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Selection and Effects of Environmental and Social Engagement by Institutional Investors[1]

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Abstract

This study uses proprietary data on environmental and social issue engagement in Japan to examine institutional investors' selection criteria and the effects of engagement on the environmental and social performance of companies. The results indicate that institutional investors engage with companies that align with their monitoring motivations, exhibit relatively good capital efficiency, and demonstrate good governance practices. Additionally, environmental engagements lead to the adoption of long-term CO_2 emission targets and a reduction in companies' CO_2 emissions. Social and governance engagement increased the representation of women on corporate boards. These results indicate the presence of differences in the effects of engagements across different themes.

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1. Introduction

Responsible investment, which integrates environmental, social, and governance (ESG) factors into investment decisions and processes, has attracted increased global attention. ESG investments are expected to contribute to a company's sustainable social impact, leading to a balance between investment return and social responsibility of the portfolio firms. One action associated with ESG investment is ESG engagement, in which investors engage directly with portfolio company's executives to address the company issues. According to Gibson Brandon, Glossner, Krueger, Matos, and Steffen (2022), more than 75% of signatory institutions to the Principles for Responsible Investment (PRI) employ engagement as a strategy for ESG investments. Broccardo, Hart, and Zingales (2021) presented a prediction that engagement strategies encompassing engagement and voting rights yield socially desirable outcomes, particularly when investors bear social responsibility. Conversely, exit strategies such as divestment do not have these effects. Engagement is recognized for its elevated adoption rate and heightened effectiveness compared to other ESG investment strategies.

While governance engagement, denoted as G-engagement, can potentially augment shareholder value through the resolution of agency problems and enhancement of shareholder interests, engagement activities focused on environmental or social improvements, termed E-engagement and S-engagement, respectively, or collectively as ES-engagement, may not yield direct or immediate shareholder benefits. This distinction emphasizes the likelihood that institutional investors bounded by fiduciary responsibilities may exhibit different preferences for ES- and G-engagement.

Institutional investors can be divided into active and passive investors. Prior studies show that both active and passive investors engage with companies and have disciplinary effects (Appel, Gormley, and Keim, 2016; McCahery, Sautner, and Starks, 2016). However, active and passive investors have different investment styles, which may lead to different engagement approaches (Aghion, Reenen, and Zingales 2013; Appel et al., 2016; Schmidt and Fahlenbrach, 2017) since engagement activities incur costs. Considering the benefits obtained from these costly activities, active investors who select investment targets and concentrate their holdings on certain stocks are more likely to derive higher benefits. Moreover, active investors generally have higher fees, which suggests that they have more room to engage in activities in terms of cost-effectiveness.

Additionally, there is motivation for ES-engagement among passive investors as well. Passive investors hold a wide range of companies included in their respective benchmarks based on market capitalization weights, limiting their ability to sell individual stocks. Therefore, direct engagement through ES-engagement is important for controlling portfolio risks and returns. Furthermore, environmental and societal issues, on which ES-engagement focuses, have high externalities, meaning that the benefits derived from improvements made by companies do not benefit investors. Thus, even if an engagement is conducted, it may be difficult to directly benefit from a particular stock, which may hinder active investors' ES-engagement. However, passive investors can be viewed as universal owners due to their wide range of holdings. If improvements in environmental and social aspects lead to reduced climate change and societal risks, passive investors, as universal owners, can reap significant benefits. This serves as motivation for passive investors to engage in ES-engagement. Based on these

considerations, active and passive investors have distinct motivations and exhibit differences in their selection of engagement targets concerning ES-engagement.

Taking these factors into account, this study focuses on ES-engagement and examines how active and passive investors select companies for ES-engagement, and whether there are observable changes in environmental and social indicators, such as the intensity of greenhouse gas emissions and the ratio of woman directors, as a result of ES-engagement. This study is unique because it focuses on the ES-engagement activities of institutional investors, targeting Japanese listed companies, and utilizes a proprietary dataset provided by four large Japanese institutional investors. Since institutional investors' engagement activities are conducted privately and are unobservable, few previous studies have examined the selection criteria and effects using actual engagement data, and studies focusing on ES-engagement are even more limited.[1] In addition, dissimilar to previous studies, this study examines ES-engagement not by a specific asset manager but by four different asset managers, including domestic and foreign managers and active and passive investors.

In Japan, the Government Pension Investment Fund (GPIF), the largest pension fund in the world, signed a PRI in 2015 as an asset owner. It actively encourages external asset managers to integrate ESG considerations into their investment strategies and participate in what is termed *constructive dialogue* (engagement). In 2017, the revised Japan Stewardship Code added content that emphasizes the need for effective monitoring

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[1] Extant studies on engagement include Carleton, Nelson, and Weisbach (1998); Dimson, Karakas, and Li (2015); Barko, Cremers, and Renneboog (2022); Becht, Franks, and Wagner (2019); Ceccarelli, Nelson, and Weisbach (2021); Hidaka, Ikeda, and Inoue (2023); and Dimson, Karakas, and Li (2023).

by asset managers and owners. In response, the GPIF formulated the Stewardship Principles in June 2017. These principles call upon asset managers to channel their efforts toward achieving long-term risk-adjusted returns through stewardship activities, including engagement. The subsequent revision of the Stewardship Code in 2020 placed even more emphasis on *purposeful dialogue* (engagement) based on the consideration of ESG factors for long-term sustainability with investee companies, urging institutional investors to engage in such dialogues. Consequently, investors anticipate heightened engagement initiatives.

Thus, it is valuable to examine the effects of the recent engagement activities in Japan. The GPIF's policy of allocating assets to asset managers who show a strong commitment to their responsible investment in sustainability potentially provides reasonable incentives for asset managers who seek business with the GPIF, regardless of whether they are domestic or foreign managers. This mitigates the free-rider problem and lowers the incentives for ES-engagement from its external nature. From the engagement data provided by the four asset managers, we confirm that the engagement activities and activity records of the asset managers examined in this study dramatically increased since 2017. This allowed for the examination of the effects of the first wave of ES-engagement on Japanese firms; an ideal setting for conducting an event study approach.

Previous studies on ES-engagement have focused on engagement by specific individual investors (Dimson, Karakas, and Li, 2015), the effects of engagement on non-ES outcomes, such as stock prices (Dimson, Karakas, and Li, 2023), and the downside risk of stock prices (Hoepner, Oikonomou, Sautner, Starks, and Zhou, 2022). However, to the best of our knowledge, there have been no detailed examinations of the

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environmental and social effects of ES-engagement using comprehensive dialogue data. The two exceptions that examined the effects of ES-engagement on ES-related indicators are Barko, Cremers, and Renneboog (2022) and Becht, Franks, Miyajima, and Suzuki (2023), who examined the effects of ESG engagements by an activist or ESG investor on the target firms' ESG ratings. However, neither study examined the direct effect of engagement on the environmental and social variables related to target firms' engagement topics. Therefore, this study presents novel and generalized evidence by clarifying the effects of multiple institutional investors on the environmental and social aspects of engaged companies.

This study identifies the characteristics of companies that institutional investors tend to select for ES-engagement. The main results are as follows:

First, when selecting target companies for engagement, active investors prefer companies with high ownership stakes, whereas passive investors prefer companies with high portfolio weights. These results are consistent with results reported by Iliev, Kalodimos, and Lowry (2021), who showed that investors' attention on corporate governance is largely explained by the investors' concentrated ownership and the size of portfolio firms. In addition, institutional investors prefer to conduct ES-engagement for portfolio firms with superior capital efficiency (higher return on equity [ROE] and lower cash ratio) and better governance structures and information disclosure. The selection criteria are more obvious for active investors. This significantly differs from the selection criteria for G-engagement in Japan, where investors are more likely to engage with firms with larger free cash flows (Hidaka, Ikeda, and Inoue, 2023). In addition, although

investors tend to engage in G-engagement with poor prior stock returns, they tend to engage in S-engagement with firms with better previous returns.

Second, regarding the effects of engagement, this study reveals that E-engagement leads to the establishment of long-term CO_2 emission reduction targets and actual reductions in CO_2 emissions. Both S- and G-engagements increase the proportion of women on corporate boards. Although G-engagement is associated with improvements in companies' Tobin's Q, this study observes no positive effects on Tobin's Q from ES-engagements. Although we do not observe increase in shareholder value after the ES engagements, an important finding is that the ES engagements improve CSR performance of the portfolio firms without decreasing their shareholder value. The distinct improvements observed in the indicators relevant to each type of engagement suggest that ESG engagements by institutional investors yield varying effects based on different engagement topics.

The structure of this study is as follows: Section 2 reviews relevant previous literature. Section 3 presents the hypotheses. Section 4 presents the data and sample and Section 5 presents the empirical results regarding the factors influencing the selection of engagement target companies. Section 6 presents the empirical results on the engagement effects and provides a robustness test. Finally, the conclusions are presented in Section 7.

2. Literature

While corporate social responsibility (CSR) activities are highly valued in society, the impact of CSR activities on shareholder value according to previous studies remains ambiguous. Using advertising as a proxy for customer awareness, Servaes and Tamayo

(2013) demonstrated that CSR activities enhance corporate value in companies with high customer awareness. Conversely, CSR activities can be seen as a manifestation of agency problems, in which corporate CSR activities impose costs on shareholders. Masulis and Reza (2014) argued that corporate philanthropy is driven by CEOs' personal interests, resulting in lower shareholder returns. Regarding these divergent outcomes of CSR, Margolis, Elfenbein, and Walsh (2009) conducted a review of studies on the relationship between a company's social and financial performance. They found that 2% of the studies showed a negative relationship, 28% showed a positive relationship, and 59% showed no significant relationship. Recent literature reviewed by Gillan, Koch, and Starks (2021) reported mixed results from corporate finance studies, showing that different empirical studies indicate that ESG/CSR has a positive, negative, or zero effect on various firms' financial performance.

Indeed, corporate CSR activities do not necessarily increase shareholder value. However, institutional investors are believed to promote corporate CSR activities through ESG investments to mitigate companies' future risks (Gillan et al., 2021; Kölbel. Heeb, Paetzold, and Busch, 2020). Dyck, Lins, Roth, and Wagner (2018) found a positive correlation between institutional ownership and ESG performance indicators. They specifically demonstrated that when investors stem from countries where the importance of environmental and social factors is highly recognized, it leads to improved ES performance. Kölbel et al. (2020) distinguished three impact mechanisms from institutional investors investing in societal goals and indicated that shareholder engagements are associated with larger contributions to societal goals than capital allocation and indirect impacts.

Therefore, institutional investors' ESG investments are gaining attention to achieve a sustainable society. Gibson et al. (2022) conducted a study based on a survey conducted by the PRI, which promotes ESG investments among institutional investors. They found that ESG engagement was actively adopted by 86% of PRI signatory institutions compared with other strategies, indicating its significance as an ESG investment strategy. However, they did not obtain statistically significant positive results regarding the effectiveness of engagement for the E, S, and G scores.

Regarding the relationship between investor type and monitoring activity in portfolio companies, several studies found that passive investors are relatively inactive in costly monitoring. Using investor survey data, McCahery et al. (2016) reported that investor voice intensity is higher among active investors and when investors have higher shareholdings in firms. This is supported by Iliev et al., (2021) who showed that passive investors pay less attention to the details of corporate governance-related topics and that investors pay more attention when they have higher ownership of the firms. Dyck et al. (2018) reported that passive investors do not conduct high-cost governance activities that require continuous monitoring of the portfolio companies. In summary, active investors' concentrated holdings are an important factor in engaging with portfolio companies.

Dimson et al. (2015) conducted a detailed empirical analysis of ESG engagement by institutional investors. They observed private engagement activities by institutional investors from 1999 to 2009 and examined the factors influencing the selection of engagement targets and their effects on engagement returns. They reported that the targets for G-engagement and ES-engagement were determined by different selection factors and that the ES-engagement targets tended to be companies with higher advertising

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expenditure ratios and a focus on customer reputation. Successful ES-engagement is associated with subsequent improvements in financial performance and governance. Hidaka et al. (2023) analyzed engagement data on governance from three institutional investors in Japan and showed that institutional investors tend to engage with companies with monitoring incentives in their portfolios, demonstrating that effective engagement improves corporate governance. However, since institutional investors do not typically disclose their engagement activities, studies on institutional investors' engagement activities are limited. Drawing on relevant previous studies by Dimson et al. (2015) and Hidaka et al. (2023), this study examines the direct effects of ES-engagement on environmental and social aspects, which are specific themes of engagement.

Regarding other studies on actual engagement activities, Barko et al. (2022) demonstrated that engagement activities improve the E-score for companies with low pre-existing ESG scores, while Ceccarelli, Glossner, Homanen, and Schmidt (2021) found that engagement by certain leading investors improves the E-score. Becht et al. (2023) found that the enhanced engagement activity of passive investors, incentivized by the GPIF, has positive effects on ES scores. However, ESG scores can vary significantly depending on the source, as highlighted by Abhayawansa and Tyagi (2021). Additionally, individual company scores may not accurately reflect the actual corporate activities and achievements related to environmental and social aspects in the short term. Therefore, this study used direct indicators related to the company's environmental and social aspects, such as CO_2 emissions, emission reduction targets, and the proportion of woman directors, instead of relying on ESG scores to assess the effectiveness of engagement activities.

3. Hypotheses

This section establishes hypotheses regarding the selection of ES-engagement targets by institutional investors in Japan and the effects of ES-engagement activities on environmental and social target companies.

First, we focus on the selection of ES-engagements. Regarding institutional investors' monitoring incentives, we emphasize their shareholding ratios. Engaging in monitoring activities incurs costs for institutional investors. However, the benefits are dispersed among all shareholders, creating a free-rider problem. This free-rider problem reduces investors' motivation to incur monitoring costs (Grossman and Hart, 1980; Shleifer and Vishny, 1986). However, if investors hold a large proportion of shares in a company, the benefits derived from monitoring increase, which is expected to provide an incentive for monitoring, even in the presence of free-rider problems. Additionally, institutional investors with higher shareholding ratios have a greater influence on boards of directors, enabling more effective engagement. In particular, as a typical universal owner, the GPIF requested asset managers to implement responsible investments in environmental and social issues in 2017 to mitigate the free-rider problem, and asset managers were predicted to be highly motivated in the expectation of enhancing business. Hidaka et al. (2023) demonstrated that companies with higher shareholding ratios tended to be the focus of engagement by three large institutional investors in Japan after 2017. This study specifically focuses on ES-engagement and examines whether similar selection tendencies are observed.

Additionally, this study explores how active and passive investment styles contribute to institutional investors' monitoring activities. Active investors seek alpha or

abnormal returns on their benchmarks with relatively concentrated portfolios. They should have stronger motivation to improve portfolio returns and mitigate risks by engaging with portfolio companies than passive investors. McCahery et al. (2016) suggested that active investors actively engage with companies through their voice, implying that the shareholding ratio of active investors can have a positive impact on engagement activities.

Conversely, passive investors face constraints on stock sales. Therefore, passive investors may be motivated to engage with companies to address the risks within their portfolios. Appel et al. (2016) found that passive mutual investors in the United States have an impact on corporate governance, leading to improvements in the proportion of independent directors, the elimination of anti-takeover provisions, and the equalization of voting rights. Ekholm and Maury (2014) found that portfolio weight affects investors' monitoring incentives under limited monitoring resources. Hidaka et al. (2023) reported that, in Japan, engagement activities related to governance are conducted for companies with higher investor ownership and larger market capitalization. Since passive funds are typically allocated to companies based on market capitalization (holding market capitalization-weighted portfolios of companies within their benchmark), companies with larger market capitalization have higher value weights in passive portfolios. Consequently, market capitalization is expected to directly relate to institutional investors' engagement incentives. Therefore, the larger the market capitalization, the stronger the engagement incentive for passive investors. Based on the above, the following hypotheses are established:

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Hypothesis 1: *Institutional investors actively engage in ES-engagement with companies that have a high active investor ownership ratio and with companies that have a large market capitalization due to the high portfolio weight in passive funds.*

Institutional investors have fiduciary responsibilities and are accountable for their investment performance. Therefore, they are likely to prioritize factors that are closely related to the financial performance of portfolio companies, and they engage in indirect factors, such as ES issues, only after investors are satisfied with the financial performance of the portfolio companies. Fulton, Kahn, and Sharples (2012) reviewed more than 100 studies and found that investors prioritize governance as the most important aspect of ESG, followed by environmental and social factors. This is consistent with what institutional investors tell themselves. Krueger, Sautner, and Starks (2020) also reported from their survey data that institutional investors prioritize corporate earnings, capital efficiency, and corporate governance system to social and environmental issues in their investment and related activities. Thus, firm governance can be considered a high-priority aspect. Harjoto and Jo (2011) found that corporate CSR activities have a positive relationship with governance variables such as board independence. Thus, it can be predicted that ES-engagement will be observed in companies with relatively good past financial performance, capital efficiency, and governance structure.

Similarly, companies with detailed environmental and social disclosures are perceived as actively engaging in CSR activities. Institutional investors gather information about companies before engaging with them, and companies with strong environmental and social disclosures make it easier to collect information related to their

environmental and social issues. This factor can also contribute to the active engagement of institutional investors in ES-related issues.

Hypothesis 2: *Institutional investors are more likely to conduct ES-engagement with (i) companies that demonstrate robust financial performance and capital efficiency, and (ii) companies that exhibit exemplary governance practices.*

If institutional investors engage their portfolio companies with enhanced monitoring motivation, they may vote against the management in shareholder meetings or ultimately sell their shares if a company fails to respond to the engagement. However, few studies have examined the reactions between investor engagement and the actual environmental or social aspects of target firms. Companies are expected to make efforts to improve aspects that have received engagement from institutional investors concerning environmental and social factors. Previous studies found that institutional investors' shareholdings and engagements improve companies' environmental and social indicators (Azar, Duro, Kadach, and Ormazabal, 2021; Barko et al., 2021; Ceccarelli et al., 2021; Bonacchi, Klein, Longo, and Strampell, 2022).

From an environmental perspective, given investors' strong interest in climate change issues, the disclosure of new reduction targets for CO_2 emissions and measurement of their effectiveness are employed as variables to examine engagement effects. From a social perspective, with similarly high investor interest, the ratio of woman board members, which is data accessible for target companies, is employed as an effectiveness variable. We interviewed with the four asset managers who provided

engagement data and confirmed that CO2 emissions are a central topic in E-engagements and gender diversity in S-engagements. Furthermore, G-engagement aims to improve shareholder value through governance enhancements and predicts a positive effect on Tobin's Q. Although the effect of ES-engagement on Tobin's Q is indirect, if investors engage in ES-engagement with the ultimate objective of improving shareholder value, a positive effect can be expected.

Hypothesis 3: *Institutional investors' ES-engagement leads to improvements in the environmental and social aspects of engaged companies. In addition, on the assumption that better ESG performance is positively evaluated in the stock market, ESG engagement improves the shareholder value of engaged companies.*

4. Data and Samples

4.1. Engagement Activity Data

This study utilizes detailed data on engagement activities provided by four major institutional investors in Japan in response to our call for engagement data from more than 30 asset managers through various channels such as investor conferences, introduction by a large pension fund, and direct requests by the authors. These four firms are asset managers entrusted with funds from asset owners such as pension funds and insurance companies and include two foreign and two domestic institutions. The foreign firms operate in Japan through local entities and manage several public and private investment trusts that target Japanese stocks. All four firms are actively engaged in

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engagement activities through their Tokyo offices and have shown interest in this study, utilizing engagement activity data.

They have agreed not to disclose any information that identifies the source of the data, such as their names, the engaged companies, or the individuals involved in the engagement. Therefore, in the subsequent analysis, the names of the asset management companies are represented as institutions A, B, C, and D, and no specific reporting is made regarding the detailed characteristics of each asset manager.

The data provided by each institution included the date of the dialogue, counterpart company, and topic categorization of the dialogue. Using this data, variables related to engagement activities were constructed.

First, as variables for scrutinizing the selection criteria for engagement targets, we formulate variables that count the number of engagements undertaken by institutional investor k with firm i in year t. These engagement count variables are defined by engagement categories: Total, ES, E, S, and G. The annual engagement count for each category is employed as an indicator of the intensity of an investor's motive to engage with a particular company with the respective topic.

Second, to assess the impact of engagement, we created variables that represent the cumulative count of engagements involving firm i up to year t. These variables were defined by engagement categories. All engagement count variables used for the effect analysis are created at the firm-year level by aggregating individual engagement counts across investors. Additionally, we define a post-engagement dummy variable equal to one after the first engagement by at least one of the four institutional investors and zero otherwise. Details of the created variables are presented in the Appendix.

Table 1 presents the descriptive statistics of the engagement counts by year and category for all four firms (Panel A) and each institutional investor (Panels B, C, D, and E). Regarding ES-engagements, there were very few records before 2016 and only one company had available data; therefore, the analysis focused solely on the period from 2017 onwards. This was influenced by the introduction of the GPIF's Stewardship Principles in June 2017. They requested asset managers to engage in stewardship activities, including engagement, from a long-term perspective to ensure their effectiveness. Therefore, the ES-engagements examined in this study can be interpreted as activities triggered by exogenous shocks, thereby mitigating endogeneity issue in some degree. This is an important reason for analyzing the effects of institutional investors' initial engagement activities in Japan.

The analysis in this study covers four years, from 2017 to 2020, with 2,832 available engagement records. Table 1 shows that G-engagements account for a significant proportion of all engagements. However, there were 898 ES-engagements, which comprised more than 30% of the entire engagement events in our sample. Furthermore, multiple topics may be addressed in a single engagement activity.

Table 1. Descriptive Statistics of Engagement Activity Data

Panel A. Aggregated Engagement Activity of the four Institutions

Engagement year	All	ES	E	S	G
2017	441 (15.57)	112 (25.4)	81 (18.37)	75 (17.01)	388 (87.98)
2018	806 (28.46)	242 (30.02)	148 (18.36)	158 (19.6)	696 (86.35)
2019	838 (29.59)	258 (30.79)	183 (21.84)	119 (14.2)	734 (87.59)
2020	747 (26.38)	286 (38.29)	214 (28.65)	157 (21.02)	649 (86.88)
total	2832 (100)	898 (31.71)	626 (22.1)	509 (17.97)	2467 (87.11)

Panel B. Engagement Activities of Institution A

Engagement year	all (% within total)	ES (% within all)	E (% within all)	S (% within all)	G (% within all)
2017	110 (16.95)	19 (17.27)	8 (7.27)	18 (16.36)	98 (89.09)
2018	208 (32.05)	21 (10.1)	12 (5.77)	16 (7.69)	203 (97.6)
2019	179 (27.58)	32 (17.88)	24 (13.41)	23 (12.85)	172 (96.09)
2020	152 (23.42)	46 (30.26)	37 (24.34)	35 (23.03)	142 (93.42)
total	649 (100)	118 (18.18)	81 (12.48)	92 (14.18)	615 (94.76)

Panel C. Engagement Activities of Institution B

Engagement year	all (% within total)	ES (% within all)	E (% within all)	S (% within all)	G (% within all)
2017	57 (16.19)	19 (33.33)	19 (33.33)	19 (33.33)	56 (98.25)
2018	75 (21.31)	42 (56)	39 (52)	42 (56)	64 (85.33)
2019	109 (30.97)	44 (40.37)	31 (28.44)	29 (26.61)	108 (99.08)
2020	111 (31.53)	77 (69.37)	57 (51.35)	60 (54.05)	108 (97.3)
total	352 (100)	182 (51.7)	146 (41.48)	150 (42.61)	336 (95.45)

Panel D. Engagement Activities of Institution C

Engagement year	all (% within total)	ES (% within all)	E (% within all)	S (% within all)	G (% within all)
2017	220 (16.18)	63 (28.64)	44 (20)	34 (15.45)	184 (83.64)
2018	379 (27.87)	124 (32.72)	66 (17.41)	72 (19)	308 (81.27)
2019	414 (30.44)	135 (32.61)	91 (21.98)	52 (12.56)	331 (79.95)
2020	347 (25.51)	105 (30.26)	73 (21.04)	41 (11.82)	272 (78.39)
total	1360 (100)	427 (31.4)	274 (20.15)	199 (14.63)	1095 (80.51)

Panel E. Engagement Activities of Institution D

Engagement year	all (% within total)	ES (% within all)	E (% within all)	S (% within all)	G (% within all)
2017	54 (11.46)	11 (20.37)	10 (18.52)	4 (7.41)	50 (92.59)
2018	144 (30.57)	55 (38.19)	31 (21.53)	28 (19.44)	121 (84.03)
2019	136 (28.87)	47 (34.56)	37 (27.21)	15 (11.03)	123 (90.44)
2020	137 (29.09)	58 (42.34)	47 (34.31)	21 (15.33)	127 (92.7)
total	471 (100)	171 (36.31)	125 (26.54)	68 (14.44)	421 (89.38)

4.2. Other Data Sources

We combined data on ownership structure, financials, and governance with engagement activity data. Regarding shareholder structure, we obtained detailed information on institutional investors' ownership from a database provided by IR Japan, a leading shareholder investigation firm in Japan. This dataset not only covers the overall shareholdings of institutional investors but also includes more detailed information on individual investor holdings. The ownership ratio of each asset-managing firm is determined by summing the holdings of the funds managed under the respective institutions and dividing this sum by the total number of outstanding shares. Since the institutional investors' ownership data categorize each fund into distinct investment styles, we calculate the ownership ratios separately for active and passive funds associated with each institutional investor.

To control for the potential effects of other engagement funds, we identify ownership of other socially responsible investment (SRI) funds. The shareholding ratios of SRI funds are calculated by summing investors' holdings whose names contain words related to environmental or social topics. The word list used to create the SRI shareholding ratio is provided in Table A1 in the Appendix.

Financial and governance-related data were obtained from Nikkei NEEDS-Cges provided by Nikkei Media Marketing Inc. and Quick AstraManager by Quick Inc. Both databases were constructed by Nikkei and are widely used in Japan by researchers and practitioners as the most reliable databases in Japan. Environmental and social data were obtained from multiple sources. Greenhouse gas (GHG) emission data were obtained from S&P Trucost.[2] The CO2 emission reduction target data was acquired from the CSR data provided by Toyo Keizai Data Service, specifically the "Medium-Term Plan for CO2 Emissions and Unit Reduction," which included descriptions of CO2 reduction targets beyond the year 2046, thirty years from 2016, the implementation year of the Paris Agreement.[3] The percentage of woman executives was obtained from Nikkei NEEDS-Cges. We also used Bloomberg's ESG disclosure score for environmental and social aspects. In this analysis, we winsorize tangible fixed asset ratio, debt ratio, and SRI fund ownership ratios at 1% level and ROE at 3% level. The variables are described in the Appendix.

4.3. Firm-level Data and Descriptive Statistics

By combining the engagement counts of individual institutional investors with the characteristics of the listed firms, we obtain panel data by firm, year, and investor. Panel A of Table 2 presents the descriptive statistics of the variables used in the analysis of the selection of engagement target firms. After filtering the sample into those with positive

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[2] We use GHG Scope 1 defined as GHG emissions from sources owned or controlled by the company.

[3] The choice of setting the benchmark as 2046 is related to Japan's goal to reduce greenhouse gas emissions by 80% by the year 2050.

institutional ownership and non-missing firm characteristics, we obtained a final sample of 8,538 firm-year investor observations with 1,573 unique firms. The sample sizes for active holdings and passive dummy are larger than those for other variables. This is because, unlike the other variables, which have only one observation per firm-year, these variables have data for each firm-year for all four institutional investors.

In several cases, institutional investors engage in both ES- and G-engagements, making it difficult to distinguish between the factors that promote G-engagement and those that promote ES-engagement. Therefore, to examine the characteristics of companies that receive ES-engagement, particularly among companies that have received engagement on any topic, a subsample is created consisting of companies, years, and institutional investors where engagement occurs, within which we test our hypotheses. This allows us to uncover the specific characteristics of companies that receive ES-engagement, even within a group of companies with governance engagement. This subsample analysis also mitigates biases resulting from institutional investors' portfolio holdings and investors' accessibility to portfolio firm management.

Additionally, to examine the effects of ES-engagement on the target companies, we construct panel data at the firm-year level. We aggregate the shareholding ratios of the four institutional investors to create a total shareholding ratio of the four investors, as if those four are in one group. Panel B of Table 2 presents the descriptive statistics of the variables of the impact of engagement. Regarding the effects of E-engagement, we use long-term goal, which is a dummy variable that equals one if a firm sets a long-term CO_2 reduction goal and zero otherwise, and ln(GHG Intensity), which is the natural log of greenhouse gas emission intensity. The observation sizes of long-term goal and ln(GHG

Intensity) are smaller than the other variables because the former is in the survey database of Toyo Keizai, and the latter is provided by S&P, and both of the sample is limited in a certain extent.

Regarding S-engagement, we utilize the ratio of woman directors (woman director ratio). Gender diversity in the boardroom is relatively new; however, it is an increasingly important agenda for Japanese corporations, and investors indicated that the topic was an issue discussed in social engagements during this period. Three of the four investors joined the investor initiative of 30% Club Japan, which aims to achieve a woman director ratio of 30% by 2030.

Tobin's Q was used as the dependent variable to measure the effect on firm value. The sample of this analysis includes firms that are not held by the four institutional investors. Institutional investors engage with firms even if the data show zero ownership ratio, because the balance of private fund holdings, which are typically delegated by asset owners such as pension funds and insurance companies, is not observed unless they are at least 5%. Consequently, by filtering the sample to include only those with non-missing firm variables, the final sample for the engagement effect analysis includes 9,512 firm-year samples, with a maximum of 2,713 unique firms.

Table 2. Descriptive Statistics of Firm-Level Variables

Variable name	N	Mean	SD	Min	Max	Variable data year
Panel A. Variables in the analysis of engagement selection						
Active Holding	8,538	0.203	0.592	0	8.92	2016-2019
Passive dummy	8,538	0.634	0.482	0	1	2016-2019
Ln(Market Cap)	5,263	24.602	1.703	20.539	30.223	2016-2019
Past 3-year Return	5,263	0.043	0.059	-0.286	0.372	2016-2019
ROE [%]	5,263	8.794	8.076	-28.96	36.155	2016-2019
Cash ratio	5,263	0.195	0.138	0.0005	0.85	2016-2019
PPE ratio	5,263	0.274	0.175	0.002	0.795	2016-2019
Debt ratio	5,263	0.453	0.185	0.077	0.939	2016-2019
SRI ratio	5,263	0.028	0.085	0	1.17	2016-2019
Governance Index	5,263	1.456	1.081	0	4	2016-2019
ESCORE	5,263	17.067	19.807	0	87.285	2016-2019
SSCORE	5,263	12.357	6.416	0	54.716	2016-2019
Panel B. Variables in the analysis of engagement effects						
Long Term Goal	3,381	0.052	0.222	0	1	2018-2020
Log(GHG Intensity)	6,655	-1.692	1.372	-9.544	4.212	2018-2021
Female director ratio [%]	9,506	7.479	7.979	0	55.6	2018-2021
Tobin's Q	9,471	1.469	1.679	0.376	34.881	2018-2021
ABCD ratio [%]	9,512	0.221	0.680	0	9.040	2017-2020
Ln(Market Cap)	9,512	23.823	1.71	19.808	30.223	2017-2020
Past 3-year Return	8,904	0.032	0.069	-0.31	0.372	2017-2020
ROE [%]	9,392	8.62	10.093	-28.957	36.153	2017-2020
Cash ratio	9,512	0.228	0.163	0.0004	0.951	2017-2020
Governance Index	9,512	1.403	1.051	0	4	2017-2020
PPE ratio	9,512	0.254	0.181	0.002	0.793	2017-2020
Debt ratio	9,512	0.46	0.192	0.075	0.939	2017-2020
SRI ratio	9,512	0.027	0.104	0	1.17	2017-2020

Table 2 presents the descriptive statistics for the variables utilized in this analysis. Panel A includes variables for the analysis of engagement selection, whereas Panel B includes variables for the analysis of engagement effects. Column "N" signifies the number of observations, and the column "Variable data year" signifies the period during which the variables were assessed. Active Holding and Passive dummy are variables at the firm-year-investor level, resulting in a larger number of observations compared to firm characteristics, which are firm-year level variables.

5. Empirical Analysis Model and ES-engagement Target Selection Tendency Results

5.1. Empirical Methodology

In this section, we demonstrate the methodology used to examine Hypotheses 1 and 2 and present the results. As described in Section 4.3, this analysis is based on a panel dataset of firm-year institutional investors. We set a lag of one year for the dependent

variable. First, to test Hypothesis 1, we estimate the following Poisson regression model (1):

$$
\begin{aligned}
log\,\lambda_{i,t,k} = {} & \beta_1 MonitoringIncentive_{i,t-1,k} + \beta_2 Performance_{i,t-1} \\
& + \beta_3 CapitalEfficiency_{i,t-1} + \beta_4 GovernanceIndex_{i,t-1} \\
& + \beta_5 ESCORE_{i,t-1} + \beta_6 SSCORE_{i,t-1} + \gamma X_{i,t-1} + \iota_i + \delta_t + \eta_k \quad (1)
\end{aligned}
$$

where i, t and k indices firm, year and institutional investor, respectively. The dependent variable, engagement count, takes the number of engagements conducted in the year t for ES-engagement, E-engagement, S-engagement, and G-engagement respectively.

In the right-hand-side, $MonitoringIncentive_{i,t-1,k}$ includes the holding ratio of active funds of institutional investor k (Active Holding), the dummy variable of passive holding (Passive Dummy), and the natural log of market capitalization (ln(Market Cap)) to investigate whether shareholdings of active funds or portfolio weight of passive funds affect engagement activities (Hypothesis 1). Additionally, we add the following variables to investigate Hypothesis 2: $Performance_{i,t-1}$, which represents the stock return over the past three years (Past 3-year Return); $CapitalEfficiency_{i,t-1}$, which includes the ROE and Cash ratio, governance index, Bloomberg environmental score (ESCORE), and social score (SSCORE). The term $X_{i,t-1}$ includes controls for the tangible fixed asset ratio (PPE ratio), debt ratio, and aggregate shareholding ratio of SRI funds (SRI ratio). All right-hand-side variables are lagged by one year. All specifications are estimated with industry-fixed effects (ι_i), year-fixed effects (δ_t), and institutional investor-fixed effects (η_k), and standard errors are clustered by institutional investors.

Equation (1) is estimated using two sample subsets. First, we use the sub-sample of each institutional investor's portfolio holdings because we assume that each

institutional investor selects target companies from their respective portfolios. Second, we conduct an analysis within the group of companies that received engagements of any kind (referred to as engaged companies) to identify the characteristics of companies that specifically received ES-engagements. Table 3 presents the results of the Poisson regression analysis. Columns (1)–(4) correspond to the subsamples of companies with stock holdings by each institutional investor, while Columns (5)–(7) correspond to the subsamples of engaged companies.

5.2. Monitoring Incentives and ES-engagement Activities

To examine Hypothesis 1, the influence of each investor's motivation on the selection of engagement targets, three explanatory variables of interest are used: active holdings, passive dummy, and passive dummy × ln(Market Cap). Passive investors hold shares of all firms in this benchmark portfolio at an equal ratio. Therefore, the monitoring incentive of passive funds is represented by the interaction term Passive Dummy × ln(Market Cap) rather than the stock-holding ratio. The interaction term captures the strength of the motivation to monitor passive investors based on their respective portfolio weights (Chen, Harford, and Li, 2007).

Columns (1)–(4) in Table 3 show that the active holding ratio has a positive and statistically significant coefficient. This finding is consistent with the prediction that higher active investor ownership increases the likelihood that a portfolio company will become a target of ES-engagement. While the passive dummy shows negative and statistically significant coefficients, the interaction term passive dummy × ln(Market Cap) is positive and statistically significant in columns (1)–(3), where environmental and social

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engagements are employed as dependent variables. Combining these results, passive holding has less incentive to engage; however, if the size of the passively owned firm is larger, the incentive for ES-engagement increases. Additionally, considering that a apparently lower ES-engagement record is available for the period before 2017, shareholding by funds does not provide sufficient motivation to engage; however, strong incentives from influential asset owners are essential.

5.3. Corporate Characteristics and ES-engagement Activities

Regarding Hypothesis 2, companies that receive ES-engagements are predicted to have superior performance and capital efficiency. Thus, we expect that the past 3-year stock returns and ROE have a positive effect on ES-engagements. Additionally, in listed companies with access to diverse capital-raising alternatives, holding excessive cash is considered detrimental to capital efficiency because of the free cash flow problem (Jensen, 1986; Harford, 1999). Thus, companies with relatively low cash ratios are considered to have higher capital efficiency. Consequently, after controlling for debt ratios, institutional investors are predicted to engage in ES activities with companies that have lower cash ratios.

The results of Hypothesis 2 are presented in Table 3. Regarding corporate performance, the past 3-year returns do not show statistically significant results. However, the coefficient for ROE is positive and statistically significant in columns (1), (3), and (4), which align with the expected direction. Additionally, the cash ratio is negative and statistically significant in columns (2) and (6). These results suggest that companies with

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higher ROE are more likely to receive S-engagements and companies with lower cash ratios are more likely to receive E-engagements.

Subsequently, we summarize the results of the relationship between the corporate governance of portfolio companies and institutional investors' ES-engagement activities. Owing to the various intercorrelated variables related to governance and environmental-social information disclosure, we prepared an integrated variable for corporate governance and disclosure status. Specifically, dummy variables were created for the following: (1) a dummy variable equal to one if the independent outside director ratio falls within the top two quartiles; (2) a dummy variable equal to one if there are woman directors; (3) a dummy variable equal to one if stock options are adopted; and (4) a dummy variable equal to one if a corporate integrated report is prepared. The sum of these four dummy variables is used to create the Governance and Disclosure Index, where a higher value indicates better governance and information disclosure by the portfolio company. Hypothesis 2 expects the governance and disclosure indices regarding ES engagement to be positive.

The coefficients are positive and statistically significant in Columns (1)–(7). The results indicate that institutional investors engage in ES-engagements with companies that excel in governance and information disclosure, including ES aspects. Furthermore, even in Models (5)–(7), in which all targeted firms are analyzed, significant positive results are obtained. This suggests that companies receiving ES-engagements are relatively superior concerning governance and information disclosure compared to those receiving G-engagements, which is consistent with H2.

As a robustness check, we conduct a logit regression in which the dependent variables are not the number of engagements in the year but the E- or S-engagement dummy; however, the explanatory variables are the same as in Table 3. Although we do not show the table, the results are essentially the same. However, the passive dummy variable becomes insignificant for G-engagement. Thus, the results in Table 3 regarding E- or S-engagement are robust, even without considering the engagement intensities.

These results indicate that institutional investors engage in ES-engagements with companies that exhibit good capital efficiency (high ROE and low cash holdings) and strong governance structures and information disclosures. These findings are consistent with H2. However, while the results are predominantly consistent with the hypothesis, some results, such as ROE for E-engagement, cash holdings for S-engagement, and previous stock returns, are inconclusive.[4]

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[4] Krueger et al. (2019) revealed, through survey research, that many institutional investors believe climate change risks have financial implications for their portfolio companies. Given that companies with high CO2 emissions are considered to have significant climate change risks, institutional investors may engage with these companies through E-engagements. However, the analysis did not yield results indicating that E-engagements are specifically conducted with companies that have relatively higher CO2 emissions.

Table 3. Engagement Activities and Determinants

	Dependent variable:						
	Number of Engagement						
Sample Type:	Portfolio firms				Engaged firms		
Engagement Type:	ES	E	S	G	ES	E	S
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Active Holding	0.445***	0.401***	0.476***	0.503***	0.150**	0.184***	0.115
	(0.029)	(0.029)	(0.048)	(0.160)	(0.072)	(0.050)	(0.205)
Passive Dummy	-3.880**	-4.090**	-2.910	-4.410	-2.370*	-1.170	-3.600**
	(1.890)	(1.670)	(1.840)	(2.780)	(1.220)	(2.230)	(1.430)
Passive Dummy × Ln(Market Cap)	0.126*	0.129**	0.079	0.135	0.095**	0.054	0.133***
	(0.068)	(0.060)	(0.061)	(0.111)	(0.038)	(0.076)	(0.041)
Ln(Market Cap)	0.500***	0.490***	0.528***	0.429***	0.150***	0.136***	0.171***
	(0.084)	(0.082)	(0.109)	(0.067)	(0.022)	(0.031)	(0.055)
Past 3-year Return	1.450	1.080	2.300	1.300	1.040	0.478	1.900
	(1.260)	(0.793)	(2.160)	(1.040)	(1.460)	(1.260)	(2.540)
ROE	0.015***	0.010	0.018***	0.012***	0.0009	0.001	0.003
	(0.002)	(0.008)	(0.003)	(0.002)	(0.006)	(0.007)	(0.008)
Governance Index	0.097***	0.070*	0.101**	0.032*	0.130***	0.133***	0.112*
	(0.029)	(0.038)	(0.045)	(0.020)	(0.028)	(0.042)	(0.060)
ESCORE	0.012***	0.012***	0.013**	0.006*	0.007	0.008*	0.005
	(0.004)	(0.004)	(0.006)	(0.003)	(0.005)	(0.004)	(0.006)
SSCORE	0.017*	0.011	0.018	0.004	0.009	$6.82×10^{-5}$	0.013
	(0.009)	(0.012)	(0.011)	(0.008)	(0.013)	(0.014)	(0.017)
Cash ratio	-0.493	-1.740*	0.026	0.104	-0.061	-1.970***	1.560*
	(0.758)	(0.964)	(1.370)	(0.398)	(0.171)	(0.393)	(0.814)
PPE ratio	-0.755	-0.545	-1.080	-0.423	-0.216**	-0.347	0.314
	(0.762)	(0.525)	(0.719)	(0.372)	(0.110)	(0.551)	(0.319)
Debt ratio	-0.108	-0.683*	-0.072	-0.533	0.094	-0.980***	0.565***
	(0.475)	(0.398)	(0.743)	(0.473)	(0.331)	(0.177)	(0.115)
SRI ratio	-0.017	-0.314*	0.018	-0.326	-0.156	-0.473	0.427
	(0.553)	(0.161)	(1.03)	(0.294)	(0.222)	(0.402)	(0.345)
Year FE:	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE:	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fund FE:	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R-squared	0.273	0.272	0.225	0.197	0.211	0.228	0.195
Observations	8,494	8,494	8,399	8,519	1,213	1,213	1,138

Table 3 presents the Poisson regression results for the engagement selection equation (1). Subsamples for Columns (1)–(4) consisted of firm-year observations where at least one institutional investor held the stock, and subsamples for Columns (5)–(7) consisted of firm-year observations where ESG engagement was received in the past or current year. Standard errors are in parentheses and clustered by institutional investor. ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

5.4. Firm Characteristics and the Selection of ES-engagement Targets by Active

   Managers

Active investors that select individual stocks to invest in consider the specific factors of each company with stronger motivation than passive investors that cannot engage in stock selection. As institutional ownership in the previous section includes stock holdings by both active and passive investors, this could be a potential reason why some of the results related to the company's financial performance in the previous section are inconsistent with Hypothesis 2. Therefore, we conduct an additional analysis by separating institutional investors into active and passive investors to examine the selection of ES-engagement targets.

Regarding the analysis, the regression model used in the previous section is employed and augmented with the interaction terms between the active investor ownership ratio and the company's financial characteristics and performance. These interaction terms are included to examine the additional focus on engagement target selection by active investors. Given that active investors have a higher level of interest in the performance of individual companies compared to passive investors, the expected interaction terms are positive for the past 3-year returns and ROE and negative for cash ratio. The results are presented in Table 4.

First, active holding shows positive and statistically significant results in Models (1)–(6), while the passive dummy has a negative coefficient in Model (2) for E-engagement and Model (5) for ES-engagement. The results indicate that ES-engagement is dominated by the predicted motivation for active investors. These results are consistent with the free-rider problem of passive investors.

Regarding the relationship between the past 3-year returns of active investors' invested companies and ESG engagements, when focusing on the interaction term Active

Holding × Past 3-year Return, no statistical significance is observed concerning E-engagements. However, Column (4) shows negative and statistically significant effects on G-engagements, whereas Column (7) shows positive and statistically significant effects on S-engagements. This suggests that G-engagements by active investors are more likely to target poorly performing firms in the stock market, whereas S-engagements are more likely to be conducted by active investors of companies with better stock market performance. This shows a significant difference between the selection of target firms for G- and S-engagement through active funds.

The interaction term Active Holding × ROE is statistically significant and positive in columns (1), (2), (3), (5), and (6) for ES-engagement, whereas model (4) indicates negative and statistically significant effects on G-engagement. This implies that compared to G-engagement, E- and S-engagement are more likely to be conducted by active investors of companies with higher ROE as their holdings increase. These results differ from those presented in Table 3. This indicates the importance of separating the engagement motivations of active and passive investors.

The coefficients of the interaction term of active holdings and cash ratio are negative and statistically significant in all columns. This suggests that, as the holding ratio of active investors increases, there is a stronger tendency to select companies with lower cash ratios as engagement targets. Similar negative and significant results are obtained in Columns (5)–(7). Therefore, it becomes evident that, compared to G-engagement, ES-engagement tends to select companies with lower cash ratios, and this tendency strengthens as the holding ratio of active investors increases.

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Finally, the coefficients of the interaction term of active holdings and Governance Index are positive and statistically significant in all Column (2), (3), (6), and (7). This suggests that, as the holding ratio of active investors increases, there is a stronger tendency to select companies with better governance condition as environment and social engagement targets.

To summarize, it is evident that institutional investors with a higher holding ratio for active funds tend to select companies with higher past 3-year returns, better capital efficiency (higher ROE and lower cash ratio), and better governance condition for ES-engagement targets. This confirms that Hypothesis 2 is supported concerning active funds but is ambiguous concerning passive funds.

Table 4. Relationship between Active Funds and ES-engagement

	Dependent variable:						
	Number of Engagement						
Sample Type:	Portfolio firms				Engaged firms		
Engagement type:	ES	E	S	G	ES	E	S
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Active Holding	0.499***	0.724***	0.559***	1.083***	0.161	0.517***	0.086
	(0.193)	(0.273)	(0.099)	(0.196)	(0.143)	(0.178)	(0.338)
Active Holding × Past 3-year Return	-1.241	-0.1277	-1.228	-2.319**	-0.519	0.714	1.082***
	(0.983)	(1.233)	(0.966)	(0.902)	(1.609)	(2.688)	(0.121)
Active Holding × ROE	0.018***	0.012***	0.017***	-0.021*	0.045**	0.048**	0.038
	(0.004)	(0.004)	(0.003)	(0.011)	(0.022)	(0.020)	(0.027)
Active Holding × Cash ratio	-1.316***	-2.672***	-1.502***	-0.969**	-2.254***	-5.156**	-2.700***
	(0.318)	(0.246)	(0.290)	(0.417)	(0.633)	(2.079)	(0.887)
Active Holding × Governance Index	0.094**	0.087**	0.118*	0.039***	0.060	0.095**	0.103**
	(0.043)	(0.041)	(0.064)	(0.013)	(0.048)	(0.048)	(0.041)
Passive Dummy	-3.837*	-3.958**	-2.837	-4.372	-2.775**	-1.941	-4.239***
	(2.019)	(1.811)	(1.931)	(2.858)	(1.209)	(2.100)	(1.614)
Passive Dummy × Ln(Market Cap)	0.124*	0.125*	0.076	0.136	0.110***	0.083	0.158***
	(0.073)	(0.066)	(0.063)	(0.113)	(0.039)	(0.073)	(0.049)
Ln(Market Cap)	0.515***	0.514***	0.548***	0.426***	0.148***	0.128***	0.167***
	(0.083)	(0.078)	(0.097)	(0.068)	(0.019)	(0.031)	(0.052)
Past 3-year Return	1.636	0.871	2.479	1.921***	0.893	-0.038	1.318
	(1.489)	(1.058)	(2.473)	(0.554)	(1.667)	(1.762)	(2.430)
ROE	0.011***	0.007	0.013***	0.018***	-0.005	-0.006	-0.001
	(0.002)	(0.008)	(0.003)	(0.005)	(0.009)	(0.009)	(0.006)
Cash ratio	-0.222	-1.160**	0.465	0.409**	0.148	-1.442***	1.87**
	(0.623)	(0.538)	(1.184)	(0.192)	(0.224)	(0.233)	(0.740)
Governance Index	0.072**	0.044*	0.062	0.030	0.117***	0.111***	0.083*
	(0.034)	(0.026)	(0.052)	(0.024)	(0.019)	(0.025)	(0.044)
ESCORE	0.011***	0.012***	0.012**	0.007*	0.007	0.008*	0.005
	(0.003)	(0.004)	(0.005)	(0.004)	(0.005)	(0.004)	(0.006)
SSCORE	0.018**	0.013	0.021**	0.002	0.009	0.001	0.014
	(0.008)	(0.011)	(0.011)	(0.009)	(0.014)	(0.016)	(0.016)
PPE ratio	-0.681	-0.456	-0.949	-0.378	-0.298*	-0.482	0.287
	(0.716)	(0.428)	(0.682)	(0.352)	(0.153)	(0.670)	(0.333)
Debt ratio	-0.117	-0.713*	-0.082	-0.411	0.027	-1.10***	0.472***
	(0.440)	(0.386)	(0.696)	(0.368)	(0.360)	(0.226)	(0.114)
SRI ratio	-0.010	-0.346**	0.152	0.070	-0.184	-0.558	0.453
	(0.567)	(0.162)	(1.032)	(0.138)	(0.245)	(0.479)	(0.297)
Year FE:	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE:	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fund FE:	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R-squared	0.276	0.276	0.229	0.202	0.217	0.259	0.181
Observations	8,494	8,494	8,399	8,519	1,213	1,213	1,138

Table 4 presents the Poisson regression results for the engagement selection equation (1). Subsamples for Columns (1)–(4) consisted of firm-year observations where at least one institutional investor holds the stock, and subsamples for Columns (5)–(7) consisted of firm-year observations where ESG engagement was received in the past or current year. Standard errors are in parentheses and clustered by institutional investor. ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

6. Empirical Analysis of ES-engagement Effects

6.1. Analysis of Engagement Effects

This section examines Hypothesis 3, regarding the effectiveness of institutional investors' ES-engagement. The analysis is conducted at the portfolio firm-year level, as explained in Section 4.3, using a panel dataset in which the engagement variables are aggregated across four institutional investors. We estimate the following specifications:

$$Outcome\ variable_{i,t} = \beta_1 post\ engagements_{i,t-1} + \gamma X_{i,t-1} + \delta_t + \alpha_i + \varepsilon_{i,t} \quad (2)$$

where i and t represent the firm and year, respectively. $Post\ Engagements_{i,t-1}$ is a dummy variable that equals to one for the period after the first engagement by one of the four institutional investors. We include control variables ($X_{i,t-1}$), which are the same variables used in Table 3, as well as year and firm-fixed effects. This analysis can be interpreted as an event study difference-in-differences (DID) analysis in which treatment timings differ across firms. Additionally, we construct a variable representing the cumulative number of engagements for each category. To identify the pure effects of E-, S-, or G-engagement, we exclude combinations of different types of engagements. [5] Consequently, we employ variables of post-pure E-/S-/G-engagement.

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[5] Post-E-engagement dummy takes a value of one in the period after E-engagement without G-engagement, and post-S-engagement dummy takes a value of one in the period after S-engagement without G-engagement. Post-G-engagement dummy takes a value of one in the period after G-engagement without E- and S-engagement.

The dependent variables are the long-term goal and ln(GHG Intensity) for E-engagement, and the ratio of woman directors (Woman Director Ratio) for S-engagement, as explained in Section 4. Additionally, to examine the effects of engagement on firm value, we analyzed the effects on Tobin's Q.

The control variables are the same as those listed in Table 3. In the analysis with Tobin's Q as the dependent variable, the past 3-year return and return on equity (ROE), which are closely related to performance, are excluded from the control variables.

The engagement data used is from 2017 to 2020, spanning four years. However, regarding the presence of long-term CO_2 emission reduction targets, the analysis is conducted using a three-year period, from 2017 to 2019, which aligned with the available data.

Table 5 presents the results of the effects of E-engagements on setting long-term CO_2 emission reduction targets and GHG emission intensity. In Table 5, post-E-engagement shows a positive and statistically significant effect on the likelihood of setting long-term CO_2 emission reduction targets and a negative and statistically significant effect on GHG emission intensity. Conversely, no statistically significant effects are observed for post-G-engagement. These results indicate that the setting of long-term CO_2 emissions reduction targets and the reduction of CO_2 emissions occur only after E-engagements, and G-engagements do not have any significant impact on either. Therefore, E-engagements are suggested to affect both the short- and long-term reduction of a company's GHG emissions. These results are consistent with Hypothesis 3.

Table 5. The Effect of E-engagement on Target Companies

	Dependent variable:						
Variable type:	Long Term Goal				Ln(GHG Intensity)		
	Dummy		Cumulative		Dummy		Cumul
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Post Pure E Engagement	0.074***		0.028***		-0.068*		-0.044**
	(0.026)		(0.011)		(0.039)		(0.020)
Post Pure G Engagement		-0.021		-0.001		0.030	
		(0.014)		(0.006)		(0.022)	
ABCD ratio	0.007	0.008	0.008	0.006	-0.002	-0.003	-0.003
	(0.008)	(0.009)	(0.008)	(0.009)	(0.013)	(0.013)	(0.013)
Ln(Market Cap)	-0.017	-0.016	-0.016	-0.016	-0.048*	-0.049*	-0.049*
	(0.015)	(0.015)	(0.015)	(0.015)	(0.027)	(0.027)	(0.027)
Past 3-year Return	-0.052	-0.049	-0.054	-0.047	-0.096	-0.098	-0.096
	(0.075)	(0.075)	(0.075)	(0.074)	(0.111)	(0.111)	(0.111)
ROE	-0.0001	-0.0001	-0.0002	-0.0001	0.001	0.001	0.001
	(0.0005)	(0.0005)	(0.0005)	(0.0005)	(0.001)	(0.001)	(0.001)
Cash ratio	-0.051	-0.081	-0.060	-0.080	0.178	0.188	0.175
	(0.087)	(0.088)	(0.087)	(0.088)	(0.133)	(0.133)	(0.132)
Governance Index	0.004	0.006	0.005	0.006	-0.020*	-0.020*	-0.019
	(0.008)	(0.008)	(0.008)	(0.009)	(0.012)	(0.012)	(0.012)
PPE ratio	-0.176	-0.167	-0.15	-0.169	0.433*	0.431*	0.422
	(0.141)	(0.142)	(0.142)	(0.142)	(0.260)	(0.260)	(0.260)
Debt ratio	-0.157*	-0.155*	-0.164*	-0.160*	0.008	0.008	0.012
	(0.086)	(0.086)	(0.087)	(0.087)	(0.138)	(0.138)	(0.138)
SRI ratio	0.061	0.068	0.049	0.069	-0.006	-0.011	0.005
	(0.054)	(0.054)	(0.053)	(0.053)	(0.044)	(0.043)	(0.045)
ESCORE	0.002*	0.002*	0.002*	0.002*	-0.003	-0.003	-0.003
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)
SSCORE	0.003	0.003	0.002	0.003	-0.001	-0.002	-0.001
	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R-squared	0.702	0.699	0.702	0.699	0.945	0.945	0.945
Observations	2,863	2,863	2,863	2,863	5,946	5,946	5,946

Table 5 presents the regression analysis results of studying the effects of E-engagements on target firms' behavior. The dependent variables are "Long Term Goal" in Column (1)–(4) and "Ln(GHG Intensity)" in Column (5)–(8). Explanatory variables are "Post E-Engagement" in odd-numbered columns and "Post G-Engagement" in even-numbered columns. The "Variable type" row represents the type of engagement variables: *Dummy* represents the engagement variable equal to one after the first engagement, and *Cumulative* represents the engagement variable counting the cumulative numbers of engagements. Control variables include ABCD ratio, Ln(Market Cap), past 3-year return, ROE, Cash ratio, Governance Index, PPE ratio, Debt ratio, and SRI ratio. All specifications include firm and year-fixed effects. Standard errors are in parentheses and clustered by firm. ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 6. The Effect of S-engagement on Target Companies

Variable type:	Dependent variable:			
	Woman Director Ratio			
	Dummy		Cumulative	
	(1)	(2)	(3)	(4)
Post Pure S Engagement	0.899**		0.346**	
	(0.382)		(0.154)	
Post Pure G Engagement		0.256		0.155*
		(0.237)		(0.081)
ABCD ratio	-0.115	-0.124	-0.116	-0.12
	(0.145)	(0.145)	(0.145)	(0.144)
Ln(Market Cap)	0.738***	0.764***	0.748***	0.761***
	(0.253)	(0.254)	(0.253)	(0.253)
Past 3-year Return	-3.792***	-3.861***	-3.780**	-3.850***
	(1.467)	(1.467)	(1.467)	(1.466)
ROE	0.007	0.007	0.007	0.008
	(0.010)	(0.010)	(0.010)	(0.010)
Cash ratio	3.204**	3.160*	3.223**	3.161*
	(1.621)	(1.625)	(1.622)	(1.625)
Governance Index	0.008	0.026	0.02	0.02
	(0.117)	(0.117)	(0.117)	(0.117)
PPE ratio	0.201	0.34	0.275	0.294
	(2.491)	(2.483)	(2.490)	(2.482)
Debt ratio	2.821*	2.871*	2.863*	2.859*
	(1.712)	(1.713)	(1.712)	(1.713)
SRI ratio	0.646	0.82	0.581	0.812
	(0.717)	(0.720)	(0.721)	(0.720)
ESCORE	0.028*	0.029*	0.029*	0.028*
	(0.015)	(0.015)	(0.015)	(0.015)
SSCORE	0.021	0.029	0.021	0.027
	(0.040)	(0.040)	(0.040)	(0.039)
Firm FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Adjusted R-squared	0.790	0.790	0.790	0.790
Observations	7,203	7,203	7,203	7,203

Table 6 presents the regression analysis results of studying the effects of S-engagements on target firms' behavior. The dependent variable is "Woman Director Ratio." Explanatory variables are "Post S-engagement" in odd-numbered columns and "Post G-Engagement" in even-numbered columns. The "Variable type" row represents the type of engagement variables: *Dummy* represents the engagement variable equal to one after the first engagement, and *Cumulative* represents the engagement variable counting the cumulative numbers of engagements. Control variables include ABCD ratio, Ln(Market Cap), past 3-year return, ROE, Cash ratio, Governance Index, PPE ratio, Debt ratio, and SRI ratio. All specifications include firm and year-fixed effects. Standard errors are in parentheses and clustered by firm. ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

We examined the effects of S-engagement on board gender diversity. As shown in Table 6, post-S-engagement has a positive and statistically significant effect. In addition, post-G-engagement has a positive and statistically significant effect. These results suggest that both S- and G-engagements contribute to improving the representation of women in engaged companies. We treat the ratio of woman directors as a social indicator to examine the effects of engagement. However, it is worth noting that woman board members can also be considered as a topic within governance engagements to enhance the board (Adams and Ferreira, 2009; Adams, 2016). These results are consistent with reality, considering the various aspects in which woman board members are involved in engagement activities.

Finally, we examined the effects of engagement on firm value. While the dummy variable for post-G-engagement shows no statistically significant effect on Tobin's Q, the cumulative version shows a positive and statistically significant effect in Column (4), although it is only significant at the 10% level. These results suggest that the intensity of G-engagement has a positive effect on shareholder value. Furthermore, although the coefficients are positive, we do not observe statistically significant effects from E- and S-engagement. Therefore, the results show that only enhanced G-engagements improve the target companies' Tobin's Q, and while E- and S-engagements do not increase shareholder value, it is not against shareholder value.

Based on these results, E-engagements promote the reduction of CO_2 emissions in target companies, while S- and G-engagements improve the gender diversity of corporate boards. Additionally, only accumulated G-engagement has a weak but positive impact on Tobin's Q. These findings support Hypothesis 3, which suggests that engagement activities directly improve the specific indicators targeted by each engagement type. This result suggests that, although ES-engagements may encourage companies to consider environmental and social factors, ultimately improving shareholder value, their effects may not be immediately evident in the short term.

Although we did not find a positive effect on shareholder value from E- and S-engagements, we also did not find a negative effect. Therefore, E- and S-engagements are not against the fiduciary duty of asset managers toward asset owners if the engagement cost, which we do not observe, is not material.

Table 7. The Effect of Engagement on Target Companies' Tobin's Q

Variable type:	Dependent variable:					
	Tobin's Q					
	Dummy			Cumulative		
	(1)	(2)	(3)	(4)	(5)	(6)
Post G Engagement	0.032			0.013*		
	(0.029)			(0.007)		
Post Pure E Engagement		0.129			0.097	
		(0.092)			(0.099)	
Post Pure S Engagement			-0.017			0.072
			(0.064)			(0.052)
ABCD ratio	-0.012	-0.011	-0.011	-0.011	-0.012	-0.011
	(0.026)	(0.026)	(0.026)	(0.026)	(0.026)	(0.026)
Ln(Market Cap)	-0.214***	-0.214***	-0.213***	-0.214***	-0.214***	-0.214***
	(0.069)	(0.069)	(0.069)	(0.069)	(0.069)	(0.069)
Cash ratio	-0.366	-0.363	-0.367	-0.358	-0.363	-0.366
	(0.364)	(0.364)	(0.364)	(0.364)	(0.364)	(0.364)
Governance Index	-0.007	-0.006	-0.006	-0.008	-0.006	-0.006
	(0.019)	(0.019)	(0.019)	(0.019)	(0.019)	(0.019)
PPE ratio	0.122	0.122	0.124	0.117	0.123	0.123
	(0.328)	(0.328)	(0.328)	(0.328)	(0.328)	(0.328)
Debt ratio	-0.189	-0.185	-0.187	-0.190	-0.186	-0.185
	(0.310)	(0.310)	(0.310)	(0.310)	(0.310)	(0.310)
SRI ratio	-0.027	-0.023	-0.023	-0.048	-0.023	-0.026
	(0.084)	(0.084)	(0.084)	(0.084)	(0.084)	(0.084)
ESCORE	-0.0003	-0.0002	-0.0003	-0.001	-0.0002	-0.0003
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
SSCORE	-0.005	-0.005	-0.005	-0.006	-0.005	-0.005
	(0.007)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R-squared	0.856	0.856	0.856	0.856	0.856	0.856
Observations	7,538	7,538	7,538	7,538	7,538	7,538

Table 7 presents the regression analysis results studying the effects of ESG engagements on target firms' Tobin's Q. The dependent variable is Tobin's Q. Explanatory variables are post-G-engagement in Columns (1) and (4), post-E-engagement in Columns (2) and (5), and post-S-engagement in Columns (3) and (6). The "Variable type" row represents the type of engagement variables: *Dummy* represents the engagement variable equal to one after the first engagement, and *Cumulative* represents the engagement variable counting the cumulative numbers of engagements. Control variables include ABCD ratio, Ln(Market Cap), Cash ratio, Governance Index, PPE ratio, Debt ratio, and SRI ratio. All specifications include firm and year-fixed effects. Standard errors are in parentheses and clustered by firm. ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

6.2. Robustness test

Recent studies, such as Sun and Abraham (2021), emphasize potential concerns with staggered treatment adoption, where units are treated at different times and there may or may not be never-treated units. The main results in Tables 5–7 highlight the potential issue of using two-way fixed effects models in settings with staggered treatment adoption. As a robustness check of our main results in Tables 5–7, we employed an event study design, as suggested by Sun and Abraham (2021), which considers potential issues. The results are presented in Table 8. In Table 8, the reference year is the year before the first engagement (Year -1).

The results show that the reduction in GHG emissions in the post-E-engagement period and the increased gender diversity of the boards of target firms in the post-S-engagement period are robust. Additionally, although we observe a positive and significant effect on the presence of long-term CO_2 emissions reduction targets in the post-period (Year 0 and Year +1), we also observe negative effects in Year -2, which indicates that there is some trend in the year before investors' first engagement. However, because we do not observe trends in Year -3, which indicates that the trend in pre-event years is unclear, we still interpret that engagements likely promote the adoption of long-term CO_2 emissions reduction targets. In particular, if investors select E-engagement

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targets from firms that are slow to set their long-term goals relative to their peer firms, we observe the results shown in model (1).

Finally, G-engagement does not show a statistically significant effect on Tobin's Q, similar to the results in Column (1) of Table 7. The results also suggest that the intensity of the G-engagement is related to Tobin's Q.

Table 8. Event Study DID for Effects of ESG Engagements

Event	Long-Term Goal	log(GHG Intensity)	WomanDirector Ratio	Tobin's Q
	E-engagement	E-engagement	S-engagement	G-engagement
	(1)	(2)	(3)	(4)
		Dependent variable:		
Year = -3		0.063	-0.296	-0.135
		(0.151)	(0.792)	(0.130)
Year = -2	-0.082*	0.095	-0.148	-0.105*
	(0.043)	(0.082)	(0.464)	(0.064)
Year = 0	0.039*	-0.048	0.891***	-0.03
	(0.022)	(0.038)	(0.324)	(0.038)
Year = 1	0.129**	-0.112**	0.532	-0.005
	(0.050)	(0.051)	(0.523)	(0.036)
Year = 2		-0.080*	0.811	0.015
		(0.042)	(0.638)	(0.040)
Control variables	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Adjusted R-square	0.704	0.945	0.790	0.856
Observations	2,862	5,945	7,202	7,537

Table 8 presents the event study DID analysis results for the effect of engagements on target firms' engagement behavior, following the methodology of Sun and Abraham (2021). Control variables are the same as those in Tables 5–7. All specifications include firm and year-fixed effects. Standard errors are in parentheses and clustered by firm. ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

7. Conclusion and Implications

This study analyzes the engagement activities of four large asset managers in Japan, focusing on which companies engage in ES issues and the impact of such engagements on their ES aspects. Our results reveal several important findings. First, institutional investors engage with companies with high monitoring incentives such as those with high ownership ratios or portfolio weights. This result indicates that engagement is costly and requires corresponding economic motivation. These results are consistent with McCahery et al.'s (2016) and Iliev et al.'s (2021) findings. In Japan, the

GPIF's encouragement of asset managers toward responsible investment, including sustainability, has been essential for asset managers to conduct engagements.

Furthermore, institutional investors engage with companies that demonstrate superior capital efficiency and excel in governance and environmental and social information disclosure. Institutional investors prioritize capital efficiency over environmental and social indicators and are likely to select companies with excellent capital efficiency as ES-engagement targets. This finding contrasts with the results of Hidaka et al. (2023), who suggested that governance engagement is directed towards companies with high cash ratios. This emphasizes the differences in the target selection criteria between ES-engagement and governance engagement.

Moreover, institutional investors are presumed to engage in ES-engagements with companies with well-established governance structures and disclosure attitudes. This indicates that ES-engagements are costly and asset managers select targets that are well-prepared for dialogue with investors concerning ES aspects.

Additionally, portfolio companies with higher ownership ratios of active funds are more likely to engage in ES issues if they have higher prior stock returns and ROE and lower cash ratios. Compared to other investors, active investors emphasize investment returns and capital efficiency that affect them. Therefore, when the ownership ratio of active investors is high, there is a stronger tendency to engage with companies that had favorable stock performance in the past and no issues with their capital efficiency.

These results suggest that institutional investors prioritize their investments and place particular importance on financially relevant aspects that are highly correlated with returns. The result is consistent with results from field study reported by Krueger et al.

(2020). Institutional investors engage in ES activities to further improve the corporate value of companies that do not have financial issues. This implication is supported by a stronger emphasis on the financial aspects, particularly on active investors that prioritize investment returns. Furthermore, engagement with companies that excel in governance and environmental and social disclosures suggests that they select companies with a high potential for improvement as ES-engagement targets.

In the analysis of the effects of engagement, E-engagement resulted in the establishment of long-term CO_2 emissions reduction targets for target companies and in the reduction of CO_2 emissions. S- and G-engagement increased the woman board representation of the target companies, and accumulated G-engagement led to an improvement in Tobin's Q. Although no positive effect of ES engagement is observed on Tobin's Q, ES engagement is not against shareholder value.

Regarding this study's contribution, we focus on the ES-engagement of active and passive investors and clarify their selection tendencies and effects. Since institutional investors' engagement activities are predominantly conducted confidentially, it is difficult to observe them externally, resulting in limited prior research. This study reveals the direct positive effects of ES-engagement on the environmental and social aspects of target firms. Additionally, this study shows that active investors engage more aggressively than passive investors. Thus, an increase in the number and volume of active investors in a market is beneficial for the improvement in corporate social responsibility of the portfolio firms.

However, this study has some limitations. The analysis period is short, and it is challenging to capture the engagement effects, particularly on shareholder value. The

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effects of environmental and social indicator improvements are expected to increase gradually over a longer period. Therefore, future studies should use long-term data for a more detailed analysis of these effects.

References

Abhayawansa, S.; and S. Tyagi. "Sustainable investing: The black box of environmental, social and governance (ESG) ratings." *Journal of Wealth Management*, 24 (2021), 49–54.

Adams, R. B. "Women on boards: The superheroes of tomorrow?" *The Leadership Quarterly,* 27 (2016), 371–386.

Adams, R. B.; and D. Ferreira. "Women in the boardroom and their impact on governance and performance." *Journal of Financial Economics,* 94 (2009), 291–309.

Aghion, P.; J. V. Reenen; and L. Zingales. "Innovation and Institutional Ownership." *American Economic Review*, 103 (2013), 277–304.

Appel, I. R.; T. A. Gormley; and D. B. Keim. "Passive investors, not passive owners." *Journal of Financial Economics*, 121 (2016), 111–141.

Azar, J.; M. Duro; I. Kadach; and G. Ormazabal. "The Big Three and corporate carbon emissions around the world." *Journal of Financial Economics*, 142 (2021), 674–696.

Barko, T.; M. Cremers; and L. Renneboog. "Shareholder Engagement on Environmental, Social, and Governance Performance." *Journal of Business Ethics*, 180 (2022), 777–812.

Becht, M.; J. R. Franks; and H. F. Wagner. "Corporate Governance Through Voice and Exit." Working Paper, ECGI (2019). Available at SSRN: https://ssrn.com/abstract=3456626

Becht, M.; J. R. Franks; H. Miyajima; and K. Suzuki. "Does paying passive managers to engage improve ESG performance." Working Paper, ECGI (2023).

Bonacchi, M.; A. Klein; S. Longo; and G. Strampell. "The Effects of Credible Voluntary Disclosures: Institutional Investor Engagement and Investees' ESG Performances." Working paper, ECGI (2022). Available at SSRN: http://ssrn.com/abstract=4011957

Broccardo, E.; O. Hart; and L. Zingales. "Exit vs. Voice." Working Paper, ECGI (2021). Available at SSRN: https://ssrn.com/abstract=3671918

Carleton, W. T.; J. M. Nelson; and M. S. Weisbach. „The Influence of Institutions on Corporate Governance through Private Negotiations: Evidence from TIAA-CREF." *Journal of finance*, 53 (1998), 1335–1362.

Ceccarelli, M.; S. Glossner; M. Homanen; and D. Schmidt. "Which institutional investors drive corporate sustainability?" Working Paper (2021). Available at SSRN: https://ssrn.com/abstract=3988058

Chen, X.; J. Harford; and K. Li. "Monitoring: Which institutions matter?" *Journal of Financial Economics,* 86 (2007), 279–305.

Dimson, E.; O. Karakas; and X. Li. "Active ownership." *Review of Financial Studies*, 12 (2015), 3225–3268.

Dimson, E.; O. Karakas; and X. Li. "Coordinated Engagements." Working Paper, ECGI (2023). Available at SSRN: http://ssrn.com/abstract=3209072

Dyck, A.; K. V. Lins; L. Roth; and H. F. Wagner. "Do institutional investors drive corporate social responsibility? International evidence." *Journal of Financial Economics*, 131 (2018), 693–714.

Ekholm, A.; and B. Maury. "Portfolio Concentration and Firm Performance." *Journal of Financial and Quantitative Analysis*, 49 (2014), 903–931.

Fulton, M.; B. Kahn; and C. Sharples. "Sustainable Investing: Establishing Long-Term Value and Performance." Working paper (2012). Available at SSRN: https://ssrn.com/abstract=2222740

Gibson Brandon, R.; S. Glossner; P. Krueger; P. Matos; and T. Steffen. "Do responsible investors invest responsibly?" *Review of Finance*, 26 (2022), 1389–1432.

Gillan, S. L.; A. Koch; and L. T. Starks. "Firms and social responsibility: A review of ESG and CSR research in corporate finance." *Journal of Corporate Finance*, 66 (2021), 101889

Grossman, S. J.; and O. D. Hart. "Takeover Bids, The Free-Rider Problem, and the Theory of the Corporation." *Bell Journal of Economics*, 11 (1980), 42–64.

Harford, J. V. T. "Corporate cash reserves and acquisitions." *Journal of Finance,* 54 (1999), 1969–1997.

Harjoto, M. A.; and H. Jo. "Corporate Governance and CSR Nexus." *Journal of Business Ethics,* 100 (2011), 45–67.

Hidaka, W.; N. Ikeda; and K. Inoue. "Does engagement by large asset managers enhance governance of target firms?" *Pacific-Basin Finance Journal*, 77 (2023).

Hoepner, A. G. F.; I. Oikonomou; Z. Sautner; L. T. Starks; and X. Y. Zhou. "ESG Shareholder Engagement and Downside Risk." Working Paper, ECGI Finance (2022). Available at SSRN: https://ssrn.com/abstract=2874252

Iliev, P.; J. Kalodimos; and M. Lowry. "Investors' Attention to Corporate Governance." *Review of Financial Studies,* 34 (2021), 5581–5628.

Jensen, M. C. "Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers." *American Economic Review*, 76 (1986), 323–329.

Kölbel, J. F.; F. Heeb; F. Paetzold; and T. Busch. "Can Sustainable Investing Save the World? Reviewing the Mechanisms of Investor Impact." Working Paper (2020). Available at SSRN: https://ssrn.com/abstract=3289544

Krueger, P.; Z. Sautner; and L. T. Starks. "The Importance of Climate Risks for Institutional Investors." *Review of Financial Studies*, 33 (2020), 1067–1111.

McCahery, J. A.; Z. Sautner; and L. T. Starks. "Behind the Scenes: The Corporate Governance Preferences of Institutional Investors." *Journal of Finance*, 71 (2016), 2905–2932.

Margolis, J. D.; H. A. Elfenbein; and J. P. Walsh. "Does it Pay to Be Good...And Does it Matter? A Meta-Analysis of the Relationship between Corporate Social and Financial Performance." Working Paper (2009). Available at SSRN: https://ssrn.com/abstract=1866371

Masulis, R. W.; and S. W. Reza. "Agency Problems of Corporate Philanthropy." *Review of Financial Studies*, 28 (2014), 592–636.

Principles for Responsible Investment. Signatory directory (2023). https://www.unpri.org/signatories/signatory-resources/signatory-directory

Schmidt, C.; and R, Fahlenbrach. "Do exogenous changes in passive institutional ownership affect corporate governance and firm value?" *Journal of Financial Economics*, 124 (2017), 285–306.

Servaes, H.; and A. Tamayo. "The Impact of Corporate Social Responsibility on Firm Value: The Role of Customer Awareness." *Management Science*, 59 (2013), 1045–1061.

Shleifer, A.; and R. W. Vishny. "Large Shareholders and Corporate Control." *Journal of Political Economy*, 94 (1986), 461–488.

Sun, L.; and S. Abraham. "Estimating dynamic treatment effects in event studies with heterogeneous treatment effects." *Journal of Econometrics*, 225 (2021), 175–199.

Appendix

A1. Additional Tables

Table A1. SRI Fund Identification Word List

Environmental Fund	Social Fund	Environmental and Social Fund
Ecology	Women	Sustainable
Environment	Gender	Social responsibility
Global warming	Equality	Social contribution
Climate change		ESG
Green		SRI
Climate		Sustainability
		Socially responsible

Table A2. Firm-level Variables

Ln(Market Cap)	The natural logarithm of the market capitalization at the end of the previous fiscal year
Past 3-year Return	The three-year total return of stocks on a daily average basis (including dividends) up to the end of the previous fiscal year
ROE [%]	Net Income/Shareholders' Equity・previous fiscal year × 100 (Winsorized at the 3% level)
Cash ratio	(Cash, Deposits + Marketable Securities)/Total Assets
PPE ratio	Tangible Fixed Assets/Total Assets (Winsorized at the 3% level)
Debt ratio	Total Liabilities/Total Assets (Winsorized at the 3% level)
SRI ratio	Shareholding ratio by SRI funds (Winsorized at the 3% level)
Governance Index	The sum of the following four dummy variables; Dummy variable equals one when the independent director ratio is in the top two quintiles and zero otherwise, Dummy variable equals one when a woman director is present on the board and zero otherwise, Dummy variable equals one when the firm introduces stock option and zero otherwise, Dummy variable equals one when the firm issues integrated report and zero otherwise.
ESCORE	Environmental information disclosure score from Bloomberg
SSCORE	Social information disclosure score from Bloomberg

Ownership ratio by ABCD [%]	Total shareholding by the four asset managers (Investors A, B, C, and D)
Long Term Goal	Presence of CO2 emissions reduction targets beyond 2046 (0: None; 1: Yes)
Log(GHG intensity)	The natural logarithm of the ratio of GHG emissions (Scope 1) to sales
Woman Director Ratio [%]	The ratio of woman directors among the board members
Tobin's Q	(Market capitalization of stocks + Total Liabilities)/Total assets' replacement cost
Active Holding [%]	Shareholding ratio by active funds within an institutional investor's portfolio
Passive Dummy	Presence of shareholding in companies by passive funds (0: None; 1: Yes)