

# For All Generations



# GPIF and ESG in numbers



\* The figure is from the results of a survey of listed companies conducted by GPIF in January and February 2018. All other data are as of the end of March 2018.



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GPIF is committed to fulfilling our fiduciary duties in order to retain sufficient pension reserve for both the current and future generations of beneficiaries. GPIF believes that it is vital to minimize negative externalities by integrating ESG factors into the investment process, in addition to improving the governance of investee companies, to ensure its portfolio's investment returns over the long term.



President

Norihiro Takahashi

Government Pension Investment Fund, Japan

The mission of Government Pension Investment Fund (GPIF) is to retain sufficient reserves for future pension beneficiaries through investment management activities for pension reserve. GPIF invests in a wide range of domestic and foreign companies and other organizations; therefore, sustainable and stable growth of the entire market is essential for us to increase pension reserve. In addition, it is of vital importance for GPIF to ensure its portfolio's investment returns over the long term as an investor responsible for supporting pension finance with an investment horizon of as long as 100 years. Considering these factors, GPIF believes that it is essential to minimize negative externalities (e.g. environmental and social issues) by integrating ESG (Environmental, Social, and Governance) factors into the investment process, in addition to improving the governance of investee companies.

GPIF outsources the investment management activities of all the assets under management to external asset managers, with the exception of a portion of domestic bond investments. In order to increase pension reserve, GPIF appropriately selects and evaluates external asset managers, and encourages external asset managers to engage in constructive dialogues with investee companies that are conducive to sustainable growth, with the aim of achieving its main goal of increasing its portfolio's investment returns as well as improving the sustainability of the overall capital market and encouraging its growth. GPIF has stepped up its ESG activities since we signed the Principles for Responsible Investment (PRI) in September 2015.

In fiscal 2017, GPIF selected three ESG indices for Japanese equities and commenced investment tracking those indices. In addition, we revised our Investment Principles to expand the scope of stewardship activities from equities to all asset classes. Furthermore, GPIF conducted a joint research with the World Bank Group on ESG integration in fixed income investment, with the aim of expanding ESG activities from equities to all asset classes.

GPIF has decided to publish the ESG Report for the first time, to report on our ESG activities and their impacts to the public. GPIF's ESG investments are designed to achieve investment returns over the long term, and it takes a long time to produce results. However, for GPIF to eventually attain the desired impacts and confirm the direction of our ESG activities, it is necessary to regularly examine the impacts of such activities. GPIF seeks to verify the long-term impacts of our ESG activities by constantly examining impacts on a yearly basis.

GPIF's ESG activities have just begun, but all executives and employees of GPIF pledge to devote all of our efforts to ensuring long-term investment returns for pension beneficiaries and fulfilling our fiduciary responsibilities. I would sincerely appreciate your continued understanding and support.

#### What is GPIF?

GPIF undertakes the management and investment of the pension reserve of the National Pensions and the Employees' Pension Insurance, entrusted by the Minister of Health, Labour and Welfare. GPIF's assets under management were 156 trillion yen as of the end of fiscal 2017, making us the world's largest pension fund. In order to diversify investment risks, GPIF invests in various assets, and its portfolio comprised 506 domestic bond issuers, 2,700 foreign bond issuers, 2,321 domestic stocks, and 2,793 foreign stocks, as of the end of fiscal 2017. GPIF's investment target is to secure a long-term real return (net investment yield on the pension reserve less the nominal wage growth rate) of 1.7% with the minimal level of risk, and we are taking measures to produce results that exceed that goal. As a result, the cumulative returns since fiscal 2001, when the GPIF started investing pension reserve in the market, has grown to more than 60 trillion yen.

#### **GPIF's Major Initiatives on ESG**

GPIF has stepped up its ESG activities since signing the PRI in 2015. Because this is our first ESG Report, we summarized our major ESG activities so far.



- Published the Investment Principles
- Signed the Principles for Responsible Investment (PRI)
- Established Business and Asset Owners' Forum
- Established Global Asset Owners' Forum
- Joined the 30% Club in the U.K. and the Thirty Percent Coalition in the U.S.
- Started conducting a survey of listed companies regarding stewardship activities of institutional investors
- Published Stewardship Principles and Proxy Voting Principles
- Selected ESG indices for Japanese equities and started investment tracking those indices
- Revised the Investment Principles
- Started a joint research with the World Bank Group regarding ESG integration in fixed income investment
- Started RFP for global environmental stock indices

#### **Revision of the Investment Principles**

GPIF established the Investment Principles in 2015 with the aim of disclosing our basic investment policies to the public. GPIF partially revised the Investment Principles in October 2017 to expand the scope of stewardship activities from equities to all asset classes, and added descriptions on ESG as an example of its stewardship activities.

Regarding ESG activities for equity investment, GPIF selected ESG indices as described later, and is working on ESG integration in evaluating and selecting external asset managers. Regarding ESG activities for fixed income investment, GPIF is

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conducting a joint research with the World Bank Group as described later.

GPIF is also expanding investments in alternative assets (infrastructure, private equity, and real estate) for the efficient management of portfolio. In selecting external asset managers, GPIF screens asset managers based on criteria, such as investment strategies, investment performance and risk management framework, through which ESG activities of external asset managers and investee companies are evaluated.

# **Investment Principles**

Our overarching goal should be to achieve the investment returns required for the public pension system with minimal risks, solely for the benefit of pension recipients from a long-term perspective, thereby contributing to the stability of the system.

Our primary investment strategy should be diversification by asset class, region, and timeframe. While acknowledging fluctuations of market prices in the short term, we shall achieve investment returns in a more stable and efficient manner by taking full advantage of our long-term investment horizon. At the same time, we shall secure sufficient liquidity to pay pension benefits.

We formulate the policy asset mix and manage and control risks at the levels of the overall asset portfolio, each asset class, and each investment manager. We employ both passive and active investments to attain benchmark returns (i.e., average market returns) set for each asset class, while seeking untapped profitable investment opportunities.

By fulfilling our stewardship responsibilities (including the consideration of ESG (Environmental, Social, and Governance) factors), we shall continue to maximize medium- to long-term investment returns for the benefit of pension recipients. GPIF's Initiatives

Adoption of ESG Indices and RFP for Global Environmental Stock Indices

#### Selection of ESG indices for Japanese equities

GPIF selected and announced three ESG indices for Japanese equities in July 2017, with the expectation of increasing risk-adjusted returns over the long term by improving ESG evaluations and responses by Japanese companies to support their long-term corporate value enhancement. GPIF commenced passive investment tracking those indices with a portfolio value of approximately 1 trillion yen which accounts for 3% of Japanese equity portfolio.

GPIF received proposals of 27 indices by 14 companies. In the selection process, we screened applicants based on criteria, including economic rationality, such as investment risks and returns, and whether adoption of such an index can boost the Japanese equity market by improving ESG evaluations. Specifically, screening was carried out by emphasizing that: (1) the ESG evaluations should be based on public information, in order to encourage information disclosure by companies, (2) "positive screening should mainly be adopted" in determing constituent companies based on their ESG evaluations and (3) opportunities for adoption are open to a wide range of companies. We expect that utilization of selected ESG indices will further incentivize Japanese companies to promote responses to ESG issues, which will increase their corporate value over the long term.



[List of adopted ESG indices]

\* GPIF publicly announced that it has selected global environmental stock indices in September 2018.

GPIF believes that in order to encourage companies to be proactive in addressing ESG issues and disclosing information, it is important to help them deepen their understanding of the methodologies of ESG evaluation and index development. To promote such understanding, GPIF requests for index providers to publicly disclose how they conduct ESG evaluation and how they develop indices.



#### **RFP for Global Environmental Stock Indices**

An environmental issue, including climate change, is one of the most important ESG issues for GPIF as a universal owner and super long-term investor. In November 2017, following the selection of three ESG indices in July, GPIF started calling for applications for the environmental index for global equities. Considering that environmental issues including climate change constitute cross-border global challenges, applicants should propose two indices based on the same concept, one for (i) global equities (excluding Japanese equities) and one for (ii) Japanese equities. In addition, the index should be based on the concept that it encourages corporations to seek solutions to environmental issues, rather than uniformly excluding companies in specific industries or types of business. The RFP was closed at the end of January 2018. We received proposals from 11 companies (groups)(\*). GPIF aims to expand ESG investments, including

the use of other ESG indices and active investments, while examining the impacts of ESG investments in the medium and long term.

\* GPIF publicly announced that it has selected global environmental stock indices in September 2018.



#### [Positive cycle brought about by the expanding ESG investments]

## Collaboration with the World Bank Group regarding ESG in Fixed Income Investments



Research and implementation of ESG considerations in investment are making progress in the field of equity investment, but they have just started in the field of fixed income investment. In order to explore the significance and possibilities of integrating ESG into fixed income investment, for which the concept of ESG integration is relatively new, GPIF has decided to conduct a joint research to incorporate ESG factors in fixed income investment with the World Bank Group, which is the world's leading issuer of green bonds and social bonds and is practicing integration of ESG factors in the process of investment and loan to governments and companies around the world. In conducting research work, we carried out a comprehensive study of past academic research work, as well as interviews with officials of the world's major public pension funds, asset managers and credit rating agencies. The World Bank Group released a research report based on our joint research at Spring Meetings held in April 2018.

#### **Overview of the report**

While integration of ESG factors into the investment decision process for fixed income investment has spread rapidly for corporate bonds and supranational bonds, there are many issues to be worked out for ESG integration in the investment process for government bonds, asset-backed securities, and private placement bonds.

There are various ways to integrate ESG for fixed income investors, such as purchasing green bonds, social bonds and sustainable bonds that meet the criteria, establishing ESG or Socially Responsible Investment (SRI) funds or investing in such funds, investing in funds that track ESG indices, adopting active ESG asset managers and integrating ESG factors into the entire investment process.

Some investors are not only seeing ESG factors as sources of risk control and investment returns, but also are integrating ESG and impact investing, using methods such as measuring the impacts of portfolio on specific events in the environment and society and going further to link such impacts with the United Nations Sustainable Development Goals (SDGs).



\* For details, please see the website of GPIF or the World Bank Group.

Many investors still face issues related to ESG integration, particularly in fixed income investment. There is no established standard definition for ESG yet. In particular, there are different views on the social (S) factor. The accuracy of published data is improving and information sources have become diverse. However, sufficient information has not become available yet, especially in emerging markets. In particular, fixed income investment have issues, such as difficulty of promoting engagement (constructive dialogues) with issuers (notably, governments issuing sovereign bonds), ambiguity of

the roles of ESG in credit ratings and bond indices, and shortage of bond indices and investment products compared to those for equity investment. Furthermore, the green bond market has the issue of excess demand over supply. As regards conceptual analyses of ESG and fixed income investments, a task going forward is to take the analysis one step further, going from an analysis of the relationship between ESG and credit risks alone to an analysis of the relationships between ESG and liquidity risks and other market risks.

# GPIF's ESG-themed Engagement Activities

#### Engagement with external asset managers

GPIF proactively conducts dialogues with various stakeholders, with the aim of making its ESG activities more effective. The main dialogues is the one with external asset managers. GPIF is not allowed to invest directly in equities, and the management of its entire equity portfolio is outsourced to external asset managers. Accordingly, GPIF proactively holds dialogues with external asset managers on topics, such as which ESG themes they have identified as important, how they link such themes with their investment behaviors and issues they have discussed in the course of dialogues with investee companies (\*). Previously, the focus of dialogues was on monitoring external asset managers by GPIF, but the focus has largely shifted to engagement activities since 2017. In this context, GPIF has proactively held dialogues with external asset managers on matters such as exercise of proxy voting rights, using case studies to understand the background of their proxy actions. As a result of such efforts, mutual understanding between GPIF and external asset managers has deepened, and we evaluate that external asset managers on the whole are exercising proxy voting rights in compliance with GPIF Proxy Voting Principles by integrating ESG factors into the investment process.





\* For material ESG issues recognized by external asset managers to whom GPIF outsources investment, please see page 37 of ANNUAL REPORT FISCAL YEAR 2017.

#### Engagement with index providers and ESG evaluators



ESG evaluators and index providers, as well as external asset managers, play an important role in GPIF's investment. In GPIF's equity investments, passive investment tracking indices account for about 90% of the equity portfolio. While there may seem to be not much difference in investment performance between indices, index selection is a key factor that affects the investment performance of GPIF's portfolio as a whole, given the large size and the proportion of the passive investments.

In the case of ESG indices, especially, constituent stocks and their weights are determined based on ESG evaluations, so the responsibility of ESG evaluators is particularly important. Considering this, in selecting ESG indices for domestic equities, GPIF conducts due diligence to evaluate the governance structures of index providers and ESG evaluators, as with the case of selecting external asset managers, with the aim of confirming the transparency and neutrality of evaluation and index selection.

In addition, GPIF has been continuing proactive dialogues with ESG evaluators since ESG indices were selected. Unlike credit ratings for bonds, the results of ESG evaluations vary widely among ESG evaluators. GPIF supposes that the possible causes are: (i) ESG evaluation methods are still in the course of development and (ii) there is room for improvement in ESG disclosures by companies. In order to improve ESG evaluation methods, it is necessary to listen to the views of companies, not to mention investors. In addition, steady and continuous efforts are required to widely disseminate ESG evaluation methods among companies and gain their understanding, in order to promote information disclosure by companies. In April 2018, we received feedback for fiscal 2017 from MSCI and FTSE on dialogues between ESG evaluators and companies. They reported that dialogues between ESG evaluators and companies had increased significantly since GPIF's adoption of ESG indices. Dialogues between MSCI and companies conducted in the process of ESG evaluations increased sharply in Japan in 2017 as shown below. Although some critical feedback was received from companies, we evaluate that such dialogues have contributed to improving the quality of ESG evaluations.

#### [Proportion of companies that had dialogues with MSCI in the process of conducting ESG evaluations]



Note: Survey subjects are constituents of MSCI ACWI. Source: ©2018 MSCI ESG Research LLC. Reproduced by permission



#### Survey of listed companies

GPIF has been conducting a survey of listed companies regarding institutional investors' stewardship activities every year since 2016, in an effort to grasp the actual status of institutional investors' stewardship activities, including the status of dialogues on ESG issues. From the third survey conducted in 2018, we expanded the coverage of the survey to all companies listed on the first section of the Tokyo Stock Exchange and received responses from 619 companies. We also significantly expanded questions on topics, including ESG-related dialogues with external asset managers and the three ESG indices for domestic equities adopted by GPIF.

According to the survey results, those ESG indices are very well recognized among companies, and many companies highly appreciate GPIF's initiative of selecting ESG indices, with critical comments received from very few companies. Some replied with the comments including: "GPIF's selection of ESG indices has led to a change in our attitude toward ESG" and "Our efforts for ESG have developed into cross-departmental actions." Meanwhile, regarding issues about ESG evaluations, some companies offered comments including: "Companies that are relatively small have limited opportunities for being included in the three ESG indices" and "Evaluation factors of each index are not clear." GPIF considers that it is an important issue to enhance ESG evaluations of relatively small companies, in order to boost and improve the sustainability of the capital market. We are encouraging ESG evaluators to expand the coverage of companies subject to evaluation, and the number of companies evaluated has been increasing gradually.

This survey also asked respondents about GPIF's stewardship activities, including ESG activities, and approximately three-quarters of companies either "Highly appreciate" or "Appreciate" our commitment. GPIF will make efforts to grasp the actual status and issues of the stewardship activities of institutional investors including ESG activities, by regularly conducting the survey.







Note: The survey was conducted by GPIF from January 10 until February 23, 2018, and responses were received from 619 companies (response rate: 30.2%). Large caps in the graph are TOPIX 100 companies; medium caps are TOPIX 500 companies (excluding TOPIX 100 companies); and, small caps are other companies.



#### Announcement of excellent integrated reports

GPIF encourages external asset managers to proactively utilize integrated reports as a valuable information source in their investment decision and engagement activities. As part of such efforts, we requested 16 external asset managers of domestic equity investment to nominate "excellent integrated reports" and "most-improved integrated reports," and the results were announced in January 2018. In this survey, each asset manager nominated integrated reports of up to 10 companies, and a total of 70 and 68 companies were selected for having created excellent integrated reports and most-improved integrated reports, respectively. The following companies were those most nominated by respondents as publishers of excellent integrated reports and most-improved integrated reports.

#### [Companies most nominated by external asset managers for an excellent integrated report]

Ajinomoto Co., Inc. KONICA MINOLTA, INC. OMRON Corporation ITOCHU Corporation MARUI GROUP CO., LTD.

#### [Companies most nominated by external asset managers for a most-improved integrated report]

Daiwa House Industry Co., Ltd. SUMITOMO METAL MINING CO., LTD. OMRON Corporation Sumitomo Corporation

Note: For the list of companies nominated for an excellent integrated report and a most-improved integrated report, please see GPIF's website.



#### **Two Forums**

Aiming to further stimulate the investment chain where pension beneficiaries entrust reserve fund management to asset owners who outsource investments to asset managers to make actual decisions on investee companies, GPIF, jointly with California Public Employees' Retirement System (CalPERS) and California State Teachers' Retirement System (CALSTRS), which are two U.S. public pension funds acting as co-organizers, established Global Asset Owners' Forum, a platform for exchanging ideas and opinions among global asset owners, in 2016. GPIF also set up Business and Asset Owners' Forum, a platform for gathering opinions from companies. At these two forums, discussions are held mainly on themes related to ESG issues, and are very fruitful in taking GPIF's ESG-related initiatives to a higher level.

At two meetings of the Business and Asset Owners' Forum convened in fiscal 2017, participants discussed topics, including ESG disclosures and SDGs and exchanged opinions on issues faced by participating companies.

At the second meeting of the Global Asset Owners' Forum convened in the U.S. in May 2017, discussions were held on topics including ESG integration and divestment from companies that emit large greenhouse gases. On the topic of divestment, opinions expressed included that divestment may deprive asset owners of their potential to effectively engage the company on issues of concern.

At the third meeting of the Global Asset Owners' Forum convened in Japan in November 2017, discussions were held on topics, such as measuring carbon footprints and collaborative engagement with external asset managers and index providers.

[Organizers]	Nippon Telegraph and Telephone Corporation
Eisai Co., Ltd.	Shiseido Company, Limited
NISSAN MOTOR CORPORATION	TOTO Ltd.
OMRON Corporation	[Asset owners]
[Member companies]	Federation of National Public Service Personnel Mutual Aid Associations
Asahi Group Holdings, Ltd.	Government Pension Investment Fund (GPIF)
Hitachi, Ltd.	National Federation of Mutual Aid Associations for Municipal Personnel
JFE Holdings, Inc.	Pension Fund Association for Local Government Officials
Mitsubishi Chemical Holdings Corporation	Promotion and Mutual Aid Corporation for Private Schools of Japan

#### [Member companies of the Business and Asset Owners' Forum <participants (in alphabetical order)>]



# Column: Global Trends in ESG

# Sustainability and inclusiveness

Interest in the concepts of sustainability and inclusiveness has become a recent global trend. Sustainability has become a topic of discussion on various themes ranging from industry and education to fiscal issue. This trend is spreading also in the financial industry. PRI, advocated by the United Nations in 2006, are designed to develop a more sustainable global financial system by incorporating ESG factors into the investment decision-making process. In the wake of the financial crisis, there have been growing regrets about only pursuing short-term profit. As a result, more than 2,000 organizations have signed the PRI and aggregate assets under management by PRI signatories have reached USD19.1 trillion (\*).

The number of Japanese signatories to PRI has increased from 33 in September 2015, when GPIF signed up to the Principles, to 62 (\*). In addition, an increasing number of external asset managers have established a Responsible Investment department or an ESG Research department. The concept of ESG investment

\* As of June 2018

seems to be compatible with Japanese business practices. In Japan, there is a traditional merchant principle called "Good for three parties" meaning good for seller, buyer and society. Businesses in the current era may be required to aim for "Good for six parties," a principle in which benefitting shareholders, employees and environment is added to the concept of "Good for three parties."

It has been 12 years since the PRI was established, and it has become a common practice in the financial industry to consider ESG as a risk factor. Nowadays, the markets are paying attention to how we capture investment opportunities, as well as manage risks. In addition, discussions are underway on how to utilize the SDGs toward 2030, adopted by the United Nations in 2015. Companies are taking actions to work on the SDGs. According to the survey of companies conducted by GPIF, 24% of respondents have started working on the SDGs and 40% of respondents are considering working on the SDGs.

# Climate change

Since the Paris Agreement came into effect, various moves have been underway in response to climate change issues. In 2015, the Financial Stability Board (FSB) established the Task Force on Climate-related Financial Disclosures (TCFD), comprising experts from the private sector, at the request of the G20, with the aim of considering how the financial sector should manage climate change risks. In 2017, the TCFD published recommendations for voluntary climate-related financial disclosures by companies. In line with this trend, there are different moves underway in individual countries responding to climate change risks. In the U.S., the Sustainability Accounting Standards Board (SASB) is developing disclosure standards, and in France, mandatory climate-related disclosures have been introduced. Since many Japanese companies have excellent environmental technologies, they are required



Note: From January 2008 to March 2018 aggregated Source: Prepared by GPIF based on data from various sources.

to communicate their environmental initiatives to institutional investors through information disclosures. Previously, the main focus of ESG investments was equity investments, but ESG investments have also expanded to other asset classes these days. In line with this trend, green bonds, which are fixed income investments that raise capital to support projects and activities with climate or environmental sustainability goals, are being issued increasingly to meet demand from institutional investors. Since the first green bonds were issued by the World Bank in 2008, the primary market for green bonds has been expanding (see the chart below). Europe was initially the main market for green bonds. However, issuances of green bonds have subsequently grown in the U.S. and China, with China becoming the largest green bond market in the world.



# Diversity

Diversity initiatives are typical examples of inclusiveness initiatives. In the wake of the global financial crisis, interest in diversity management has grown among institutional investors based on the idea that "Group Think" contributed to the crisis. Diversity in thinking and experience is essential for conducting constructive discussions from a broad perspective. Organizations with diversity as a core value are resilient to change and have an aptitude for innovation. Looking overseas, the 30% Club was launched in the U.K. and the Thirty Percent Coalition was established in the U.S. as networks of members seeking to increase the proportion of female board members in listed companies to 30%, and some institutional investors are requiring investee companies through these networks to take

actions toward this end.

Japan is seen as falling behind other countries in gender diversity. On the other hand, it can be said that Japan has the potential for rapid improvement in this field with the future implementation of initiatives. In Japan, where a labor shortage has become an issue and the working-age population is expected to decline in the medium to long term, it is a critical issue to build organizations that allow diverse people, including women, to play active roles, in order to achieve corporate sustainability. In this context, Japanese companies are also expected to take initiatives for sustainability and inclusiveness, and to make progress.

## Approach to Measuring the Impacts of ESG Activities

The impacts of GPIF's ESG investments should be evaluated with a different perspective from the common evaluation measure of how much investment returns are generated over a certain period of time for the following reasons:

# It takes a long time for ESG investments to produce results; and GPIF seeks to improve the sustainability of the whole financial markets and encourage their growth.

GPIF's objectives for ESG investments are not to seek short-term investment returns, but to increase long-term returns for its portfolio and improve the sustainability of the whole financial markets by minimizing the negative externalities of corporate activities, such as environmental and social issues. Regarding the impacts on investments expected from integrating ESG factors into the investment process, GPIF considers that as the investment horizon becomes longer, the expected impact of improving risk-adjusted investment returns will increase (For fiscal 2017 investment performance of the three ESG indices of domestic equities adopted by GPIF, please see page 31).

The problem is that it takes a long time for ESG investments to produce results in improving the sustainability of the financial markets and in increasing risk-adjusted returns. Meanwhile, if we leave investments unchecked without measuring their impacts, we may end up continuing to take the wrong actions for a long time. In order to appropriately implement the so-called Plan-Do-Check-Act (PDCA) cycle, the important thing is to accurately evaluate: 1) whether ESG investments have led to an improvement of ESG evaluations and a strengthening of ESG responses by companies as expected (see A in the illustration on page 20) ; and 2) whether companies improving ESG evaluations and strengthening ESG responses have led to improving the sustainability of financial markets and increasing risk-adjusted returns (see B in the illustration on page 20).

GPIF does not have much experience with ESG initiatives yet: its experience with ESG initiatives only began with the signing in 2015 of the PRI, which was advocated by the United Nations, and our more direct involvement with ESG investments has just started since the selection of ESG indices for domestic equities and the start of passive investment tracking those indices in 2017. In this ESG Report, we mainly analyze whether ESG investments have contributed to improving ESG evaluations of companies and strengthening ESG responses by companies.

GPIF's ESG initiatives are also unique in that they are designed to improve the sustainability of whole financial markets and encourage their growth. The common measure for evaluating investments is how much they outperform the market average (benchmarks, such as TOPIX and MSCI ACWI) and competitors. Meanwhile, GPIF's ESG investments need to be evaluated from multiple perspectives. In the case of passive investments based on ESG indices, for instance, if many companies are conscious of the ESG indices adopted by GPIF and seek to be included in those indices, there is a good chance that the ESG evaluations will be improved more for the group of companies not included in the indices than otherwise. In fact, that is exactly what GPIF expects. In this ESG Report, therefore, GPIF analyzes ESG evaluations of listed companies as a whole (TOPIX companies for domestic equities and MSCI ACWI companies (excluding Japanese companies) for foreign equities), in addition to companies included in the three ESG indices.



[Concept of the cycle of ESG investments and their impacts]



# Measuring the Impacts of ESG Activities

#### Changes in ESG evaluations of the portfolio

GPIF started by measuring changes in ESG evaluations of its portfolio. To measure changes in ESG evaluations, we calculated the weighted average (excluding missing values) according to the market capitalization of GPIF's assets under management based on FTSE's ESG ratings (\*1), and then compared the value as of March 2017, which is before GPIF's adoption of ESG indices for domestic equities, and as of March 2018.



#### [FTSE ESG ratings]

Note: FTSE's ESG scores are on a five-point scale.

Source: Prepared by GPIF based on data obtained from the following FTSE International Limited ("FTSE") ©FTSE 2018

As a result, we confirmed that ESG ratings of GPIF's portfolio by FTSE have improved for both domestic and foreign equities.

We also looked into ESG ratings of TOPIX and MSCI ACWI (excluding Japan) as the markets' representative portfolios by calculating weighted average according to the market capitalization of constituent stocks and comparing the values to that of GPIF's portfolio, but there was very little difference. Possible reasons for this are that GPIF's assets are mainly allocated to passive investment funds and that GPIF has not withdrawn investments (divestment) from companies with large greenhouse gas emissions (\*2). GPIF, as a universal owner, aims to increase risk-adjusted return of its portfolio and improve the sustainability of whole financial markets and encourage their growth by integrating ESG factors into its investment process.

<sup>\* 1:</sup> For reasons to use FTSE ESG ratings, please see page 30 of this report.

<sup>\* 2:</sup> Due to legal restrictions, GPIF is not allowed to carry out divestments.

#### Rankings of ESG ratings by country and their changes

Then, GPIF created a ranking of the average ESG ratings of companies included in FTSE Global Equity Index by country in nine major countries/regions, and compared changes in rankings between March 2017 and March 2018.

According to the results of the analysis, the average ESG ratings of Japanese companies have remained lower than those of European companies in France and the U.K. In terms of changes in ESG ratings, the ratings of all companies surveyed in the major countries, including Japanese companies, have improved. Looking at the distribution of ESG ratings of Japanese companies, the distribution has shifted to the right (indicating an improvement). GPIF hopes that ESG evaluations of Japanese companies will improve further through enhanced responses to ESG issues and promotion of ESG disclosure.

Ranking	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
ESG ratings (March 2018)	France 3.55	U.K. 3.41	Canada 2.83	U.S. 2.68	India 2.52	Japan 2.20	Hong Kong 2.12	South Korea 1.90	China 1.36
ESG ratings (March 2017)	France 3.39	U.K. 3.29	Canada 2.72	U.S. 2.53	India 2.31	Japan 2.00	Hong Kong 1.92	South Korea 1.75	China 1.17

#### [Ranking of FTSE ESG ratings by country]

#### [Rate of improvement in FTSE ESG ratings by country (\*)]



\* Changes between March 2017 and March 2018. A comparison was made of companies assigned ESG ratings at each time point. The rate of improvement does not indicate a simple difference in ESG ratings by country as of each time point. For details, please see "Remaining Issues in ESG evaluations" on page 29-30.

#### [Distribution of ESG ratings of Japanese companies by FTSE]



Note: FTSE's ESG scores are on a five-point scale. Figures show the rate of improvement in the simple average of ESG ratings companies included in the FTSE Developed Index and the FTSE Emerging Index and with ESG ratings assigned. The chart shows figures for the major countries that have many companies with ESG ratings assigned.

Source: Prepared by GPIF based on data obtained from the following.

FTSE International Limited ("FTSE") ©FTSE 2018

#### **Correlation of different ESG ratings**

In its press release that announced the selection of ESG indices for Japanese equities ("ESG Indices Selected," published on July 3, 2017), GPIF pointed out that ESG ratings varied widely among ESG evaluators. GPIF posits that possible causes of the large differences in ESG ratings are: (i) ESG evaluation methods are still in the course of development and (ii) there is room for improving ESG disclosures by companies. In addition, GPIF conducted an analysis of changes in correlations of ESG evaluations among evaluators for this ESG Report.

We created correlation charts of ESG evaluations of Japanese companies with FTSE ESG ratings plotted on the vertical axis and MSCI ESG ratings on the horizontal axis, which shows ESG evaluations of the same company by the two ESG evaluators on a single correlation chart. A comparison of correlation charts as of March 2017 and March 2018 shows that the correlation between ESG ratings of the two evaluators has increased. While the correlation of ESG ratings of the two ESG evaluators for domestic equities is not high and is significantly lower than that for foreign equities, it is increasing. The convergence of evaluation ratings to a certain degree that occurs with improvements in the accuracy of ESG evaluations is deemed to have a positive impact on investment performance. The increase in the correlation between ESG ratings of the two ESG evaluators may be a sign that various ESG-focused dialogues (between GPIF and ESG evaluators and between ESG evaluators and companies) are reflected in the results.



#### [Correlation charts of FTSE and MSCI ESG ratings]

#### Regression analysis of FTSE and MSCI ESG ratings: Coefficient of determination ( $R^2$ ) and slope ( $\beta$ )

R <sup>2</sup>	March 2017	March 2018	β	March 2017	March 2018
Domestic equities	0.123	0.172	Domestic equities	0.168	0.196
Foreign equities	0.249	0.256	Foreign equities	0.208	0.213

Note: FTSE's ESG scores are on a five-point scale and MSCI's ESG scores are on a 10-point scale. The targets of the analysis are companies whose stocks are held by GPIF as of each time point and with ESG evaluation scores assigned by both FTSE and MSCI.

Source: Prepared by GPIF based on data obtained from the following.

FTSE International Limited ("FTSE") ©FTSE 2018

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#### E (Environment): Data on carbon footprint

Institutional investors are trying to measure the carbon footprint of their overall portfolios in their asset management by aggregating carbon footprint of investee companies according to the ownership ratio of those companies. For this report, we measured carbon footprint of GPIF's overall portfolio and checked the deviation from the benchmark. We aggregated carbon footprint by investee companies (excluding missing values) using data provided by Trucost and taking into account our ownership ratio of those companies, and compared the value to market portfolios-TOPIX for domestic equities and MSCI ACWI (excluding Japan) for foreign equities. As a result, we found little difference in carbon footprint between our portfolio and benchmarks. We

assume that this is possibly caused by the same reasons for little difference in ESG ratings between our portfolio and benchmarks as mentioned above. On the other hand, there is a large difference in carbon footprint between GPIF's portfolio companies for domestic equities and foreign equities. The possible reasons for this are: (i) There is a significant difference between GPIF's ownership ratio (on the basis of shares outstanding) of Japanese equities and that of foreign equities and (ii) Manufacturing sector attaches a relatively high weight to Japanese stocks, while giant IT companies, which have small carbon footprint and extremely large market capitalization, are included in the portfolio of foreign equities.



#### [Carbon footprint of the portfolio (\*1)]

\* 1: For carbon footprint, data from Fiscal 2016 was used. GPIF portfolio data is as of the end of March 2018.

\* 2: Benchmarks used for the comparison are TOPIX for domestic equities and MSCI ACWI (excluding Japan) for foreign equities.

Source: Prepared by GPIF based on data obtained from the following: S&P Trucost Limited ©Trucost 2018

#### S (Society): Data on gender diversity

MSCI Japan Empowering Women Index (the "WIN Index"), which is a thematic index focusing on social factors (S) adopted by GPIF, selects constituents based on five evaluation items ((i) % women in new hires, (ii) % women in the workforce, (iii) difference in years employed by the company: men vs. women, (iv) % women in senior management, and (v) % women on board), which are among the disclosure items required for companies under the "Act on Promotion of Women's Participation and Advancement in the Workplace" in Japan.

Looking at the status of information disclosure on these five items as of the end of March 2018 by the 500 companies (\*) included in the parent index of the WIN Index, companies disclosing information on all five items accounted for less than 50%. While all 500 companies disclose information on (v) % women on board, only 60-70% of the companies disclose information on other items, leaving significant room for improvement.

Regarding the performance results (median value) of the five evaluation items of the WIN Index, the results improved from the previous year for three items ((i) % women in new hires, (ii) % women in the workforce, (iv) % women in senior management, while (iii) difference in years employed by the company and (v) % women on board remained the same.



\* Survey targets are the top 500 companies by market capitalization in MSCI Japan IMI Index.

Source: Prepared by GPIF using data from ©2018 MSCI ESG Research LLC. Reproduced by permission

A partial excerpt from MSCI (2018) GENDER DIVERSITY IN JAPAN: PROGRESS REPORT 2018

The changes in the proportions of female board directors and female exective officers of Japanese companies show that both proportions have been increasing.

The Japanese government and business organizations are encouraging companies to strengthen their efforts for promoting women's participation and advancement in the workplace and enhancing information disclosure. Considering this, the improvements of these ratios are not necessarily a direct result of introducing the WIN Index. Even so, we believe that it is important to monitor the efforts and initiatives of Japanese companies.

# [Changes in the proportions of female board directors and female executive officers]



Note: The proportions show the average proportions of companies extracted from the universe of companies included in TOPIX as of March 2018 and for which relevant data are available for all preceding five fiscal years. Source: Prepared by GPIF based on various sources.

#### G (Governance): Data on outside board directors

It appears that corporate governance (G) practices of Japanese companies started to progress on a full scale with the formulation and publication of Japan's Stewardship Code in February 2014 and the application of the Corporate Governance Code to listed companies in June 2015. These two codes serve as two wheels of a cart for improving the corporate governance practices of Japanese companies toward achieving enhanced medium- to long-term corporate value and increased investment returns. With the aim of achieving further improvements from a pro-forma improvement to a substantive improvement, Japan's Stewardship Code was revised in May 2017 and the revised Corporate Governance Code was published in June 2018.

Since signing up to Japan's Stewardship Code in May 2014, GPIF has commenced activities to fulfill its stewardship activities on a full scale. In June 2017, GPIF formulated the Stewardship Principles and the Proxy Voting Principles, clarifying the requirements for its external asset managers to qualify. In the Proxy Voting Principles, GPIF urges its external asset managers to give consideration to the interests of minority shareholders and ESG issues and to publicly disclose all voting records, with the aim of contributing to maximizing shareholders' long-term interests. Based on these two principles, GPIF endorsed the revised Japan's Stewardship Code and published the Policies to Fulfill Stewardship Responsibilities in August 2017. The ESG indices selected by GPIF evaluate Governance (G) factors, such as composition and evaluation of the board of directors, remuneration, risk management, protection of minority shareholders (presence or absence of cross-shareholdings and takeover defense measures), preventing corruption and transparency of tax disclosures. To take an example, the proportion of outside board directors of companies has changed as follows.

#### [Proportion of independent outside board directors of companies listed on the TSE 1st section]



Source: Prepared by GPIF based on data from the Tokyo Stock Exchange, Inc.



# Column: ESG Evaluation and AI

# Launch of ESG evaluation using AI

With increasing interests in ESG investment, new ESG evaluation methods that use Artificial Intelligence (AI) technologies have been developed. TruValue Labs was established in San Francisco in 2013, starting from the development of a tool for analyzing information on intangible assets and measuring them. TruValue Labs calculates the ESG scores of companies by collecting and analyzing unstructured information and texts through Big Data and natural

language processing.

Arabesque Asset Management, was also established in 2013 and headquartered in London, conducts asset management activities based on ESG evaluations of companies performed using machine learning, from a perspective that nonfinancial information including ESG contributes to improvement of investment performance. The application of AI to ESG evaluation is steadily spreading.

# Characteristics of ESG evaluations performed by humans

ESG evaluations are currently performed mainly by leading index providers, ESG evaluators and research firms specialized in the environmental field. In many of these organizations, ESG evaluations of companies are done by analysts looking into ESG-related items using methods similar to those applied to financial analysis and credit ratings of companies. Such human analysis is subject to restrictions in terms of speed and volume of analysis. With human analysis, for instance, the more subjects of analysis become, the less frequently ESG evaluations would be updated. Even when subjects are expanded, it would take more time to educate or recruit new analysts, because examining ESG items requires atypical and wide-ranging analysis.

# Characteristics of ESG evaluations performed by AI

In contrast to analysis done by humans, AI is capable of regularly gathering enormous volumes of information on companies and conducting consistent analysis based on various frameworks. For instance, TruValue Labs constantly analyzes data on about 8,000 companies using more than 75,000 information sources, including media reports, announcements by NGOs and information from government agencies. Accordingly, the ESG evaluations of companies by TruValue Labs are more frequently updated than those of conventional ESG evaluation methodologies (the left chart below). In addition, TruValue Labs has provided a new framework of ESG evaluations by becoming the first to conduct an analysis of ESG factors according to materiality for each industry defined by the Sustainability Accounting Standard Board (SASB).

Arabesque Asset Management conducts 600 types of ESG evaluation on about 7,000 companies, using data from more than 50,000 information sources in 15 languages. The company issues ESG ratings in accordance with the United Nations Global Compact. The current expansion of ESG investments and increasing need for ESG evaluations of companies are creating a situation where the strengths of Al in consistently analyzing vast amounts of information from various aspects could be exploited.

# Issues in analysis using AI

It is unlikely that the results of ESG evaluations and analysis using AI will completely replace those performed by analysts, due to limits on information sources. ESG evaluations of companies are performed through analyses that are largely classified into: (i) analysis conducted using information published by companies and (ii) analysis conducted only using information not published from companies, but obtained from the media and other sources. TruValue Labs, which we cover in this column, conducts analysis that fall under the category listed in (ii) above, and so faces the issue that it cannot evaluate a company unless it is covered by the media. Therefore, evaluations of small companies, which tend to be covered less by the media, are carried

out using less information than large companies, even if the use of AI makes it technically possible to analyze large quantities of data (the right chart below). In addition, the results of analysis should be used with caution. Evaluation scores are calculated using AI through a complex process, so it is not easy to interpret different levels of scores. Therefore, scores are only used to determine if an ESG evaluation of a company has improved or deteriorated. Some market experts say that practical use of AI to perform a more exhaustive ESG evaluations combines human evaluations with AI analysis: applying human evaluations for assessing long-term score levels and complementarily using AI for analyzing short-term fluctuations.



Note: Insight score shows average change in Pulse score which is updated with a high frequency. Source: TruValue Labs ©TruValue Labs 2018.

# Remaining Issues in ESG Evaluations

Besides the issues of differences in evaluation results among evaluators, GPIF faced various other issues in preparing this first ESG Report. Four issues related to an overall ESG evaluation are described below. GPIF will work with relevant parties to make improvements for issues where possible.

#### Issue of timing of ESG evaluations

Among the issues in ESG evaluations are differences in the timing of updating ratings, and low frequency of update. For instance, MSCI, which is covered in this report, updates ESG ratings based on the latest disclosed information on companies targeted for evaluation at a predetermined time without considering accounting period or timing of publishing annual reports and CSR reports. That is to say, if it does not coincide with the timing of an evaluation update and there is no significant change in governance structures or a serious scandal involving companies targeted for evaluation, changes in their ESG ratings may not be reflected until nearly one year after publication of their CSR reports.

On the other hand, FTSE updates ESG ratings annually either in June or December every year, depending on companies targeted for evaluation. For instance, companies whose accounting period is from April to March usually publish information subject to an ESG evaluation (annual report or CSR report) between August and November, and FTSE updates the ESG ratings of many companies in June of the following year.

Trucost updates data related to carbon footprint of companies, based on the data disclosed to CDP, an international NGO that performs analysis of CSR reports of companies and environmental evaluations of companies. Therefore, the latest data available as of June 10, 2018, for instance, are for fiscal 2016 for 87% of companies surveyed, and data for fiscal 2017 are available from only 7% of companies surveyed.

ESG factors are long-term factors, and there would be a view that some differences in the timing of updating evaluation ratings do not cause any problems. However, if the timing of updating evaluation ratings differs significantly among evaluators, it would be difficult to perform cross-comparisons of evaluation ratings. GPIF also considers that there is much room for improvement in the issue of low frequency of updates of evaluation ratings.

#### Issue of revisions to ESG evaluation criteria

There is currently no standard ESG evaluation method, and further improvements to ESG evaluation methods are needed, based on opinions of investors and companies. Considering this, revisions to evaluation criteria made by ESG evaluators themselves should be welcome news. However, changing evaluation rules too rapidly and inconsistent changes to criteria depending on countries and languages should be avoided. If changes to rules create too many special factors that need to be considered, analysis of time-series data on ESG evaluation results will be of no use. Therefore, data users should pay attention to this issue.



#### Issue arising in comparing ESG evaluation results on an aggregate basis

As economies of scale work for information disclosure, so too with ESG disclosure. Larger companies tend to be evaluated better than smaller ones. Therefore, careful consideration is needed for cross-country comparison or the changes of it if the size of companies differ among countries or if the average size changes over one year as the coverage is expanded.

For the "Ranking of FTSE ESG ratings by country" on page 22, a comparison is made between

constituent companies of FTSE Developed Index and FTSE Emerging Index, which comprise medium-sized and large companies, in order to uniform the size of the companies to some extent. In the "Rate of improvement in FTSE ESG ratings by country" on page 22, a comparison is made only between companies for which ESG evaluation scores are available as of both March 2017 and March 2018, in order to eliminate the impacts of changes in constituent companies.

#### Issue arising from differences between absolute and relative evaluations

ESG ratings by MSCI and by FTSE, which are mainly referenced in this report, were determined using different evaluation methods: MSCI's ESG evaluation uses an intra-industry relative evaluation method and FTSE uses an absolute evaluation method. From the viewpoint that ESG issues for the companies differ substantially from industry to industry, it is desirable to use the intra-industry evaluation method for comparing ESG evaluations of individual companies. On the other hand, when examining improvements of ESG initiatives of individual companies through comparisons with their past performance, the absolute evaluation method, in which results obtained are not affected by other companies, would be appropriate to get the picture of the changes in individual companies' efforts more accurately. The two methods have both merits and demerits, and which method is used should be determined according to the intended use of data.

For these reasons, we use FTSE's evaluation method in this report for comparing the results of measured impacts of ESG promotional activities with past results and include MSCI's evaluation results in Appendix in this report.

#### Data Page (Comparison of Returns and Supplemental Data)

## [Comparison of benchmark returns of the three ESG indices selected by GPIF]

	Bench	mark rate of	Excess rate of return		
	ESG Index (a)	Parent index (b)	TOPIX (c)	Excess return over the parent index (a-b)	Excess return over TOPIX (a-c)
(1) MSCI Japan ESG Select Leaders Index	13.74%	14.94%	15.87%	-1.20%	-2.13%
(2) MSCI Japan Empowering Women Index	15.29%	14.94%	15.87%	0.35%	-0.58%
(3) FTSE Blossom Japan Index	14.83%	15.13%	15.87%	-0.30%	-1.04%

Note: The period of benchmark rate of return is from April 2017 to March 2018, which does not correspond to GPIF's commencement of investment tracking ESG indices. The parent index (constituent universe) for (1) and (2) is the top 500 companies by market capitalization included in the MSCI Japan IMI Index. The parent index (constituent universe) for (3) is FTSE Japan Index.

Source: Prepared by GPIF based on data obtained from the following.

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### [ESG ratings by MSCI]

Note: ESG scores provided by MSCI are on a 10-point scale. Source: Prepared by GPIF based on data obtained from the following. ©2018 MSCI ESG Research LLC, Reproduced by permission

#### [Ranking of MSCI ESG ratings by country]

Ranking	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
ESG ratings (March 2018)	France 7.25	UK 6.81	Canada 5.35	Japan 5.16	US 4.72	India 3.98	Hong Kong 3.76	South Korea 3.64	China 2.69
ESG ratings (March 2017)	France 7.08	UK 6.56	Canada 5.17	Japan 5.12	US 4.56	South Korea 3.97	India 3.77	Hong Kong 3.68	China 2.37

#### [Rate of improvement in the MSCI ESG ratings by country (\*)]



\* Changes between March 2017 and March 2018. Comparison was made between companies assigned ESG ratings as of each time point. Rate of improvement does not indicate a simple difference in ESG ratings by country as of each time point. For details, please see "Remaining Issues in ESG evaluations" on page 29-30.

#### [Distribution of ESG ratings of Japanese companies by MSCI]



Note: MSCI's ESG scores are on a 10-point scale. Figures show the rate of improvement as a simple average of evaluation ratings of companies included in MSCI ACWI and with ESG ratings assigned. The chart shows figures for the major countries that have many companies with ESG ratings assigned. Source: Prepared by GPIF based on data obtained from the following. ©2018 MSCI ESG Research LLC. Reproduced by permission

### [ESG indices for Japanese equities adopted by GPIF]

	FTSE Blossom Japan Index	MSCI Japan ESG Select Leaders Index MSCI (Bapan ESG Select Leaders Index	MSCI Japan Empowering Women Index (WIN) MSCI () MSCI Japan Empowering Women Index (WIN)		
Index concept	<ul> <li>The index uses the ESG assessment scheme that is applied to the FTSE4Good Japan Index Series which has one of the longest track records globally for ESG indices.</li> <li>The index is a broad ESG index that selects stocks with high absolute ESG scores and adjusts industry weights to neutral.</li> </ul>	<ul> <li>The MSCI Japan ESG Select Leaders Index is a broad ESG index that integrates various ESG risks into today's portfolio. The index is based on MSCI ESG Research that more than 1,000 clients use globally.</li> <li>The index incorporates stocks with relatively high ESG scores in each industry.</li> </ul>	MSCI calculates the gender-diversity scores based on various pieces of information disclosed under "the Act on Promotion of Women's Participation and Advancement in the Workplace" and selects companies with higher gender diversity scores from each sector.     The first index designed to cover a broad range of factors related to gender diversity.		
Constituent universe (parent index)	FTSE Japan Index (509 stocks)	Top 500 companies (in terms of market cap) in the MSCI Japan IMI	Top 500 companies (in terms of market cap) in the MSCI Japan IMI		
Number of index constituents	149	252	208		
Veighting Market cap weighted (Industry neutral compared with the parent index to bring industry weights in line)		Market cap weighted	"Market cap" times "Composite score" (*)		
Assets under management	¥526.6 billion	¥622.9 billion	¥388.4 billion		

\* "Sector-adjusted gender diversity score" times "Sector-adjusted quality score."

Note: Number of index constituents and assets under management are as of March 31, 2018.

### Announcement

GPIF publishes various information on a timely basis through annual reports, prepared and published as required by law, as well as through a website, SNS, and other means, from the viewpoint of ensuring transparency. GPIF will continue to endeavor to make published documents easier to understand, and examine and improve ways information is disclosed and PR activities targeting the public, in accordance with diversification, sophistication, and globalization of investment.



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#### Arabesque

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