BL - FTSE Blossom Japan Index; SP-C - S&P/JPX Carbon Efficient Index; RAFI - Nomura RAFI Index.

(Unit : ¥billion)	2017	2018	2019	2020	2021
Panel A: Active Management					
Benchmark Index					
MSCI-JS	172.1	241.5	209.4		
RN-S	178.7	56.2	47.8		110.6
RN-SG		101.8	82.1	127.9	116.0
RN-V	804.2	749.2	633.9		356.3
TOPIX	2735.6	2481.1	2232.6	1504.2	2,513.7
Sub-Total	3890.6	3629.8	3205.8	1632.1	3,096.6
Panel B: Passive Management					
Tracking Index					
TOPIX	27,435.2	25,532.2	22,479.6	34,159.4	36,028.4
FTSE-BL	526.7	642.8	931.4	1,490.6	983.0
FTSE-BLSR					800.0
JPX	1,995.7	1,908.8	1,187.9		
MSCI-ESG	622.9	804.3	1,306.1	2,026.8	2,099.0
MSCI-IR				66.7	143.5
MSCI-J	316.2	0.6			
MSCI-WIN	388.4	474.6	797.8	1,236.2	1,245.7
RAFI	1,855.2	1,753.5	1,535.3	1,354.5	1,422.3
RN-P	1,643.5	1,564.8	1,420.7	2,037.1	2,072.6
SP-C		387.8	980.2	1,536.5	1,567.8
SP-G	2,023.9	1,945.6	1,696.9		
Sub-Total	36,807.7	35,015.0	32,335.9	43,907.8	46,362.3
Total	40,698.3	38,644.8	35,541.7	45,539.9	49,458.9
Panel C: Passive domestic equities invested in ESG					
FTSE-BL	526.7	642.8	931.4	1,490.6	983.0
FTSE-BLSR					800.0
MSCI-ESG	622.9	804.3	1,306.1	2,026.8	2,099.0
MSCI-WIN	388.4	474.6	797.8	1,236.2	1,245.7
SP-C	0.0	387.8	980.2	1,536.5	1,567.8
Total	1,538.0	2,309.5	4,015.5	6,290.1	6,695.5
Fraction	4.2%	6.6%	12.4%	14.3%	13.5%
Sources	(1)	(2)	(3)	(4)	(5)

Sources Legend:

- (1) GPIF Annual Report FY 2017, pg. 58
- (2) GPIF Annual Report FY 2018, pg. 66
- (3) GPIF Annual Report FY 2019, pg. 82
- (4) GPIF Annual Report FY 2020, pg. 94
- (5) GPIF Annual Report FY 2021, pg. 91

Table 10. GPIF External Asset Managers - Japanese Domestic Equities

The table shows the market value of assets under management in Yen billions per external manager at year end. Panel A shows active managers that make investment decision. Panel B shows the breakdown for passive managers.

End of FY	Market value under management FY end (billions)					Percentage of total				
	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
Panel A: Active Managers										
AM One	754.5	697.4	613.2	223.3	345.1	19.4%	19.2%	19.1%	6.8%	11.1%
Capital International	495.4	471.3	434.1	673.2	619.3	12.7%	13.0%	13.5%	20.5%	20.0%
Daiwa SB Investments	408.6	377.7				10.5%	10.4%			
Eastspring Investments	276.2	170.5	138.0			7.1%	4.7%	4.3%		
FIL Investments (Japan)	392.9	352.1	337.3	521.2	498.9	10.1%	9.7%	10.5%	15.8%	16.1%
Invesco AM	217.3	221.7	194.4	378.1	429.6	5.6%	6.1%	6.1%	11.5%	13.9%
JP Morgan AM	395.6	371.5	319.4			10.2%	10.2%	10.0%		
Nikko AM	319.8	205.9	186.4	63.0		8.2%	5.7%	5.8%	1.9%	
Nomura AM	230.5	297.7	257.2	435.4	110.6	5.9%	8.2%	8.0%	13.2%	3.6%
Russell Investments	101.2	187.8	166.0	242.9	231.2	2.6%	5.2%	5.2%	7.4%	7.5%
Schroder Investment	287.2	276.2	245.3	357.5	361.9	7.4%	7.6%	7.7%	10.9%	11.7%
Seiryu AM	11.4					0.3%				
Sumitomo Mitsui			314.5	327.6	356.3			9.8%	10.0%	11.5%
Lazard Japan				66.3	143.7				2.0%	4.6%
Total Active	3,890.6	3,629.8	3,205.8	3,288.5	3,096.6	100.0%	100.0%	100.0%	100.0%	100.0%
Panel B: Passive managers										
AM One	11,842.4	11,419.4	10,500.3	11,299.1	11,488.1	32.2%	32.6%	32.5%	25.7%	24.8%
BlackRock Japan	7,715.8	6,043.0	4,195.7	5,825.4	6,408.2	21.0%	17.3%	13.0%	13.3%	13.8%
FIL Investments (Japan)		98.2	88.9	126.4	231.5		0.3%	0.3%	0.3%	0.5%
Goldman Sachs AM	2,023.9	1,945.6	1,696.9			5.5%	5.6%	5.2%		
Mitsubishi UFJ Trust BK	8,926.2	8,162.5	6,694.9	9,889.4	9,307.5	24.3%	23.3%	20.7%	22.5%	20.1%
Nomura AM	1,855.2	1,753.5	1,535.3	1,421.2	1,565.8	5.0%	5.0%	4.7%	3.2%	3.4%
Resona AM		982.5	2,819.5	6,425.0	7,897.5		2.8%	8.7%	14.6%	17.0%
Sumitomo Mitsui Trust AM	4,444.2	4,610.3	4,804.4	8,921.3	9,463.7	12.1%	13.2%	14.9%	20.3%	20.4%
Total Passive	36,807.7	35,015.0	32,335.9	43,907.8	46,362.3	100.0%	100.0%	100.0%	100.0%	100.0%
Total	40,698.3	38,644.8	35,541.7	47,196.3	49,458.9					
Active %	9.6%	9.4%	9.0%	7.0%	6.3%					
Passive %	90.4%	90.6%	91.0%	93.0%	93.7%					
Sources	(1)	(2)	(3)	(4)	(5)					
Source: GPIF Annual Reports										

Sources Legend:

- (1) GPIF Annual Report FY 2017, pg. 58
- (2) GPIF Annual Report FY 2018, pg. 66
- (3) GPIF Annual Report FY 2019, pg. 82
- (4) GPIF Annual Report FY 2020, pg. 94
- (5) GPIF Annual Report FY 2021, pg. 91

Table 11. GPIF Asset Allocation over Time

The table shows the evolution of GPIF's asset allocation over time.

Year	Domestic bonds	Foreign bonds	Domestic equities	Foreign equities	ST assets	Total
Panel A: Value of GPIF investments by asset class (Unit : ¥billion)						
2011	71,912.7	9,930.1	14,199.2	13,020.5	4,548.6	113,611.1
2012	74,458.6	11,789.6	17,557.5	14,875.8	1,783.8	120,465.3
2013	70,159.6	13,996.1	20,846.6	19,732.6	1,842.2	126,577.1
2014	56,703.7	18,181.5	31,670.4	30,077.2	7,318.1	143,950.9
2015	52,801.0	18,938.8	30,580.9	31,071.4	7,235.1	140,627.2
2016	47,870.7	19,681.7	35,178.4	34,926.2	13,436.5	151,093.5
2017	44,517.8	23,910.9	40,699.5	38,662.9	8,592.0	156,383.1
2018	43,162.7	27,818.7	38,655.6	41,897.5	7,680.8	159,215.3
2019	37,125.9	36,408.7	35,563.0	37,163.9	4,371.6	150,633.1
2020	42,362.1	47,154.8	47,227.3	47,818.0	1,600.3	186,162.5
2021	46,896.9	48,628.9	49,513.7	50,770.0	783.2	196,592.6
Panel B: Asset classes as a fraction of total investment value (%)						
2011	63.3%	8.7%	12.5%	11.5%	4.0%	100%
2012	61.8%	9.8%	14.6%	12.3%	1.5%	100%
2013	55.4%	11.1%	16.5%	15.6%	1.5%	100%
2014	39.4%	12.6%	22.0%	20.9%	5.1%	100%
2015	37.5%	13.5%	21.7%	22.1%	5.1%	100%
2016	31.7%	13.0%	23.3%	23.1%	8.9%	100%
2017	28.5%	15.3%	26.0%	24.7%	5.5%	100%
2018	27.1%	17.5%	24.3%	26.3%	4.8%	100%
2019	24.6%	24.2%	23.6%	24.7%	2.9%	100%
2020	22.8%	25.3%	25.4%	25.7%	0.9%	100%
2021	23.9%	24.7%	25.2%	25.8%	0.4%	100%

Source: GPIF Annual Reports FY 2011-2021; own calculations

Table 12. Fraction of Assets under Active or Passive Investment by Asset Category (%)

The table shows evolution of GPIF's asset allocation and split for each asset class between active and passive management.

Year	Domestic bonds		Domestic equities		Foreign bonds		Foreign equities		Total	
	Passive	Active	Passive	Active	Passive	Active	Passive	Active	Passive	Active
2001	50.7	49.3	44.2	55.8	71.4	28.6	53.3	46.8	50.1	49.9
2002	61.4	38.6	70.8	29.2	76.9	23.2	79.0	21.0	65.5	34.5
2003	75.5	24.5	77.0	23.0	73.3	26.7	81.6	18.4	74.9	25.1
2004	78.6	21.4	76.9	23.1	72.5	27.6	79.9	20.1	77.8	22.2
2005	79.9	20.1	76.2	23.8	72.0	28.0	79.7	20.3	78.1	21.9
2006	78.0	22.0	76.3	23.7	71.9	28.1	79.9	20.2	77.2	22.8
2007	80.9	19.1	76.4	23.6	72.3	27.7	82.9	17.1	79.5	20.5
2008	82.3	17.7	75.7	24.3	71.7	28.3	85.4	14.7	80.5	19.5
2009	83.1	16.9	75.3	24.7	70.9	29.1	85.6	14.4	79.7	20.3
2010	82.1	18.0	75.3	24.7	70.6	29.4	86.2	13.8	78.1	21.9
2011	81.6	18.4	76.2	23.8	70.9	29.1	86.0	14.0	76.7	23.4
2012	90.5	9.5	78.8	21.2	70.6	29.4	86.7	13.3	84.5	15.5
2013	90.1	9.9	87.7	12.3	71.7	28.3	89.4	10.6	86.0	14.0
2014	86.1	13.9	86.7	13.3	69.9	30.2	88.1	12.0	83.9	16.1
2015	82.5	17.5	81.5	18.5	64.9	35.1	84.2	15.9	79.3	20.7
2016	79.4	20.6	90.6	9.4	60.9	39.1	86.5	13.6	77.3	22.7
2017	77.0	23.0	90.4	9.6	62.0	38.0	86.3	13.7	76.3	23.7
2018	75.5	24.5	90.6	9.4	66.2	33.8	90.5	9.5	77.9	22.1
2019	71.5	28.6	90.9	9.1	73.8	26.2	90.2	9.8	79.2	20.8
2020	72.9	27.1	93.0	7.0	76.1	23.9	88.0	12.0	82.7	17.3
2021	76.6	23.4	93.7	6.4	79.2	20.8	90.8	9.2	85.2	14.8

Source: GPIF Annual Reports 2017 pg. 57 and 2021 pg. 89

1. Basic Concepts

- Given the fact that the GPIF holds domestic equities over the long term, the GPIF as an "institutional investor as an asset owner" under the Japan's Stewardship Code will fulfill the stewardship responsibilities by cooperating with the External Asset Managers, acting to the extent possible by GPIF's own as set forth in 3 below, understanding implementation by the External Asset Managers as set forth in 2 below, and disclosing the outlines of implementation every fiscal year.
- The GPIF will seek to enhance the medium- to long-term investment return for the insured and endeavor to achieve the mission of contributing to the stability of the public pension scheme through various stewardship activities.

2. Policy on Actions through External Asset Managers

Conducting hearings

- The GPIF will conduct hearings with the External Asset Managers in selection of such managers or annual evaluations, and will ask for explanations on and understand the implementation of the Code. The GPIF will also disclose the outlines of implementation every fiscal year.
- The GPIF will require improvement from the External Asset Managers, when problems are recognized in fulfilling their stewardship responsibilities.
- The GPIF will clarify level of engagement activities, for respective External Asset Managers in advance, as such level differs by investment style of each manager. However, regardless of the investment style, the common policy will apply to the exercise of voting rights.
- When evaluating the External Asset Managers' engagement activities, the GPIF appreciates the contents of engagement rather than superficial activities (such as the number of meetings held with management).
Examples of contents of engagement: (1) content of business model that would enhance corporate value (such as management philosophy/vision, specific business strategy), (2) status of corporate governance (such as supervision by the board of directors, etc. of business execution), (3) consideration of long-term capital productivity, (4) response to risks (including risks related to social/environmental problems), (5) prevention of antisocial behaviors, etc.

Evaluation of the External Asset Managers

- Provided all other conditions are the same, the GPIF would more highly evaluate an External Asset Manager that is considered to better fulfill their stewardship responsibilities.

3. Policy on Actions Taken by GPIF

- The GPIF will accumulate knowledge on stewardship responsibilities by conducting hearings on the status of exercise by the External Asset Managers of their stewardship responsibilities. The GPIF will discuss more appropriate stewardship responsibilities in the process for enhancing the medium- to long-term investment return for the insured, and review the policies as necessary.
- From the viewpoint of fiduciary responsibility, the GPIF will consider those activities that would serve to enhance long-term return in the equity market with a view to improving medium- to long-term investment return for the insured (including study/research on selection of benchmarks aimed at long-term improvement of capital productivity, etc.).

⁵⁹ The policy was adopted in 2014 and published as an exhibit that was annexed to GPIF's Acceptance of the Japan's Stewardship Code published on May 30, 2014.

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