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Results of the Second Market Functioning Survey concerning Climate Change

- Progress in the Improvement of Market Functioning and Challenges for the Future -

**Financial Markets Department
Bank of Japan**

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Executive Summary

There is an increasing recognition that financial markets should play a greater role in terms of financial intermediation to expedite efforts in tackling climate change. Specifically, financial markets are expected to support industries' efforts to address climate change by pricing risks and opportunities arising from climate change (climate-related risks and opportunities) into financial instruments such as stocks and corporate bonds. This integration, combined with providing a more favorable environment for the issuance of climate change-related ESG bonds, would facilitate funding and investments in this area.

Last year, the Bank of Japan launched the Market Functioning Survey concerning Climate Change. The objective of this survey was to evaluate the functioning of Japanese financial markets in relation to climate change and gain insights into challenges that need to be addressed for further improvement. This year, the Bank conducted the second round of the survey, involving more entities. The questionnaire for the second survey was distributed to 816 entities including issuers, investors, financial institutions, and rating agencies. This marks an increase from the first survey, which reached 663 entities. Of the distributed questionnaires, 380 entities provided responses, indicating a response rate of 47 percent. In comparison, the first survey received responses from 290 entities, resulting in a response rate of 44 percent.

Similar to the findings of the first survey, respondents in the second survey viewed that climate-related risks and opportunities were priced into both the stock and corporate bond markets in Japan to a certain degree. At the same time, there was still perceived potential for further incorporation of these factors in the markets. To enhance the incorporation of climate-related risks and opportunities into market prices, many respondents raised issues regarding the availability of information and the assessment methodologies for evaluating these factors. The former included "enhancing and/or standardizing information disclosure" and "bridging data gaps on climate-related data," while the latter included "improving transparency in ESG evaluation" and "further developing analysis methodologies." Additionally, "increasing investors and/or issuers that place a high value on climate-related risks and opportunities" was reiterated, echoing issues raised in the first survey.

That being said, the results of the second survey implied positive changes in certain areas. For instance, continuous respondents, who participated in both the first and second surveys, reported that climate-related risks and opportunities were better priced in corporate bonds compared to the time of the first survey. Additionally, although the proportion of respondents

raising issues about the availability of information such as "enhancing and/or standardizing information disclosure" remained high, it decreased slightly compared to the first survey. These findings align with the responses to an open-ended question, where many respondents highlighted changes that took place in the past 12 months. These changes included advancements in the development of climate-related disclosure standards, the introduction of mandatory disclosure requirements for certain items, and progress in discussions surrounding transition finance.

Market stakeholders have demonstrated their commitment to addressing the issues highlighted in the survey and have been actively working towards the development of the market. In line with this, the Bank will continue conducting the survey, improving its contents, and providing information on the state of market functioning related to climate change, as well as highlighting future challenges. Furthermore, the Bank aims to contribute to the advancement of financial markets by not only monitoring developments outside of Japan but also conducting additional research and analyses on the functioning of financial markets in relation to climate change. Additionally, the Bank will engage in communication and coordination with relevant stakeholders to foster the development of market infrastructure in this domain.

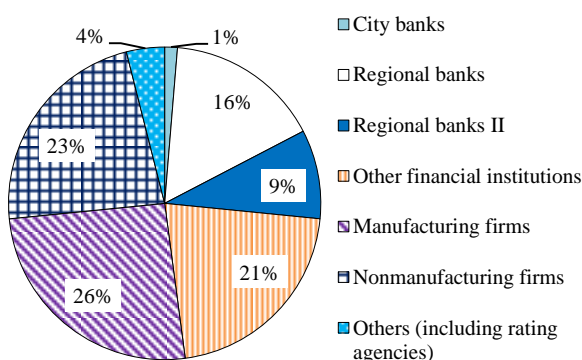
I. Introduction

In April 2022, the Bank of Japan launched the Market Functioning Survey concerning Climate Change, targeting a wide range of market participants including not only investors and financial institutions but also business corporates and others. The survey aims to continuously collect their views on the functioning of Japanese financial markets in relation to climate change and identify challenges for further improvement. The results of the first survey were published in August 2022.¹ The Bank subsequently hosted a meeting on the results of the survey in October 2022.²

The second round of the survey was carried out between February 16 and March 31, 2023. This time, the questionnaire was distributed to 816 entities, including financial institutions, business corporates, and rating agencies, compared to 663 entities in the first survey. Out of the distributed questionnaires, 380 entities responded, while the first survey received responses from 290 entities. Consequently, the response rate increased from 44 percent in the first survey to 47 percent in the second survey. For this round of the survey, respondents were given the option to provide their responses online, in addition to the file-based submission via email that was utilized in the first survey.

The Bank is appreciative of the valuable contributions from all the survey respondents. Furthermore, the Bank extends its gratitude to the TCFD Consortium (Chair: Kunio ITO, Director of Hitotsubashi CFO Education and Research Center) as well as other financial associations and organizations for their support, all of which helped the Bank to survey a broad range of entities.

Overview of Respondents (Breakdown by Sector)



¹ "Results of the First Market Functioning Survey concerning Climate Change"
(https://www.boj.or.jp/en/research/brp/ron_2022/ron220805a.htm)

² "Meeting on the Market Functioning Survey concerning Climate Change"
(<https://www.boj.or.jp/en/paym/m-climate/rel221019b.htm>)

To ensure comparability of results, the content of the questionnaire remained largely unchanged from the first survey. However, based on feedback received from market participants, some open-ended questions were added and minor technical revisions were made. In terms of methodology, the results from continuous respondents, who participated in both the first and second surveys, were aggregated separately. This approach allowed for a focused examination of the data from this subset of entities besides analyzing the overall results.

II. Results of the Second Market Functioning Survey concerning Climate Change

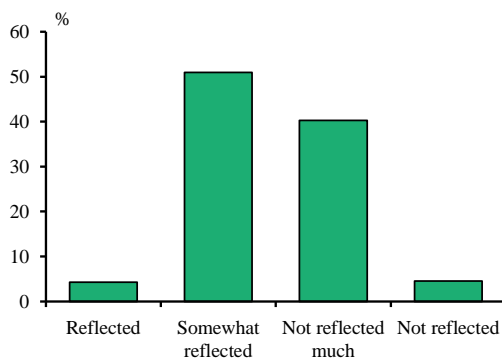
A. Pricing of Climate-related Risks and Opportunities in Financial Instruments

1. Pricing of Climate-related Risks and Opportunities

The survey started by asking respondents for their views on whether climate-related risks and opportunities were factored into the pricing of stocks and corporate bonds in financial markets in Japan.

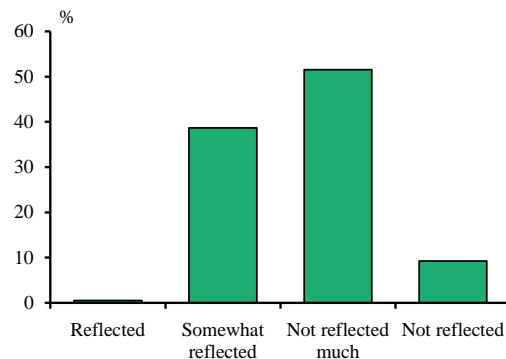
According to the survey results, slightly less than 60 percent of the respondents believed that climate-related risks and opportunities were "reflected" or "somewhat reflected" in stock prices. Similarly, about 40 percent of the respondents expressed the view that these risks and opportunities were "reflected" or "somewhat reflected" in corporate bond prices. However, only slightly over 4 percent of the respondents considered climate-related risks and opportunities to be "reflected" in stock prices, and less than 1 percent held the same view for corporate bond prices (Charts 1 and 2).

Chart 1: Climate-related Risks and Opportunities in Stock Prices in Japan



Note: The total number of respondents was 375 (excluding those who did not provide answers).

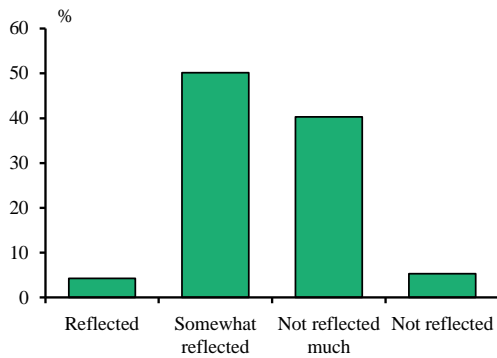
Chart 2: Climate-related Risks and Opportunities in Corporate Bond Prices in Japan



Note: The total number of respondents was 367 (excluding those who did not provide answers).

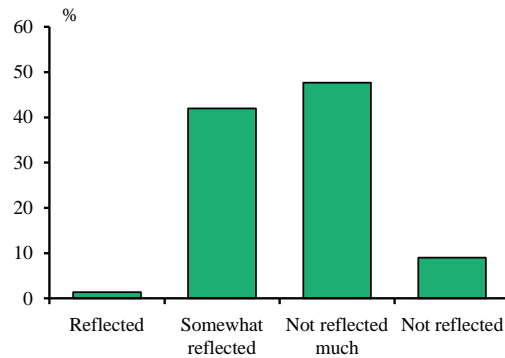
Similar patterns were observed regarding the progress made compared to a year ago. Specifically, over 50 percent of the respondents stated that climate-related risks and opportunities were reflected more or reflected somewhat more in stock prices than they were one year ago. Likewise, over 40 percent of the respondents expressed the same sentiment for corporate bonds. However, when narrowing down to the "reflected" responses, only slightly over 4 percent of the respondents believed that the risks and opportunities were reflected more in stock prices than one year ago, and just over 1 percent held the same view for corporate bonds (Charts 3 and 4).

Chart 3: Climate-related Risks and Opportunities in Stock Prices in Japan Compared to One Year Ago



Note: The total number of respondents was 375 (excluding those who did not provide answers).

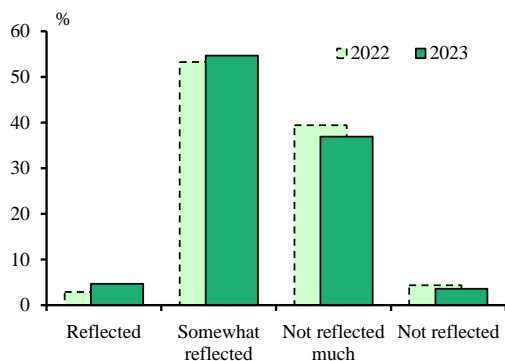
Chart 4: Climate-related Risks and Opportunities in Corporate Bond Prices in Japan Compared to One Year Ago



Note: The total number of respondents was 367 (excluding those who did not provide answers).

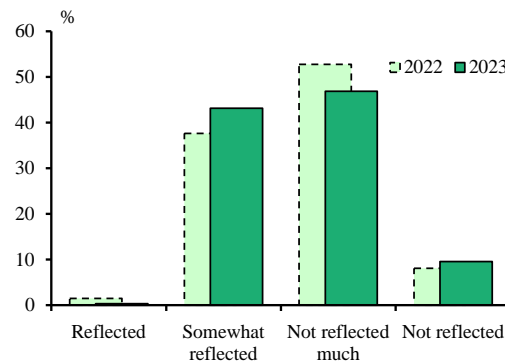
In order to analyze changes in views from the previous survey, the responses from continuous respondents were aggregated. The results indicated that, for stocks, there was no significant change in their views on the pricing of climate-related risks and opportunities. However, regarding the pricing of climate-related risks and opportunities in corporate bonds, there was a slight shift in opinions among continuous respondents. The proportion of respondents who believed that the risks and opportunities were "not reflected much" decreased somewhat, while the proportion of respondents who considered that they were "somewhat reflected" increased slightly (Charts 5 and 6).

Chart 5: Climate-related Risks and Opportunities in Stock Prices in Japan (Continuous Respondents)



Note: Of the 279 continuous respondents, the total number of respondents was 274 for 2022 and 276 for 2023 (excluding those who did not provide answers).

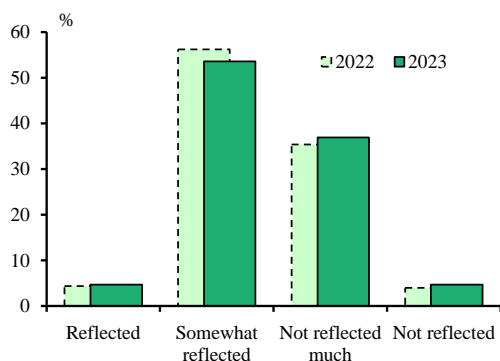
Chart 6: Climate-related Risks and Opportunities in Corporate Bond Prices in Japan (Continuous Respondents)



Note: Of the 279 continuous respondents, the total number of respondents was 271 for both 2022 and 2023 (excluding those who did not provide answers).

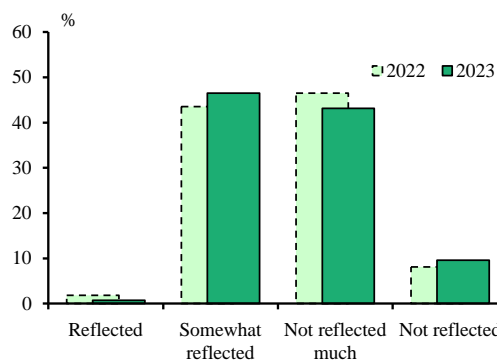
The views of continuous respondents were also analyzed to assess changes in their perspectives compared to the previous survey regarding progress made over the past year. The results indicated that there was no notable change in their views on the progress in pricing climate-related risks and opportunities in stocks. However, regarding the progress in pricing climate-related risks and opportunities in corporate bonds, there were slight shifts in opinions among continuous respondents. The proportion of respondents who believed that there was not much progress decreased somewhat, while the proportion of respondents who considered that the risks and opportunities were reflected somewhat more than they were one year ago increased slightly (Charts 7 and 8).

Chart 7: Climate-related Risks and Opportunities in Stock Prices in Japan Compared to One Year Ago (Continuous Respondents)



Note: Of the 279 continuous respondents, the total number of respondents was 274 for 2022 and 276 for 2023 (excluding those who did not provide answers).

Chart 8: Climate-related Risks and Opportunities in Corporate Bond Prices in Japan Compared to One Year Ago (Continuous Respondents)

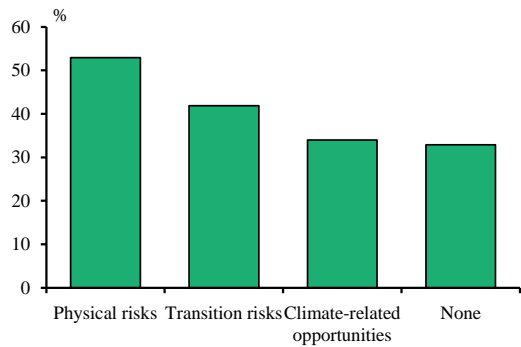


Note: Of the 279 continuous respondents, the total number of respondents was 271 for both 2022 and 2023 (excluding those who did not provide answers).

Regarding factors that were not reflected in stock prices and corporate bond prices, over 50 percent of the respondents identified "physical risks." This was followed by "transition risks" and "climate-related opportunities."³ Additionally, many respondents indicated that these factors were reflected to a lesser extent in corporate bond prices than in stock prices (Charts 9 and 10).

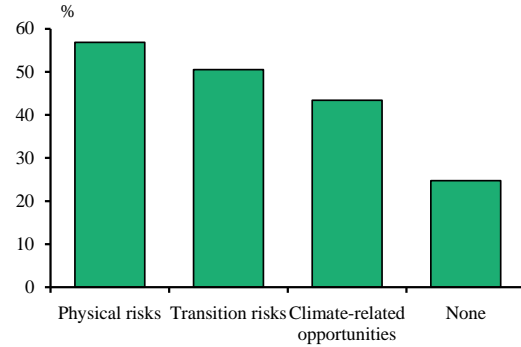
³ "Climate-related risks (physical risks)" refers to risks that physical phenomena triggered by climate change, such as large-scale disasters or rising sea levels, will have an economic loss on issuers' businesses. "Climate-related risks (transition risks)" refers to the risks of an economic loss on issuers' businesses due to changes in policy, technology, or consumer preference as society transitions towards carbon-neutral. "Climate-related opportunities" refers to profit opportunities and growth opportunities brought about by efforts to respond to climate change issues.

Chart 9: Climate-related Risks and/or Opportunities That Are Not Reflected in Stock Prices in Japan



Note: The total number of respondents was 380. Multiple answers were allowed.

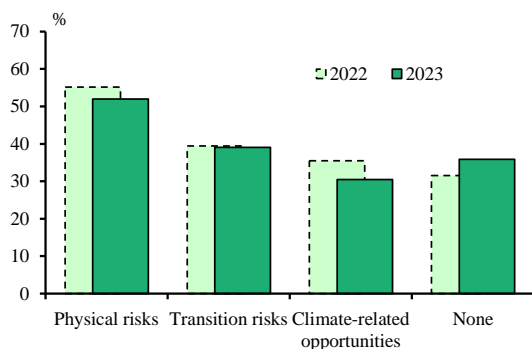
Chart 10: Climate-related Risks and/or Opportunities That Are Not Reflected in Corporate Bond Prices in Japan



Note: The total number of respondents was 380. Multiple answers were allowed.

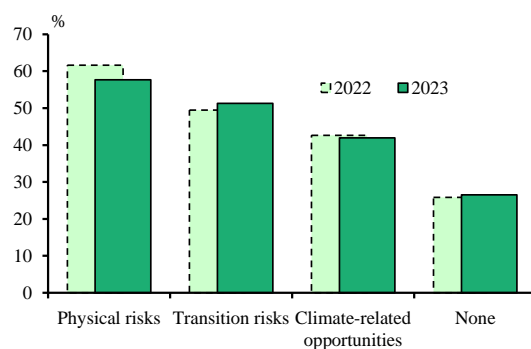
When analyzing the responses of continuous respondents, it was found that there were minimal changes compared to the previous survey in the proportions of those who believed "physical risks" and "transition risks" were not reflected in stock prices. However, there was a slight decrease in the proportion of respondents who felt that "climate-related opportunities" were not reflected in stock prices. Furthermore, there was a slight increase in the proportion of respondents who chose "none (climate-related risks and opportunities are reflected in the stock prices)." Regarding factors not reflected in corporate bond prices, there was no significant change in their views from the previous survey (Charts 11 and 12).

Chart 11: Climate-related Risks and/or Opportunities That Are Not Reflected in Stock Prices in Japan (Continuous Respondents)



Note: The total number of respondents was 279. Multiple answers were allowed.

Chart 12: Climate-related Risks and/or Opportunities That Are Not Reflected in Corporate Bond Prices in Japan (Continuous Respondents)



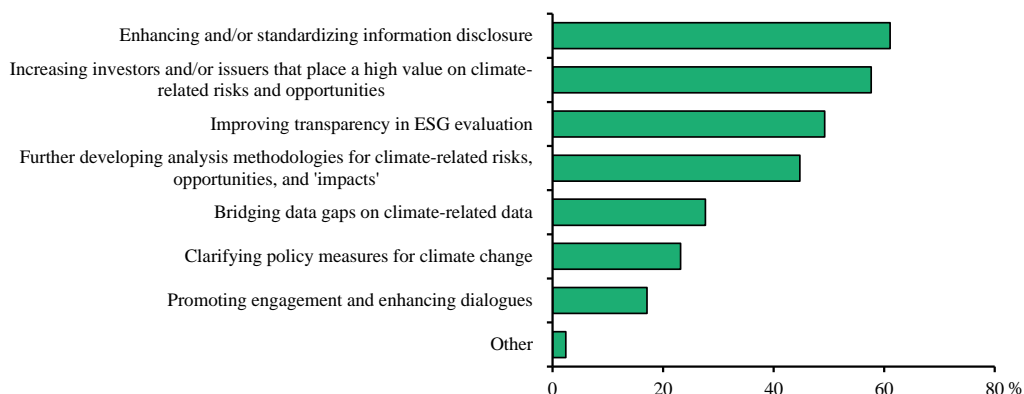
Note: The total number of respondents was 279. Multiple answers were allowed.

2. Factors Necessary to Price in Climate-related Risks and Opportunities

When asked to select up to three factors that they believed were necessary for pricing climate-related risks and opportunities more into stocks and corporate bonds, approximately 60 percent of the respondents chose "enhancing and/or standardizing information disclosure" and "increasing investors and/or issuers that place a high value on climate-related risks and opportunities," while roughly 50 percent of the respondents selected "improving transparency in ESG evaluation."

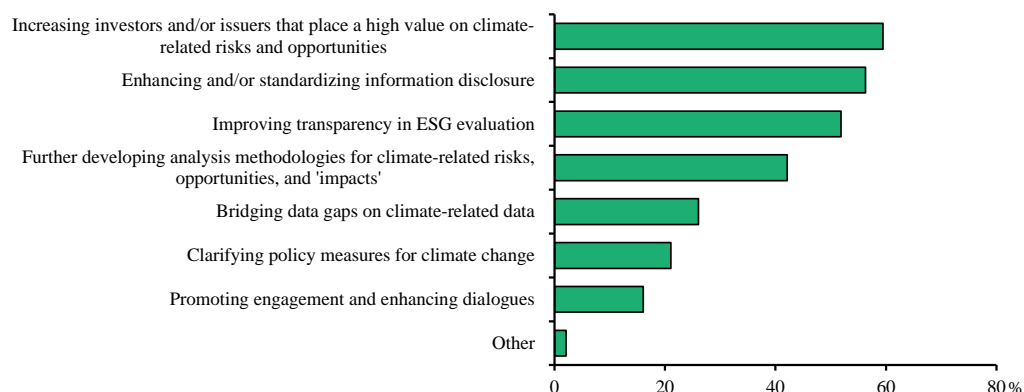
Furthermore, more than 40 percent of the respondents identified "further developing analysis methodologies for climate-related risks, climate-related opportunities, and 'impacts'" as a necessary factor for pricing climate-related risks and opportunities more in both stocks and corporate bonds. Additionally, approximately 30 percent of the respondents emphasized the importance of "bridging data gaps on climate-related data." These findings highlight the diversity of responses from the survey participants (Charts 13 and 14).

Chart 13: Factors Necessary to Reflect Climate-related Risks and Opportunities More in Stock Prices in Japan



Note: The total number of respondents was 380. Those respondents were allowed to choose up to three answers.

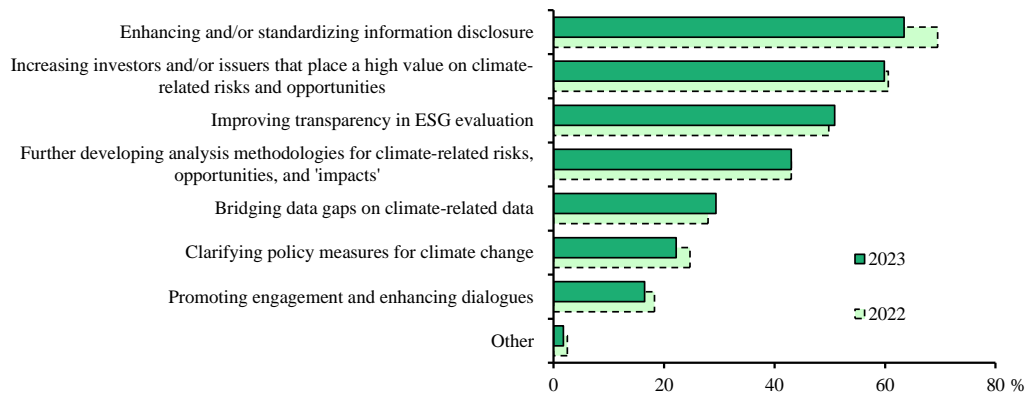
Chart 14: Factors Necessary to Reflect Climate-related Risks and Opportunities More in Corporate Bond Prices in Japan



Note: The total number of respondents was 380. Those respondents were allowed to choose up to three answers.

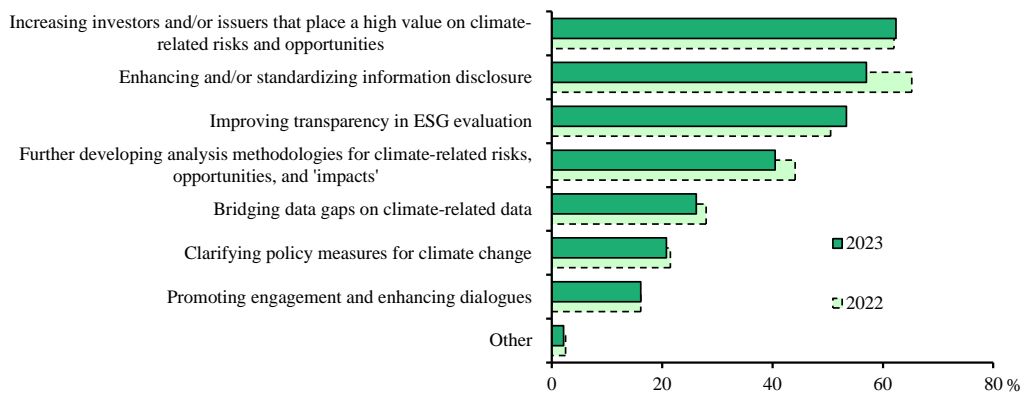
The results from continuous respondents indicated that there was a slight decrease in the proportion of respondents who chose "enhancing and/or standardizing information disclosure" as a necessary factor for pricing climate-related risks and opportunities more in both stocks and corporate bonds (Charts 15 and 16).

Chart 15: Factors Necessary to Reflect Climate-related Risks and Opportunities More in Stock Prices in Japan (Continuous Respondents)



Note: The total number of respondents was 279. Those respondents were allowed to choose up to three answers.

Chart 16: Factors Necessary to Reflect Climate-related Risks and Opportunities More in Corporate Bond Prices in Japan (Continuous Respondents)



Note: The total number of respondents was 279. Those respondents were allowed to choose up to three answers.

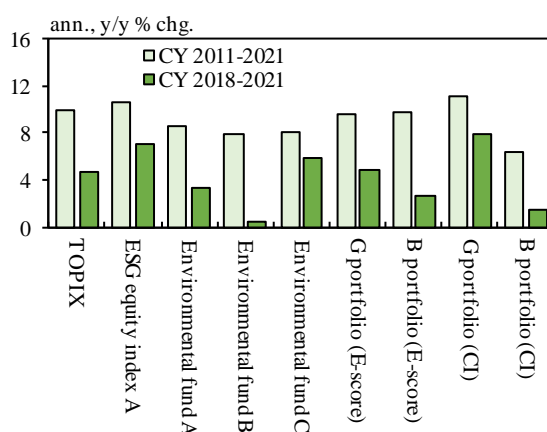
Box 1: Pricing of Climate-related Factors in the Japanese Stock Market

To evaluate the pricing of climate-related risks and opportunities ("climate-related factors"), the Bank employs not only qualitative analyses but also quantitative analyses. For example, the Bank of Japan Review published in March 2023 evaluated the pricing of climate-related factors in the Japanese stock market using the following two approaches, taking into account previous literature.⁴

1. Comparing the Performance of Equity Portfolios Considering Climate-related Factors with That of Market Benchmarks and Others

- In this approach, TOPIX listed companies whose climate-related indicators were available were categorized based on their degree of 'greenness' measured by carbon intensity (CI) or environmental score (E-Score). Hypothetical equity portfolios which consist of 'green' companies (i.e. the top one third of companies regarding greenness) and 'brown' companies (i.e. the bottom one third regarding greenness) were generated and labelled as "G portfolio" and "B portfolio," respectively. For each portfolio, an index was created by weighting the individual stock prices with their market capitalization. The return and volatility of those indices were then compared to those of TOPIX and others.
- The results of the analysis showed mixed outcomes, which varied depending on the specific sample period and the indicators used to measure the companies' greenness. Yet, overall, equity portfolios comprised of companies with higher levels of greenness demonstrated relatively favorable performance in recent years.

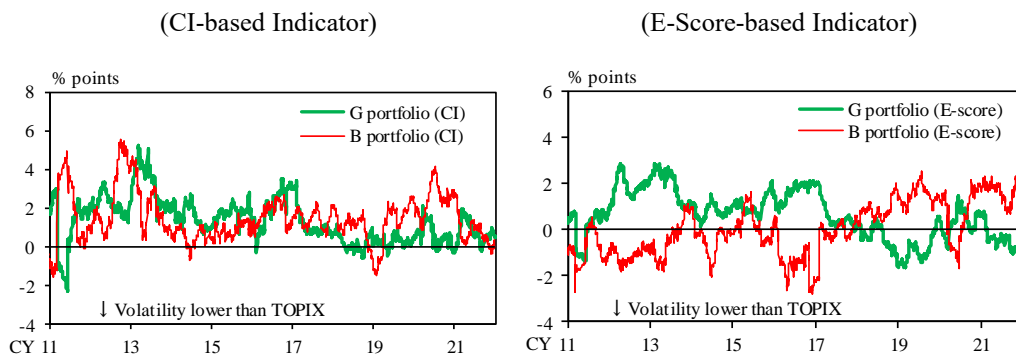
Box Chart 1-1: Comparison of Portfolio Returns



Note: Annualized total return of each sample period.
Source: Refinitiv.

⁴ For further details, please see the following: Kubo, T. and T. Oda (2023), "Honpō kabushiki shijō ni okeru kikō kanren yōin no han'ei jyōkyō: Kobetsu meigara kabuka ni motozuku teiryō bunseki" [Progress in Reflecting Climate-Related Factors in Japan's Stock Market: An Empirical Analysis Based on Individual Stock Prices], Bank of Japan Review Series, No. 23-J-4, Bank of Japan (available only in Japanese).

Box Chart 1-2: Realized Volatility of G/B Portfolios

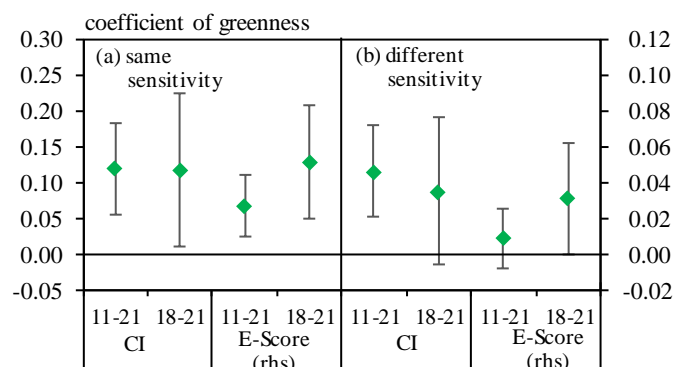


Note: The graphs describe the difference of annualized sixty-business day realized volatility of total returns between G/B portfolios and TOPIX. The observation period is from the beginning of 2011 to the end of 2021.
Source: Refinitiv.

2. Assessing the Statistical Significance of Climate-related Factors by Adding a Proxy Measure into a Standard Stock Return Model as an Additional Explanatory Variable

- In this approach, the greenness of companies measured by CI or E-Score was added as an explanatory variable to the Three-Factor Model developed by Fama and French (1993).⁵ The Three-Factor Model is a well-known model used to explain stock return variations. The coefficient for greenness was then checked for statistical significance.
- In the estimation which added individual companies' greenness as an explanatory variable to the abovementioned model, the coefficient for greenness was mostly significant overall through the different sample periods.

Box Chart 1-3: Estimation of Excess Returns (A)

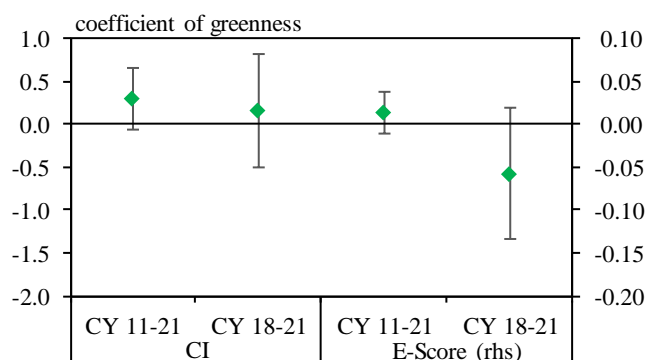


Note: In scenario (a), it is assumed that all stocks have the same sensitivity to the three common factors, while in scenario (b), the sensitivity is assumed to vary for each individual stock. The bands show the 95% confidence interval.
Sources: Bloomberg, K. French's website, Refinitiv.

⁵ The Three-Factor Model aims to explain the variations of excess returns of stocks, measured by individual stock returns minus the risk-free interest rate, with three common risk factors: (a) overall market risk (i.e. market risk premium); (b) company size (i.e. market capitalization); and (c) whether the company is a growth company or a value company (i.e. ratio of book value to market value). For further details, please see the following: Fama, E. F., & French K.R. (1993), "Common Risk Factors in the Returns on Stocks and Bonds," *Journal of Financial Economics*, 33, pp. 3-56.

- Whether greenness is effective for predicting stock returns was also examined based on prior research such as Bolton and Kacperczyk (2021).⁶ Specifically, the coefficient of greenness was estimated while controlling for major financial indicators and the market trend which are known to be useful in predicting stock returns.
- However, in this approach, the coefficient for greenness was not statistically significant for both cases using the CI and E-Score-based variables. In other words, greenness could not predict stock prices effectively.

Box Chart 1-4: Estimation of Excess Returns (B)



Note: The bands show the 95% confidence interval.
Sources: Bloomberg, Refinitiv.

As the results above suggest, the assessment of whether climate-related factors are priced into Japanese stock prices differs by sample period, estimation methodology, and climate-related factor-proxies adopted in the estimation. In fact, consensus has not been reached in empirical literature regarding the degree to which the stock market incorporates climate-related factors.

The lack of consensus can be mainly attributed to the limited availability of climate change-related data, as well as the inherent challenge of disentangling the impact of climate-related factors from other influential factors in the complex process of stock price formation.

Considering these challenges in quantitative analyses, it is crucial to employ diverse perspectives and also utilize qualitative surveys to obtain a robust understanding on how climate-related factors are priced in financial instruments.

⁶ Bolton, P., and M. Kacperczyk (2021), "Do Investors Care about Carbon Risk?" *Journal of Financial Economics*, 142, pp. 517-549.

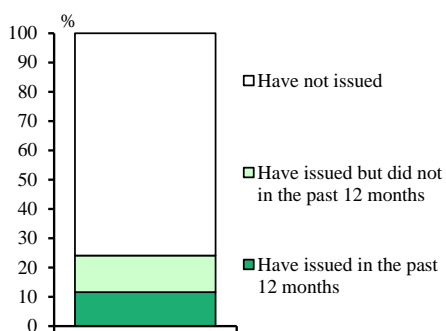
B. Climate Change-related ESG Bond Market

1. Experiences and Purposes of Issuing Climate Change-related ESG Bonds

According to the survey results, a relatively small proportion of issuers⁷, around 20 percent, confirmed that they had issued climate change-related ESG bonds (hereinafter "the ESG bonds"), as shown as "have issued in the past 12 months" and "have issued but did not in the past 12 months" in the chart.⁸ Within that group, only slightly over 10 percent reported issuing those bonds within the past 12 months (Chart 17).

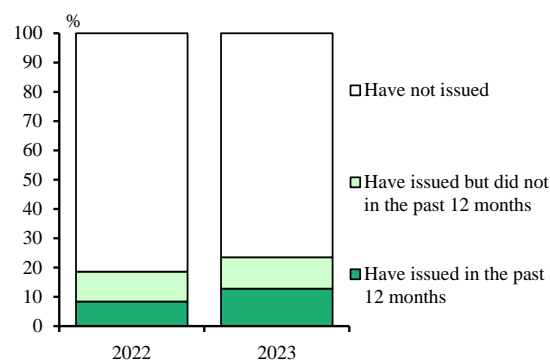
The proportion of continuous respondents who reported having issued the ESG bonds increased slightly compared to the previous survey, due to a higher number of respondents indicating that they had issued those bonds in the past 12 months (Chart 18).

Chart 17: Respondents that Have Issued Climate Change-related ESG Bonds in the Past



Note: Of the 380 respondents, the total number of respondents was 311, excluding those who did not provide answers to the question on their experience in issuing the ESG bonds and those who chose "not applicable (not an issuer)" in that question.

Chart 18: Respondents that Have Issued Climate Change-related ESG Bonds in the Past (Continuous Respondents)



Note: Of the 279 continuous respondents, the total number of respondents was 226, excluding those who did not provide answers to the question on their experience in issuing the ESG bonds and those who chose "not applicable (not an issuer)" in that question.

The issuers who did not issue the ESG bonds in the past 12 months were also asked why they had not issued those bonds (multiple answers were allowed). The most common reason, chosen by nearly 50 percent of respondents, was "no need to obtain external funds." This was followed by "fund raising through other means of financing in Japan is more favorable than issuing the ESG

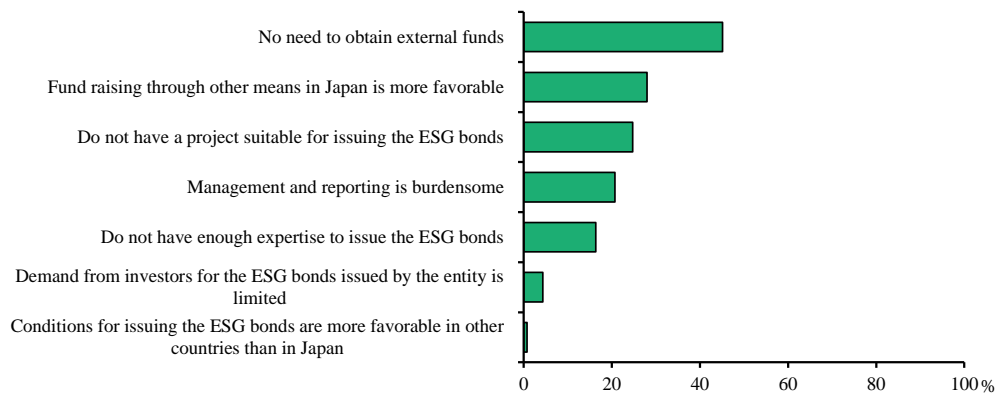
⁷ In this round of the survey, "issuers" refers specifically to respondents who provided answers to Question 11 shown in Appendices and did not select the option "not applicable (not an issuer)" in that question.

⁸ "Climate change-related ESG bonds" refers to green bonds, sustainability bonds, sustainability-linked bonds with performance targets related to efforts on climate change, and transition bonds that comply with corresponding international standards and/or guidelines set by the Japanese government.

bonds" and "do not have a project suitable for issuing the ESG bonds." Additionally, approximately 20 percent of issuers noted that "management and reporting associated with the issuance of the ESG bonds is burdensome," while a similar percentage of the respondents answered that they "do not have enough expertise to issue the ESG bonds" (Chart 19).

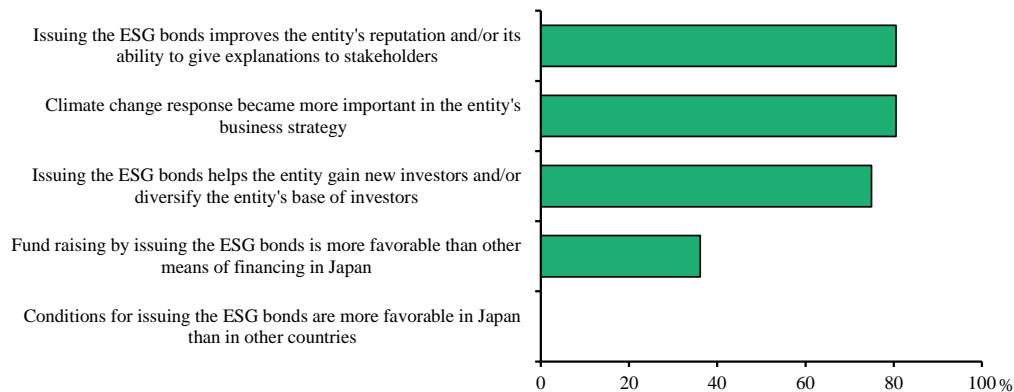
In contrast, among those who issued the ESG bonds in the past 12 months, many chose options related to the strategic interests for their businesses and investor relations, highlighting the advantages for the entity as a whole. The most common choices included "issuing the ESG bonds improves the entity's reputation and/or its ability to give explanations to stakeholders," "climate change response became more important in the entity's business strategy," and "issuing the ESG bonds helps the entity gain new investors and/or diversify the entity's base of investors." Only slightly less than 40 percent of respondents selected "fund raising by issuing the ESG bonds is more favorable than other means of financing in Japan" (Chart 20).

Chart 19: Reasons for Not Issuing Climate Change-related ESG Bonds in the Past 12 Months



Note: The total number of respondents was 275. Those were the respondents who answered that they had not issued the ESG bonds in the past 12 months. Multiple answers were allowed.

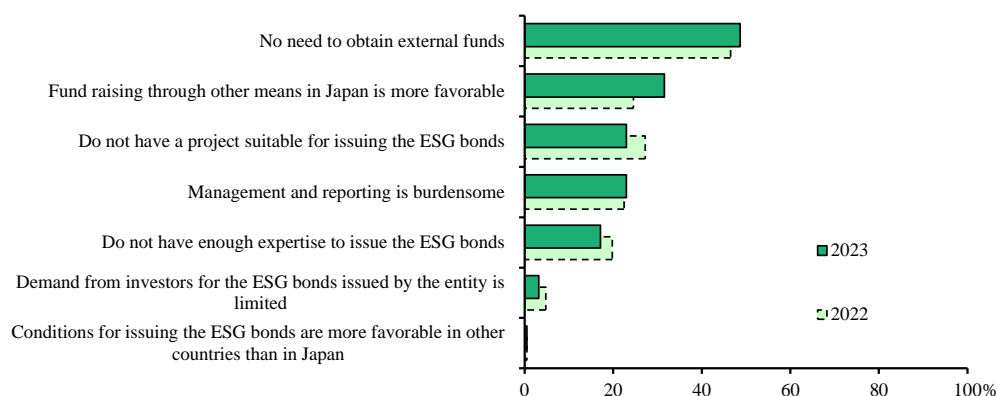
Chart 20: Reasons for Issuing Climate Change-related ESG Bonds in the Past 12 Months



Note: The total number of respondents was 36. Those were the respondents who answered that they had issued the ESG bonds in the past 12 months. Multiple answers were allowed.

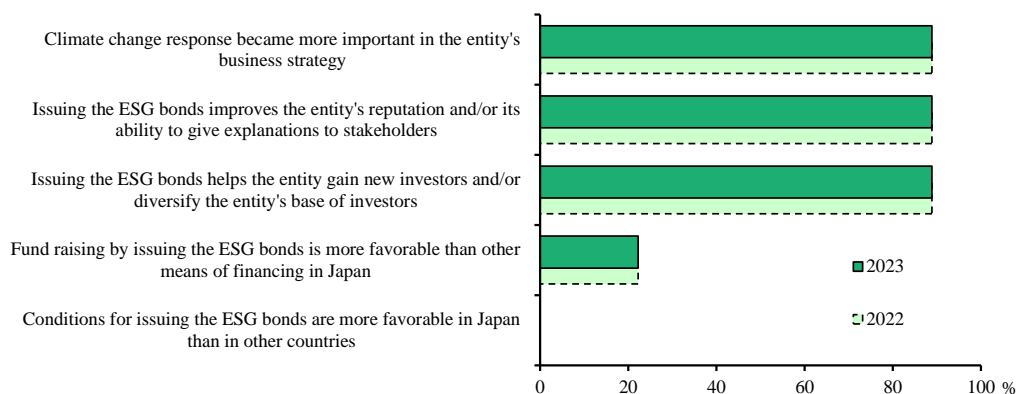
Compared to the previous survey, there was a slight increase in the proportion of continuous respondents who selected "fund raising through other means of financing in Japan is more favorable than issuing the ESG bonds" as their reason for not issuing the ESG bonds in the past 12 months (Charts 21 and 22).

Chart 21: Reasons for Not Issuing Climate Change-related ESG Bonds in the Past 12 Months (Continuous Respondents)



Note: The total number of respondents was 187. Those were the respondents who answered that they had not issued the ESG bonds in the past 12 months in the 2022 and 2023 surveys. Multiple answers were allowed.

Chart 22: Reasons for Issuing Climate Change-related ESG Bonds in the Past 12 Months (Continuous Respondents)



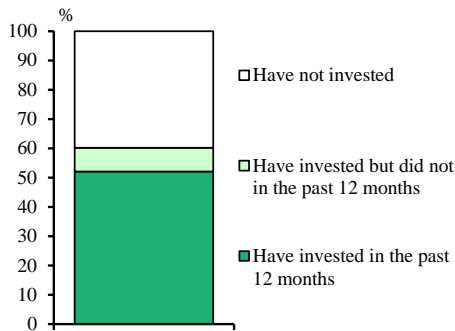
Note: The total number of respondents was 9. Those were the respondents who answered that they had issued the ESG bonds in the past 12 months in the 2022 and 2023 surveys. Multiple answers were allowed.

2. Experience and Purposes of Investing in Climate Change-related ESG Bonds

When asked whether they had invested in climate change-related ESG bonds, about 60 percent of investors indicated previous investments in the ESG bonds (shown as "have invested in the past 12 months" and "have invested but did not in the past 12 months" in the chart), with the majority noting that they had made those investments within the past 12 months (Chart 23).⁹

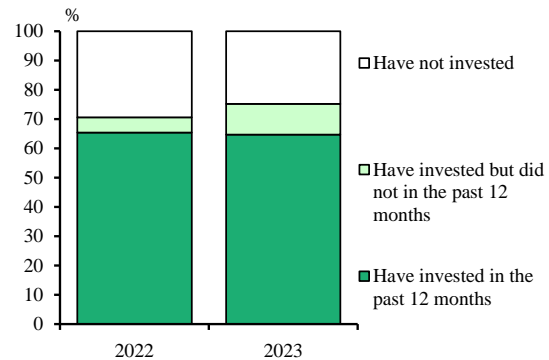
Among the continuous respondents, there was a slight decrease in the proportion of respondents who indicated they had not invested in the ESG bonds, while there was a slight increase in the proportion of respondents who reported having invested in those bonds before (Chart 24).

Chart 23: Respondents that Have Invested in Climate Change-related ESG Bonds in the Past



Note: Of the 380 respondents, the total number of respondents was 211, excluding those who did not provide answers to the question on their experience in investing in the ESG bonds and those who chose "not applicable (not an investor)" in that question.

Chart 24: Respondents that Have Invested in Climate Change-related ESG Bonds in the Past (Continuous Respondents)



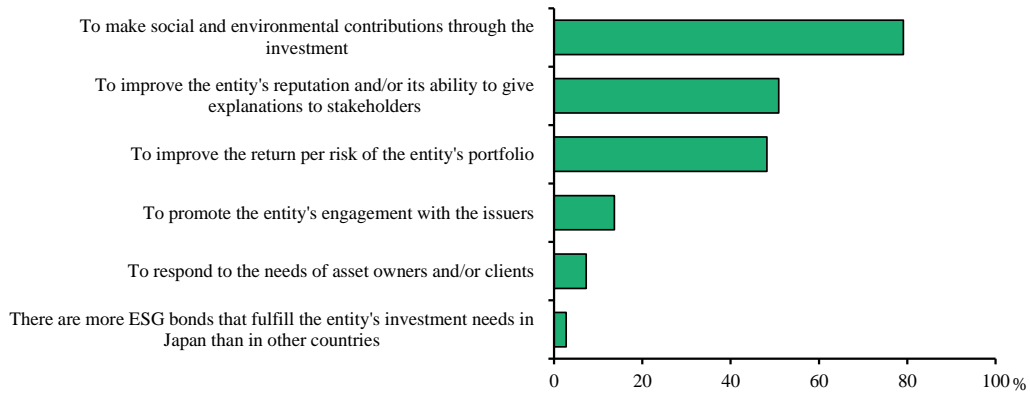
Note: Of the 279 continuous respondents, the total number of respondents was 153, excluding those who did not provide answers to the question on their experience in investing in the ESG bonds and those who chose "not applicable (not an investor)" in that question.

Among the investors who had invested in the ESG bonds in the past 12 months (in the question where multiple answers were allowed), approximately 80 percent stated that their motivation was "to make social and environmental contributions through the investment." Additionally, around 50 percent of the investors mentioned that they invested in the ESG bonds "to improve the entity's reputation and/or its ability to give explanations to stakeholders." Similarly, around 50 percent of the respondents indicated that they invested in the ESG bonds "to improve the return per risk of the entity's portfolio" (Chart 25).

⁹ In this round of the survey, "investors" refers specifically to respondents who provided answers to Question 15 shown in Appendices and did not select the option "not applicable (not an investor)" in that question.

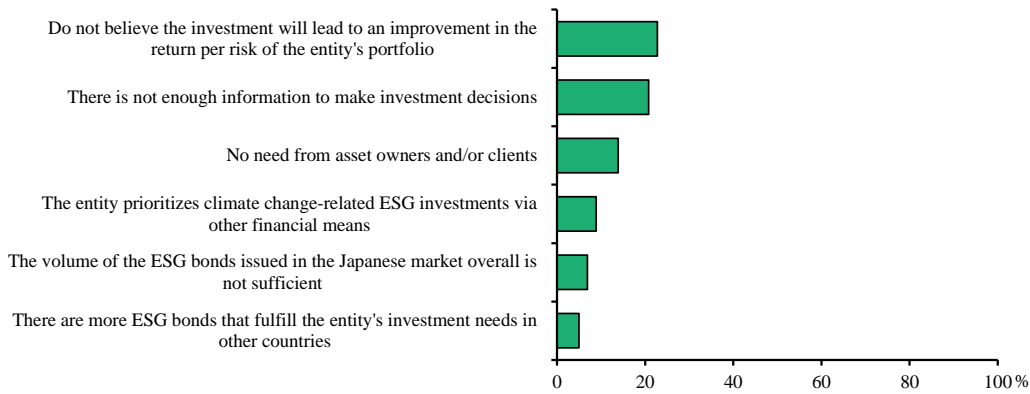
Among the respondents who had not invested in the ESG bonds in the past 12 months, many mentioned that they "do not believe the investment will lead to an improvement in the return per risk of the entity's portfolio" and "there is not enough information to make investment decisions including concerns over 'greenwashing'" (Chart 26).

Chart 25: Reasons for Investing in Climate Change-related ESG Bonds in the Past 12 Months



Note: The total number of respondents was 110. Those were the respondents who answered that they had invested in the ESG bonds in the past 12 months. Multiple answers were allowed.

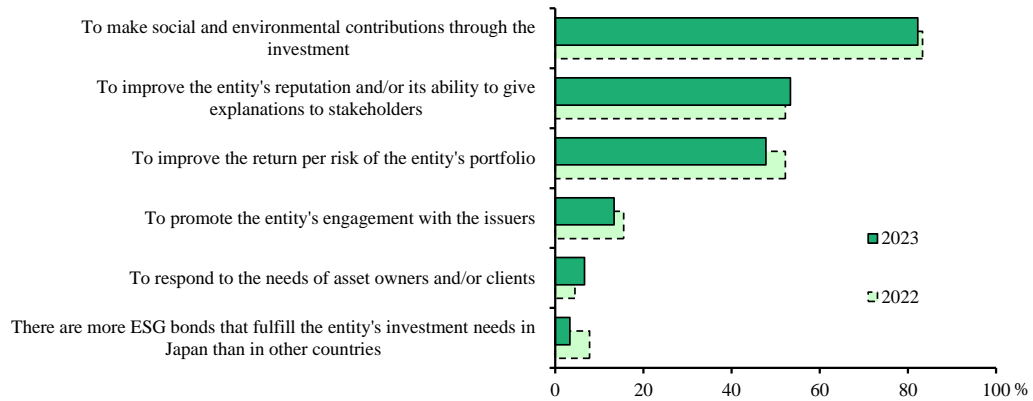
Chart 26: Reasons for Not Investing in Climate Change-related ESG Bonds in the Past 12 Months



Note: The total number of respondents was 101. Those were the respondents who answered that they had not invested in the ESG bonds in the past 12 months. Multiple answers were allowed.

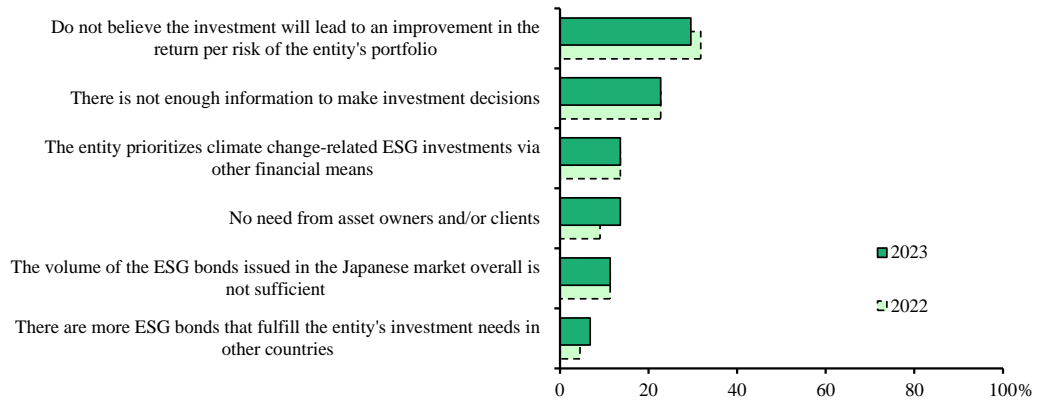
The distribution of reasons chosen by continuous respondents for investing or not investing in the ESG bonds in the past 12 months did not show any significant change compared to the previous survey (Charts 27 and 28).

Chart 27: Reasons for Investing in Climate Change-related ESG Bonds in the Past 12 Months
(Continuous Respondents)



Note: The total number of respondents was 90. Those were the respondents who answered that they had invested in the ESG bonds in the past 12 months in the 2022 and 2023 surveys. Multiple answers were allowed.

Chart 28: Reasons for Not Investing in Climate Change-related ESG Bonds in the Past 12 Months
(Continuous Respondents)



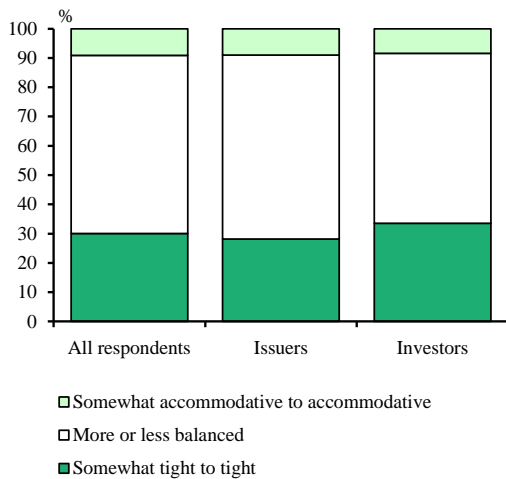
Note: The total number of respondents was 44. Those were the respondents who answered that they had not invested in the ESG bonds in the past 12 months in the 2022 and 2023 surveys. Multiple answers were allowed.

3. Supply and Demand Conditions of Climate Change-related ESG Bonds

Regarding the supply and demand conditions of the ESG bonds in Japan, over 60 percent of the respondents indicated that the conditions were "more or less balanced." However, around 30 percent described the conditions as "somewhat tight to tight," while only approximately 10 percent considered them "somewhat accommodative to accommodative."

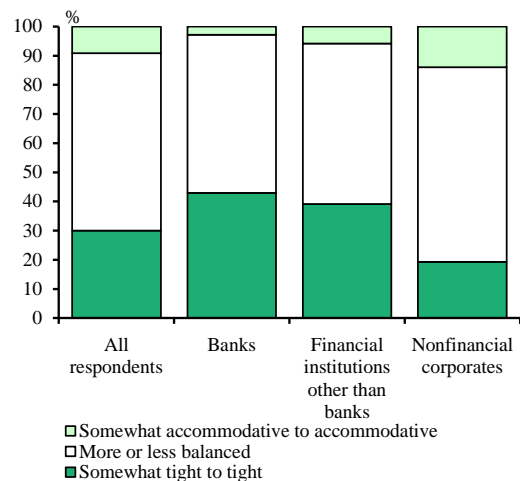
On this point, a somewhat higher proportion of investors chose "somewhat tight to tight" compared to issuers. By sector, the proportion is clearly higher for financial institutions than nonfinancial corporates (Charts 29 and 30).

Chart 29: View/Impression on the Supply and Demand Conditions of Climate Change-related ESG Bonds in Japan (by Issuer/Investor)



Note: The total number of respondents was 363 (excluding those who did not provide answers).

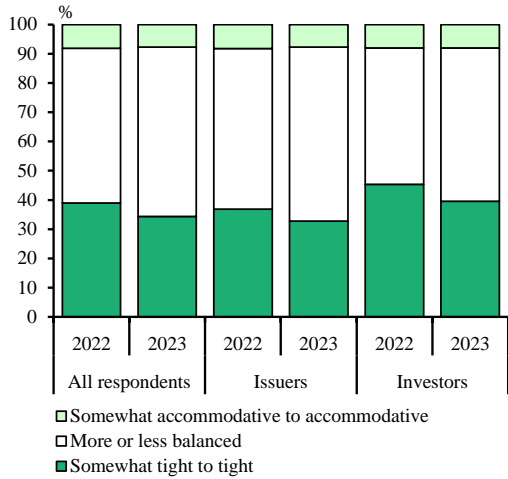
Chart 30: View/Impression on the Supply and Demand Conditions of Climate Change-related ESG Bonds in Japan (by Sector)



Note: The total number of respondents was 363 (excluding those who did not provide answers).

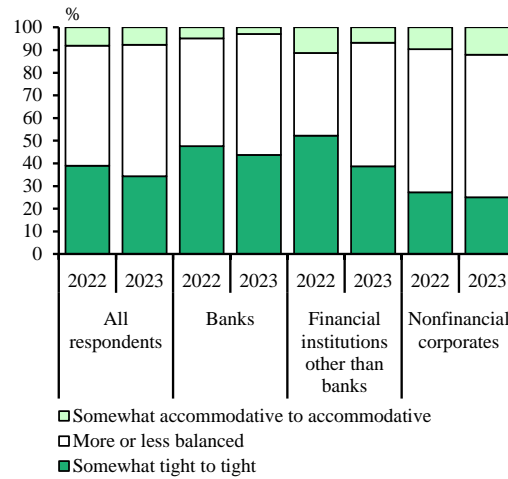
The views of continuous respondents on the supply and demand conditions of the ESG bonds remained largely unchanged from the previous survey. However, there was a slight decrease in the proportion of those perceiving the conditions as "somewhat tight to tight," while the proportion of those perceiving them as "more or less balanced" increased slightly. These trends were observed among both issuers and investors (Charts 31 and 32).

Chart 31: View/Impression on the Supply and Demand Conditions of Climate Change-related ESG Bonds in Japan (by Issuer/Investor, Continuous Respondents)



Note: Of the 279 continuous respondents, the total number of respondents was 272 for 2022 and 271 for 2023 (excluding those who did not provide answers).

Chart 32: View/Impression on the Supply and Demand Conditions of Climate Change-related ESG Bonds in Japan (by Sector, Continuous Respondents)

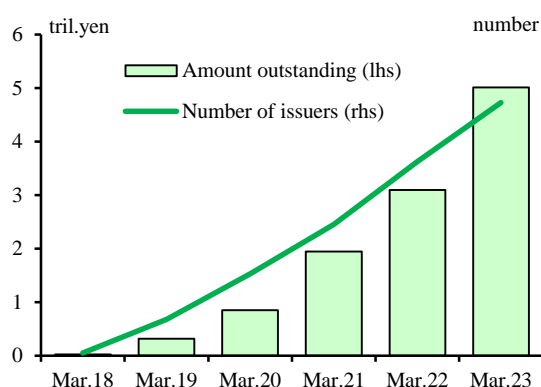


Note: Of the 279 continuous respondents, the total number of respondents was 272 for 2022 and 271 for 2023 (excluding those who did not provide answers).

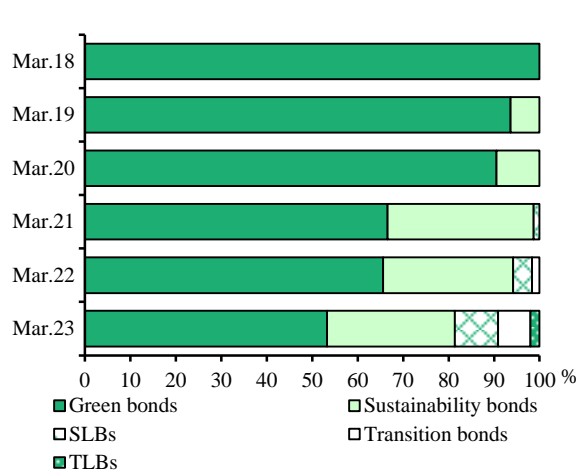
Box 2: Japanese ESG Bond Market

The issuance of climate change-related ESG bonds (hereinafter "the ESG bonds") has continued to increase in the Japanese corporate bond market. The amount outstanding of the ESG bonds that were publicly offered as straight corporate bonds increased by about six times in three years by the end of fiscal 2022.¹⁰ The types of the ESG bonds also increased. There has been an increase in the issuance of sustainability-linked bonds (SLBs) and transition bonds, while the market has also seen the inaugural issuance of transition-linked bonds (TLBs).

Box Chart 2-1: Amount Outstanding and Number of Issuers



Box Chart 2-2: Breakdown of Amount Outstanding by Bond Type



Notes: 1. In this box, climate change-related ESG bonds represent green bonds, sustainability bonds, SLBs, transition bonds, and TLBs. The data cover the ESG bonds that were publicly offered as straight corporate bonds in Japan. (The same applies hereinafter unless specified otherwise.) The number of issuers indicates issuers with the amounts outstanding of the ESG bonds at specific points in time.

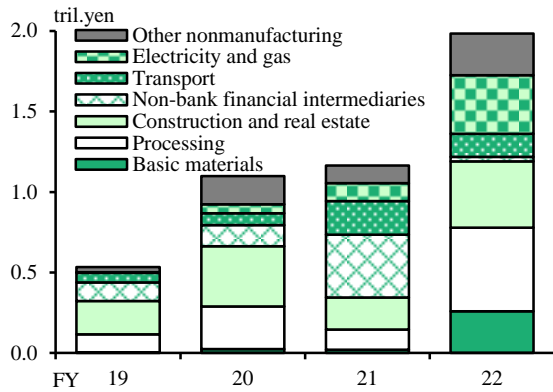
2. The data provided are as of the end of each month.

Source: Japan Exchange Group (JPX), "ESG Bond Information Platform."

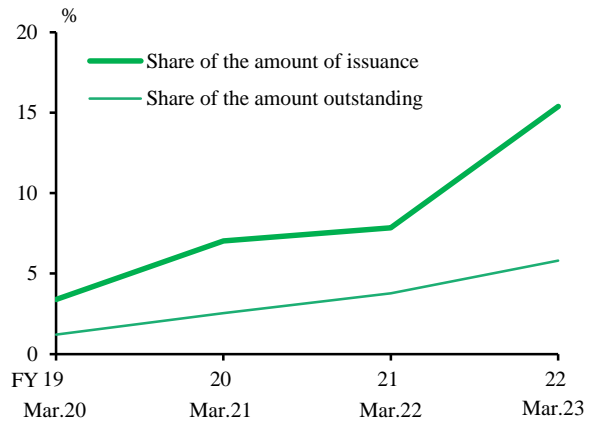
The types of industrial sectors issuing the ESG bonds increased as well. Looking at the amount of issuance in fiscal 2022, while the construction and real estate sector and the processing sector continued to be active in issuing those bonds, the issuance by the electricity and gas sector and the basic materials sector also increased. Under these circumstances, the share of the ESG bonds in the overall corporate bond market saw a significant increase, both in terms of the amount outstanding and the amount of issuance.

¹⁰ In Japan, the fiscal year starts in April and ends in March of the following year.

Box Chart 2-3: Breakdown of Issuance Amount by Sector (Flow)



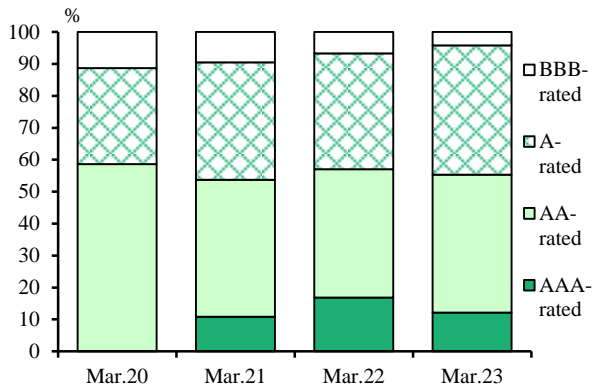
Box Chart 2-4: Share of the ESG Bonds in the Japanese Corporate Bond Market



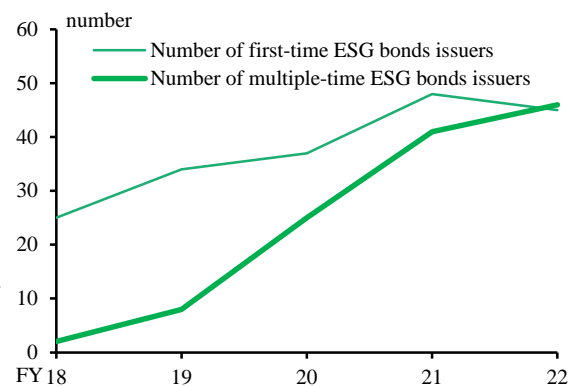
Sources: JPX, "ESG Bond Information Platform"; Japan Securities Dealers Association (JSDA), "Issuing, Redemption and Outstanding Amounts of Bonds."

As for the breakdown of issuers of the ESG bonds, relatively highly rated firms continued to be the main issuers. However, there was also a significant number of first-time issuers and an increasing trend of repeated issuances. These developments suggest a growing participation of a wider range of entities in the ESG bond market and an increasing prevalence of the ESG bond issuance.

Box Chart 2-5: Breakdown of Amount Outstanding by Credit Rating



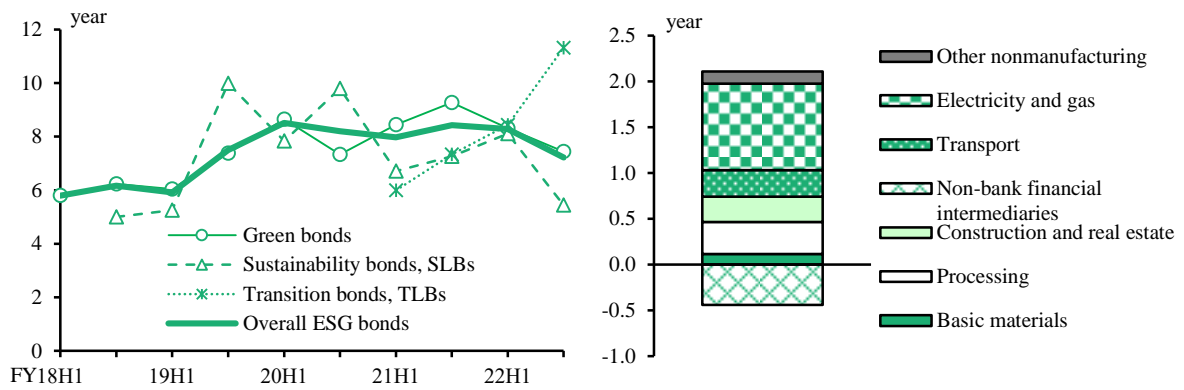
Box Chart 2-6: Number of Issuers and Issuance Experience



Notes: 1. In the left-hand chart, credit ratings are the highest ratings obtained at the time of issuance. In the right-hand chart, issuers are categorized into two groups: those who have issued the ESG bonds for the first time and those who have issued multiple times. The multiple-time issuers include entities that have issued the ESG bonds multiple times within the same fiscal year.
2. The data in the left-hand chart are as of the end of each month.
Source: JPX, "ESG Bond Information Platform."

The average maturity of the newly issued ESG bonds, excluding subordinated bonds, prolonged somewhat compared to a few years ago at around fiscal 2018 to 2019. This is partly due to an increase in the issuance by the electricity and gas sector, which usually issues bonds with long maturities. The maturity of the ESG bonds issued by other sectors also became longer, in general.

Box Chart 2-7: Changes in Maturity
 (Average Maturity by Bond Type) (Contribution to Changes in the Average Maturity of the ESG Bonds)
 FY18-19→FY20-22



Note: The average maturity is calculated as the simple average of the ESG bonds (excluding subordinated bonds) issued during each period. "H1" represents the first half of the fiscal year from April to September. The right-hand chart illustrates the contribution to changes in the average maturity between fiscal 2018 to 2019 and 2020 to 2022.

Source: JPX, "ESG Bond Information Platform."

C. Prospects and Challenges of the Climate Change-related ESG Bond Market

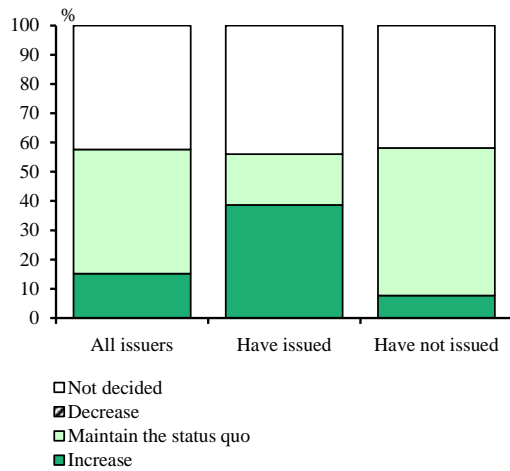
1. Plans for Issuances and Investments

The survey asked respondents about whether they planned to change their issuance of and/or investment in the ESG bonds in the next 12 months. None of them answered that they planned to decrease their issuance and/or investment.

Regarding plans for issuance, more than 40 percent of the respondents stated that they had not yet decided whether they would make any changes to their issuance, while a similar percentage indicated that they would maintain the status quo. Less than 20 percent of the respondents expressed their intention to increase their issuance. Among those who had already issued the ESG bonds, nearly 40 percent mentioned their plans to increase their issuance. In contrast, less than 10 percent of respondents who had not previously issued the ESG bonds expressed their intention to increase their issuance (Chart 33).

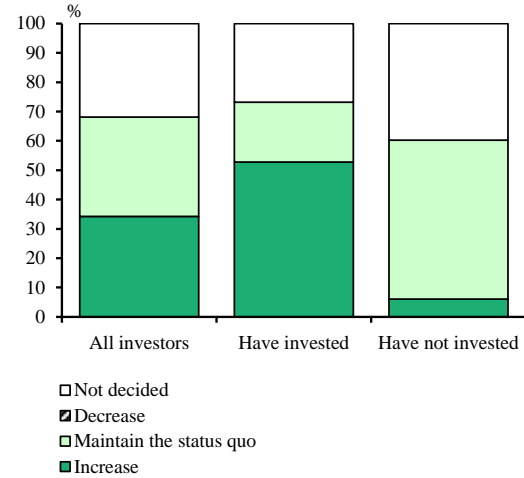
Regarding plans for investment, over 30 percent of the respondents indicated their intention to increase their investments in the ESG bonds in the next 12 months. Likewise, over 30 percent of respondents stated that they had not yet decided whether they would make any changes to their investments and a similar percentage of respondents expressed their intention to maintain the status quo. Among those who had already invested in the ESG bonds, more than 50 percent expressed their plans to increase their investments. In contrast, less than 10 percent of respondents who had not previously invested in the ESG bonds mentioned their intention to increase their investments (Chart 34).

Chart 33: Plans for Issuing Climate Change-related ESG Bonds in the Next 12 Months



Note: The total number of respondents was 309 (excluding those who did not provide answers).

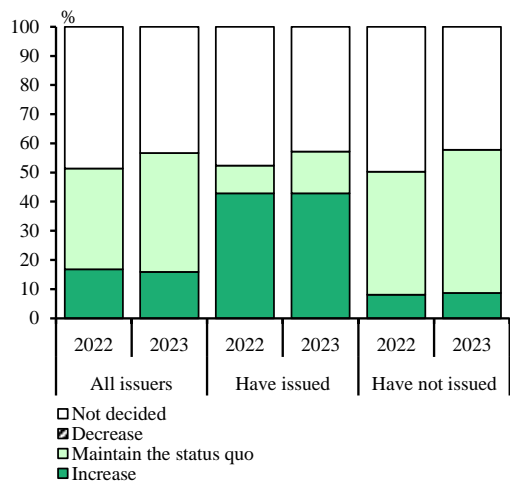
Chart 34: Plans for Investing in Climate Change-related ESG Bonds in the Next 12 Months



Note: The total number of respondents was 210 (excluding those who did not provide answers).

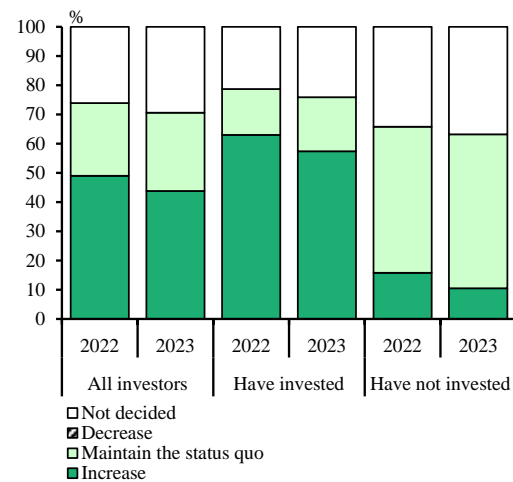
The results from continuous respondents indicated a slight increase in the proportion of those who stated their intention to maintain the status quo of their issuance compared to the previous survey. This trend was more pronounced among respondents who had not previously issued the ESG bonds. Conversely, the proportion of respondents planning to increase their investments showed a slight decline (Charts 35 and 36).

Chart 35: Plans for Issuing Climate Change-related ESG Bonds in the Next 12 Months (Continuous Respondents)



Note: Out of the 279 continuous respondents, a total of 226 participants identified themselves as issuers in both the 2022 and 2023 surveys (excluding those who did not provide answers).

Chart 36: Plans for Investing in Climate Change-related ESG Bonds in the Next 12 Months (Continuous Respondents)

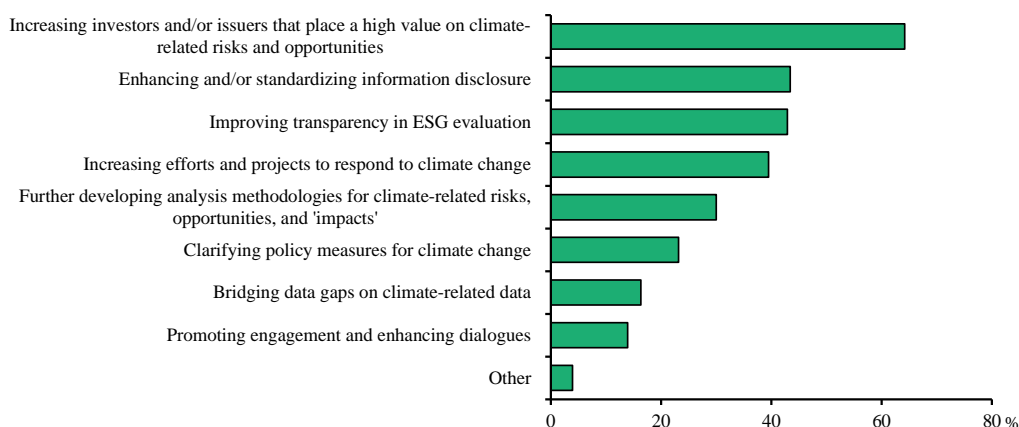


Note: Out of the 279 continuous respondents, a total of 153 participants identified themselves as investors in both the 2022 and 2023 surveys (excluding those who did not provide answers).

2. Challenges for Increasing the Size of the Climate Change-related ESG Bond Market

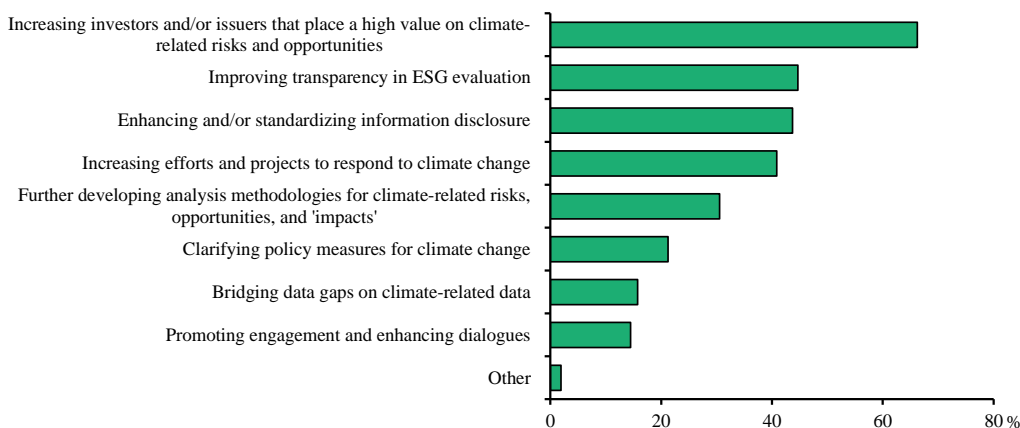
The survey included a question asking respondents to select up to three factors that were necessary to increase the size of the ESG bond market in Japan. The most common factor, chosen by over 60 percent of respondents, was "increasing investors and/or issuers that place a high value on climate-related risks and opportunities." This was followed by "enhancing and/or standardizing information disclosure," "improving transparency in ESG evaluation," and "increasing efforts and projects to respond to climate change," each selected by approximately 40 percent of respondents. Additionally, around 20 to 30 percent of respondents chose "further developing analysis methodologies for climate-related risks, climate-related opportunities, and 'impacts'," "clarifying policy measures for climate change," and "bridging data gaps on climate-related data." Notably, no significant differences were observed in the responses between issuers and investors (Charts 37 to 39).

Chart 37: Challenges for Increasing the Size of the Climate Change-related ESG Bond Market in Japan (All Respondents)



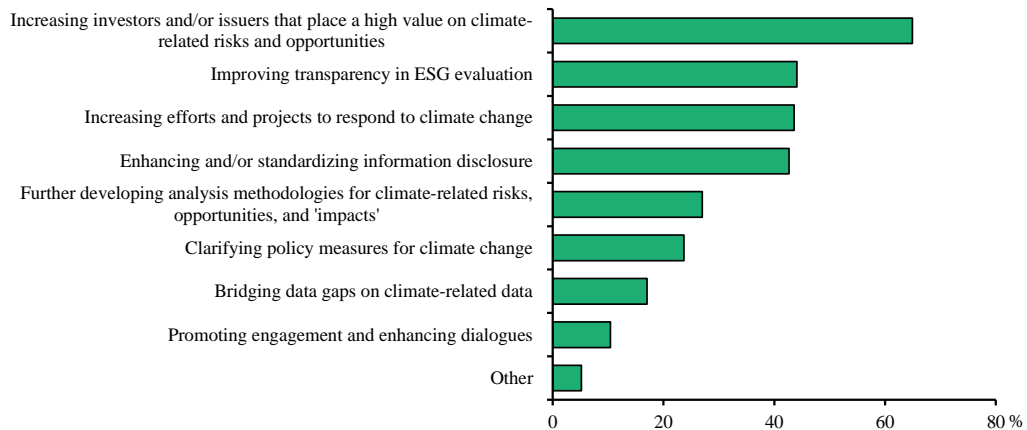
Note: The total number of respondents was 380. Those respondents were allowed to choose up to three answers.

Chart 38: Challenges for Increasing the Size of the Climate Change-related ESG Bond Market in Japan (Issuers)



Note: The total number of respondents was 311. Those respondents were allowed to choose up to three answers.

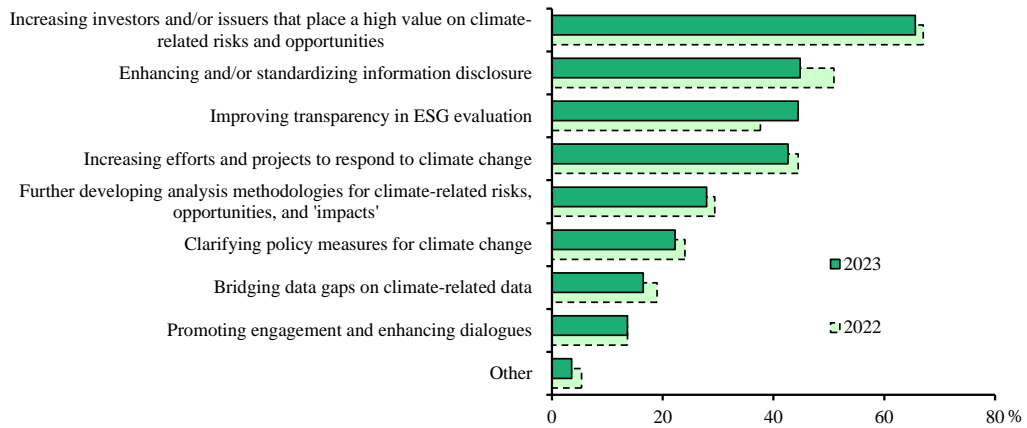
Chart 39: Challenges for Increasing the Size of the Climate Change-related ESG Bond Market in Japan (Investors)



Note: The total number of respondents was 211. Those respondents were allowed to choose up to three answers.

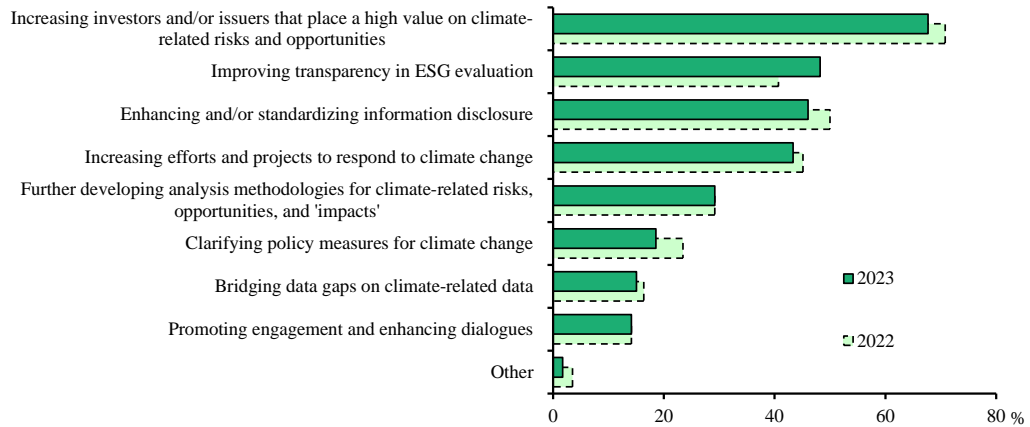
Among continuous respondents, there was a marginal decline in the proportion of issuers and investors who selected "enhancing and/or standardizing information disclosure," while a slight increase was observed in the proportion of respondents that chose "improving transparency in ESG evaluation" for both issuers and investors (Charts 40 to 42).

Chart 40: Challenges for Increasing the Size of the Climate Change-related ESG Bond Market in Japan (All Respondents, Continuous Respondents)



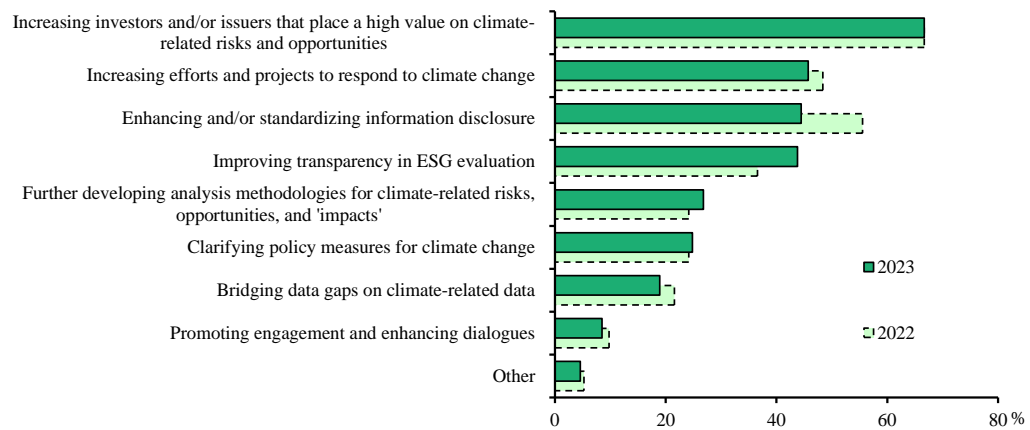
Note: The total number of respondents was 279. Those respondents were allowed to choose up to three answers.

Chart 41: Challenges for Increasing the Size of the Climate Change-related ESG Bond Market in Japan
(Issuers, Continuous Respondents)



Note: Out of the 279 continuous respondents, a total of 226 participants identified themselves as issuers in both the 2022 and 2023 surveys. Those respondents were allowed to choose up to three answers.

Chart 42: Challenges for Increasing the Size of the Climate Change-related ESG Bond Market in Japan
(Investors, Continuous Respondents)



Note: Out of the 279 continuous respondents, a total of 153 participants identified themselves as investors in both the 2022 and 2023 surveys. Those respondents were allowed to choose up to three answers.

3. Challenges for the Further Development of Japanese Financial Markets to Contribute to Addressing Climate Change

The survey included an open-ended question regarding the further development of Japanese financial markets to contribute to addressing climate change, asking for changes observed or new challenges faced compared to a year ago. Respondents highlighted various aspects. Among them, several key issues were repeatedly emphasized, aligning with the factors identified in the previous question regarding the incorporation of climate-related risks and opportunities in financial instrument prices, as well as challenges related to expanding the ESG bond market. These points were "enhancing and/or standardizing information disclosure," "improving transparency in ESG evaluation," and "increasing investors and/or issuers that place a high value on climate-related risks and opportunities."

In terms of "enhancing and/or standardizing information disclosure," many respondents highlighted enhanced disclosure of information on sustainability as an improvement since last year. Moreover, many expect continued progress in institutional frameworks and their practical implementation (see Box 4).

Regarding "improving transparency in ESG evaluation," many respondents emphasized the growing importance of external evaluations by third parties as the ESG bond market expands. They expressed a need for clearer and standardized evaluation criteria, as well as the development of an assessment methodology that is easily understood by both issuers and investors.

Concerning "increasing investors and/or issuers that place a high value on climate-related risks and opportunities," respondents highlighted the expansion of the issuer and investor base, leading to increased opportunities for engagement between them. They also acknowledged the government's efforts in promoting green transformation and transition finance. However, some respondents expressed concerns about declining public interest in climate change, partly attributed to rising energy prices, and emphasized the need for greater awareness and incentive policies. Participants recognized the positive impact of the Bank of Japan's Funds-Supplying Operations to Support Financing for Climate Change Responses in stimulating investment and lending, and they anticipated further utilization of these operations by financial institutions.

Furthermore, respondents emphasized the importance of widespread adoption of carbon pricing, implementation of measures to prevent greenwashing, and increased international awareness concerning transition finance.

In summary, the results indicated that many respondents favorably assessed the steady progress concerning initiatives to resolve the challenges facing the improvement of market functioning with regard to climate change. However, they also expressed the need for continued efforts to achieve substantial improvements in this regard.

Box 3: Initiatives for Market Developments concerning Climate Finance

Recent developments in the climate finance market have shown steady progress, particularly in areas such as enhancing and/or standardizing information disclosure, building frameworks for improving transparency in ESG evaluation, and establishing guidelines for the issuance of or investment in climate change-related ESG bonds. These developments intend to address common challenges recognized by market participants. The following are examples of initiatives undertaken by the government, the Bank of Japan, standard-setting bodies, industry associations, and others since the release of the first survey results in August 2022.

Box Chart 3-1: Examples of Market Developments concerning Climate Finance in Japan

Aug. 2022	The Bank of Japan released "Results of the First Market Functioning Survey concerning Climate Change – Progress in the Improvement of Market Functioning and Challenges for the Future –."
Aug. 2022	The Financial Services Agency (FSA) launched a website called "Sustainable Finance." — Collected relevant links on the measures to enhance corporate disclosure related to sustainable finance, capital market functions, and the role of financial institutions.
Oct. 2022	The TCFD Consortium released "Guidance on Climate-related Financial Disclosures 3.0 (TCFD Guidance 3.0)."
Oct. 2022	The Japan Exchange Group (JPX) launched "JPX Listed Company ESG Information WEB (Beta Version)" (available only in Japanese). — Released a website that aggregates links to ESG-related news and reports, consolidating ESG information disclosed by companies listed on the Tokyo Stock Exchange. This platform allows users to easily search and browse the collected links in one convenient location.
Dec. 2022	The FSA, the Ministry of Economy, Trade and Industry (METI), and the Ministry of the Environment (MOE) released "A Package of Key Initiatives/Measures to Facilitate Investing for GX (Green Transformation)" compiled based on discussions at the Study Group on Financing from the Private Sector to Help Corporate Initiatives for GX in Industries (available only in Japanese).

Dec. 2022	The FSA released "The Code of Conduct for ESG Evaluation and Data Providers."
Dec. 2022	<p>The Working Group on Corporate Disclosure of the Financial System Council released "Summary of Discussions of the 'Working Group on Corporate Disclosure' (fiscal 2022) of the Financial System Council" (available only in Japanese).</p> <p>— On sustainability disclosure, this report emphasized the importance of positioning the Sustainability Standards Board of Japan (SSBJ) and future disclosure standards within a legal framework. It provided insights on the issues that need to be addressed and presented a roadmap for future measures to be implemented in this regard.</p>
Jan. 2023	<p>The FSA finalized the amendments to the "Cabinet Office Order on Disclosure of Corporate Affairs."</p> <p>— On sustainability disclosure, the finalized Cabinet Office Order provided amendments to the narrative information to be filled out in the Annual Securities Report and Securities Registration Statement, specifically incorporating a new section on "sustainability-related policies and initiatives." Mandatory disclosure items now include "governance" and "risk management," while "strategy" and "metrics and targets" may be included based on their relevance to investors' investment decisions.</p>
Jan. 2023	The FSA released the fiscal 2022 edition of "Reference Casebook of Good Practices on the Disclosure of Narrative Information," with a focus on disclosure of corporate sustainability and related topics (available only in Japanese).
Feb. 2023	The Cabinet Secretariat released "Basic Policy for Realization of GX" (available only in Japanese).
Feb. 2023	The FSA, the METI, and the MOE released "Creating an Enabling Environment to Scale-up Transition Financing to Accelerate Decarbonization of Hard-to-Abate Sectors."

Mar. 2023	<p>The FSA released "Response to the FSA's Consultation on the Proposed Amendment of the Comprehensive Supervisory Guidelines for Financial Instruments Business Operators, etc. regarding ESG Investment Trusts."</p> <p>— Defined the specific points for supervisors to check the disclosure on publicly offered investment trusts, and the organizational resources and due diligence of asset managers regarding ESG.</p>
Apr. 2023	<p>The Japan Securities Dealers Association launched a website called "Information Site on Impact Measurement Tools" (available only in Japanese).</p> <p>— Introduced templates and performance indicators provided by international organizations that promote impact investments to measure social and environmental changes and effects (so called 'impacts') arising from business activities.</p>
Apr. 2023	<p>The MOE released "Guidance for Financial Institutions on Decarbonization Practices Starting with Portfolio Carbon Analysis" (available only in Japanese).</p> <p>— Summarized information for financial institutions to reference when conducting practical analyses. This includes international insights, specific methodologies for portfolio carbon analysis, and considerations for reducing emissions.</p>
May 2023	<p>"Act on Promoting Transition to the Decarbonized Growth Economic Structure" was enacted.</p>
May 2023	<p>The Bank of Japan released its disclosure that took into account the recommendations by the TCFD for fiscal 2022.</p>
Jun. 2023	<p>The International Sustainability Standards Board (ISSB) issued the "IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information" and "IFRS S2 Climate-related Disclosures."</p>
Fiscal 2023-2024 (Scheduled)	<p>The SSBJ is scheduled to release the exposure drafts of the Japanese sustainability disclosure standards corresponding to S1 and S2 by the end of fiscal 2023 and the final standards by the end of fiscal 2024.</p>

Box 4: Challenges Related to Information Disclosure on Climate-related Risks and Opportunities

In the previous survey, "enhancing and/or standardizing information disclosure" was raised by the largest number of respondents as a challenge to price climate-related risks and opportunities more into financial instruments. In addition, participants of the "Meeting on the Market Functioning Survey concerning Climate Change" held by the Bank of Japan in October 2022 suggested to include more detailed questions and answer choices for the items listed as challenges. Based on their suggestions, an open-ended question was included in the survey to gather insights on the challenges associated with information disclosure on climate-related risks and opportunities. Responses were collected from a large number of entities, including business corporates, financial institutions, and industry associations. Additionally, opinions on information disclosure were received in response to other open-ended questions regarding factors necessary for pricing climate-related risks and opportunities into financial instruments and challenges for the further development of Japanese financial markets to address climate change. The following is a summary of those opinions.

(Standardization of Information Disclosure)

First, the survey results indicated that many respondents expect advancements in the standardization of information disclosure concerning climate-related risks and opportunities. Issuers, as the disclosing entities, highlighted the challenges of determining the information to be disclosed and tailoring disclosures to meet the varying needs of different stakeholders. Investors, who use the disclosed information, emphasized the importance of enhanced comparability across companies. Consequently, both issuers and investors expressed their expectations for the enhancement of disclosure standards and guidelines. However, it was also acknowledged that a certain degree of flexibility should be ensured in formulating these standards, considering the potential burden on companies.

Box Chart 4-1: Market Participants' Views on the Standardization of Information Disclosure

- ✓ Determining the information to be disclosed poses challenges. (issuers)
- ✓ Investors have diverse needs, necessitating the prioritization of key information. (issuers)
- ✓ There is a lack of standardization and effective utilization of disclosed information for investment purposes. It is important to disclose information in a way that enhances comparability among companies. (investors)
- ✓ Enhancing standards and guidelines to determine the information subject to disclosure is essential. It is also anticipated to widely share good practices in corporate information disclosure. (issuers/investors)
- ✓ Given that climate change-related initiatives vary greatly among companies, it is important to

disclose information in a manner that takes into account each company's business conditions and the associated burden. (issuers)

(Disclosure of Quantitative Information)

Many respondents emphasized the significance of disclosing quantitative information, including carbon emissions, scenario analyses, and 'impacts' (environmental and social impacts and effects such as reductions in carbon emissions and increases in renewable energy utilization rates). Both issuers and investors expressed the need for standardized calculation and analysis methodologies for quantitative information. Some also called for the development of a unified platform to collect data for calculation and analysis as well as disclosed information.

Box Chart 4-2: Market Participants' Views on the Disclosure of Quantitative Information

- ✓ Disclosure of information on the profitability and risks of investment projects is important. However, there is currently a lack of consensus on the specific content and timing of such disclosures. (issuers/investors)
- ✓ There are challenges related to uncertainties in scenario analysis methodologies and differences in calculation bases across disclosing entities. (investors)
- ✓ There is an expectation to establish methodologies for measuring and calculating carbon emissions and 'impacts', formulate standard models for scenario analysis, and standardize the prerequisites for that calculation and analysis. (issuers/investors)
- ✓ Disclosure of information would be easier if calculation methodologies for quantitative information are standardized. (issuers)
- ✓ Platforms and system specifications for the acquisition and collection of disclosed information and data for calculating emissions, 'impacts,' and other information are desired. (issuers/investors)

(Reliability and Validity of Disclosed Information)

With the wide variety of information being disclosed, some pointed out the challenges of ensuring the reliability of disclosed information and identifying 'greenwashing.' Some respondents emphasized the need for a system of third-party assurance to ensure the credibility of the disclosed information.

Box Chart 4-3: Market Participants' Views on the Reliability and Validity of Disclosed Information

- ✓ The increasing adoption of information disclosure in line with TCFD recommendations has posed a challenge in ensuring the reliability of the disclosed information. (issuers)
- ✓ Identifying greenwashing is a challenge. (investors)
- ✓ Third-party assurance is desirable to improve the quality of disclosed information. Making disclosure mandatory and subject to assurance would facilitate the use of that information in investment decisions. (investors)

(Progress in Institutional Frameworks and Their Practical Application)

In addition to the challenges mentioned above, respondents expressed positive views on the recent advancements in institutional frameworks for climate change-related disclosure. There are also expectations for accelerating development of these frameworks, aligning with international disclosure standards. Furthermore, respondents emphasized the importance of implementing these frameworks in practice, which involves strengthening issuers' infrastructures, accumulating know-how, enhancing investors' understanding, and advancing assessment methodologies.

Box Chart 4-4: Market Participants' Views on the Progress in Institutional Frameworks and Their Practical Application

- ✓ Information disclosure has progressed to a certain extent, supported by disclosure frameworks established under Corporate Governance Codes and Cabinet Office Ordinances. (issuers/investors)
- ✓ Rulemaking that aligns with global disclosure standards should accelerate. (issuers/investors)
- ✓ Strengthening resource infrastructures and accumulating know-how for disclosure are challenges. (issuers)
- ✓ Upgrading expertise and evaluation methodologies, and integrating them into risk management systems and asset evaluations is important for investors. (investors)
- ✓ Providing support to stakeholders to enhance their understanding and response to the growing importance of global and domestic sustainability disclosure standards is crucial. (industry associations)

III. Conclusion (Key Findings and Future Efforts)

The key findings from this round of the survey are summarized below.

As for the pricing of climate-related risks and opportunities in financial instruments, the respondents viewed that climate-related risks and opportunities were priced into the stock and corporate bond markets in Japan to a certain degree, although they also noted that there was potential for further incorporation. At the same time, the survey revealed that climate-related risks and opportunities were better priced in corporate bonds compared to the first survey. "Physical risks," "transition risks," and "climate-related opportunities" were all pointed out as elements that respondents believed were not adequately priced in financial instruments. To further price in climate-related risks and opportunities, many respondents emphasized the need for improved information availability and assessment methodologies related to climate-related risks and opportunities. The former included "enhancing and/or standardizing information disclosure" and "bridging data gaps on climate-related data," while the latter included "improving transparency in ESG evaluation" and "further developing analysis methodologies." The importance of "increasing investors and/or issuers that place a high value on climate-related risks and opportunities" was also reiterated, echoing issues raised in the first survey.

Regarding the current status and future of the climate change-related ESG bond market, there was a slight increase in the proportions of respondents who had issued the ESG bonds and those who had invested in those bonds. None of the respondents indicated plans to decrease their issuance and/or investment in the next 12 months. Approximately 40 to 50 percent of the respondents who had issued and/or invested in the ESG bonds expressed their intention to increase their issuance and/or investment. Around 10 percent of the respondents who had not issued and/or not invested in the ESG bonds also indicated their intention to increase their issuance and/or investment. Meanwhile, many respondents described the supply and demand conditions of the ESG bonds as "somewhat tight to tight" rather than "somewhat accommodative to accommodative," indicating continued strong demand for these bonds. This suggests a growing prevalence of the ESG bond issuances and investments in the future.

Respondents identified reasons for issuing and not issuing the ESG bonds that were consistent with those in the first survey. When it comes to reasons for issuing the ESG bonds, many respondents emphasized the strategic interests for their businesses and investor relations, including reputational benefits, strategic importance, and the opportunity to diversify their

investor base, rather than solely focusing on favorable market conditions for the issuance of the ESG bonds. Respondents cited several reasons for not issuing the ESG bonds, including limited funding needs, such as not requiring external funds or a lack of suitable projects. Additionally, they highlighted perceived unfavorable issuing conditions for the ESG bonds compared to other financing options available in Japan. Some also pointed to the management and reporting burden associated with the issuance of the ESG bonds or a lack of expertise. Similar to the first survey, the primary reason for investing in the ESG bonds was to make social and environmental contributions, while many respondents expressed a desire for improving return per risk and enhancing their entities' reputation.

Concerning the challenges for increasing the size of the climate change-related ESG bond market in Japan, many respondents identified challenges that were consistent with the previous survey such as "enhancing and/or standardizing information disclosure" and "improving transparency in ESG evaluation," echoing the challenges for pricing in climate-related risks and opportunities.

That being said, the results of the second survey also implied positive changes in certain areas from the previous year. For instance, while the proportion of the continuous respondents who identified "enhancing and/or standardizing information disclosure" as a challenge to pricing in climate-related risks and opportunities and advancing ESG markets remained high, it decreased slightly compared to the first survey. This is consistent with the responses to an open-ended question, where many respondents favorably assessed the enhancement in information disclosure on sustainability.

These findings indicate that there has been steady progress in efforts to address the challenges identified in the survey, and market participants favorably assessed these developments. Climate change-related ESG bond market in Japan is expected to expand continuously, attracting a wider range of issuers and investors. To this end, it is important that market participants further recognize the benefits of issuing and investing in the ESG bonds, such as positive business and investor relations outcomes, as well as social and environmental contributions. Moreover, the market can be further stimulated by reducing the costs associated with issuing the ESG bonds and making investment decisions. Standardizing information disclosure and advancing institutional and practical initiatives to enhance the transparency of ESG evaluations are crucial steps in this direction.

The Bank will provide updates on the progress and challenges in the market functioning related

to climate change through conducting this survey continuously, while improving its content. Furthermore, the Bank aims to contribute to the advancement of financial markets by monitoring developments outside of Japan, conducting further research and analyses on the functioning of financial markets in relation to climate change, and communicating and coordinating with relevant stakeholders to foster the development of market infrastructure.

Appendices

A. Second Market Functioning Survey concerning Climate Change: Survey Questions

1. Market Functioning

(1) Stock Market

Question 1

Do you think risks and opportunities brought about by climate change (hereafter, climate-related risks and opportunities) are reflected in the stock prices of issuers in the Japanese stock market?

1. Yes (Reflected)
2. Somewhat yes (Somewhat reflected)
3. Somewhat no (Not reflected much)
4. No (Not reflected)

Question 2

Compared to a year ago, do you think climate-related risks and opportunities are reflected more in the stock prices of issuers in the Japanese stock market?

1. Yes
2. Somewhat yes
3. Somewhat no
4. No

Question 3

Are there any climate-related risks and/or opportunities that you think are not reflected in the stock prices of issuers?

(Choose all that apply, unless you choose 4.)

1. Climate-related risks (Physical risks¹)
2. Climate-related risks (Transition risks²)
3. Climate-related opportunities³
4. None (Climate-related risks and opportunities are reflected in the stock prices)

Question 4

Which of the following do you think are necessary to reflect climate-related risks and opportunities more in the stock prices of issuers in the Japanese stock market in future? Choose up to three answers that are important to your entity.

1. Increasing investors and/or issuers that place a high value on climate-related risks and opportunities
2. Bridging data gaps on climate-related data
3. Enhancing and/or standardizing information disclosure
4. Further developing analysis methodologies for climate-related risks, climate-related opportunities, and 'impacts'
5. Improving transparency in ESG evaluation (e.g., more transparency in evaluation methodologies and clarifying the relationship with credit ratings)
6. Promoting engagement and enhancing dialogues

7. Clarifying policy measures for climate change
8. Other

Please provide specific details, if any, regarding the selected answers.

(2) Corporate Bond Market

Question 5

Do you think climate-related risks and opportunities are reflected in the corporate bond prices of issuers in the Japanese corporate bond market?

1. Yes (Reflected)
2. Somewhat yes (Somewhat reflected)
3. Somewhat no (Not reflected much)
4. No (Not reflected)

Question 6

Compared to a year ago, do you think climate-related risks and opportunities are reflected more in the corporate bond prices of issuers in the Japanese corporate bond market?

1. Yes
2. Somewhat yes
3. Somewhat no
4. No

Question 7

Are there any climate-related risks and/or opportunities that you think are not reflected in the corporate bond prices of issuers?

(Choose all that apply, unless you choose 4.)

1. Climate-related risks (Physical risks¹)
2. Climate-related risks (Transition risks²)
3. Climate-related opportunities³
4. None (Climate-related risks and opportunities are reflected in the corporate bond prices)

Question 8

Which of the following do you think are necessary to reflect climate-related risks and opportunities more in the corporate bond prices of issuers in the Japanese corporate bond market in future? Choose up to three answers that are important to your entity.

1. Increasing investors and/or issuers that place a high value on climate-related risks and opportunities
2. Bridging data gaps on climate-related data
3. Enhancing and/or standardizing information disclosure
4. Further developing analysis methodologies for climate-related risks, climate-related opportunities, and 'impacts'
5. Improving transparency in ESG evaluation (e.g., more transparency in evaluation

- methodologies and clarifying the relationship with credit ratings)
6. Promoting engagement and enhancing dialogues
 7. Clarifying policy measures for climate change
 8. Other

Please provide specific details, if any, regarding the selected answers.

Question 9

Which of the following is the closest to your entity's view/impression about the supply and demand conditions of climate change-related ESG bonds⁴ in Japan?

1. Somewhat tight to tight
2. More or less balanced
3. Somewhat accommodative to accommodative

Question 10

Which of the following do you think are necessary to increase the size of the climate change-related ESG bond market in Japan? Choose up to three answers that are important to your entity.

1. Increasing efforts and projects to respond to climate change
2. Increasing investors and/or issuers that place a high value on climate-related risks and opportunities
3. Bridging data gaps on climate-related data
4. Enhancing and/or standardizing information disclosure
5. Further developing analysis methodologies for climate-related risks, climate-related opportunities, and 'impacts'
6. Improving transparency in ESG evaluation (e.g., more transparency in evaluation methodologies and clarifying the relationship with credit ratings)
7. Promoting engagement and enhancing dialogues
8. Clarifying policy measures for climate change
9. Other

Please provide specific details, if any, regarding the selected answers.

- Notes: 1. "Climate-related risks (physical risks)" refers to the risks that physical phenomena triggered by climate change, such as large-scale disasters or rising sea levels, will have an economic loss on issuers' businesses (e.g., damage to facilities and/or difficulty in continuing with business due to climate disasters and impact on business due to climate change in a longer term such as rising sea levels and rising sea temperatures).
2. "Climate-related risks (transition risks)" refers to the risks of an economic loss on issuers' businesses due to changes in policy, technology, or consumer preference as society transitions towards carbon-neutral (e.g., changes in policies such as those regarding carbon pricing, technological developments, and delays in changing business models in

response to heightened consumer preference for "green" instruments).

3. "Climate-related opportunities" refers to profit opportunities and growth opportunities brought about by efforts to respond to climate change issues (e.g., resource efficiency and cost savings, adoption of low-emission energy sources, and development of new products and services).
4. "Climate change-related ESG bonds" refers to green bonds, sustainability bonds, sustainability-linked bonds with performance targets related to efforts on climate change, and transition bonds that comply with corresponding international standards and/or guidelines set by the Japanese government.

2. Purpose of Issuance of/Investment in Climate Change-related ESG Bonds

(Questions for issuers)⁵

Question 11

Have you ever issued climate change-related ESG bonds⁴ in Japan?

1. Yes (Issued)
2. No (Have not issued)
3. Not applicable (Not an issuer)

Question 12

Have you issued climate change-related ESG bonds in Japan in the past 12 months (from April 2022 to March 2023)?

1. Yes (Issued)
2. No (Have not issued)

(For those who chose "1. Yes" in Question 12)

Question 13-A

Why did you choose to issue climate change-related ESG bonds in Japan as a means of financing?

(Choose all that apply)

1. Climate change response became more important in the entity's business strategy
2. Issuing the ESG bonds improves the entity's reputation and/or its ability to give explanations to stakeholders
3. Issuing the ESG bonds helps the entity gain new investors and/or diversify the entity's base of investors
4. Fund raising by issuing the ESG bonds is more favorable than other means of financing in Japan (e.g., loans)
5. Conditions for issuing the ESG bonds are more favorable in Japan than in other countries
6. Other

If you chose "6. Other," please specify your response.

--

(For those who chose "2. No" either in Question 11 or 12)

Question 13-B:

Why did you not choose to issue climate change-related ESG bonds in Japan as a means of financing?

(Choose all that apply)

1. No need to obtain external funds
2. Do not have a project suitable for issuing the ESG bonds
3. Demand from investors for the ESG bonds issued by the entity is limited

4. Do not have enough expertise to issue the ESG bonds
5. Management and reporting associated with the issuance of the ESG bonds is burdensome
6. Fund raising through other means of financing in Japan (e.g., loans) is more favorable than issuing the ESG bonds
7. Conditions for issuing the ESG bonds are more favorable in other countries than in Japan
8. Other

If you chose "8. Other," please specify your response.

Question 14

How are you planning to change the issuance of climate change-related ESG bonds in Japan in the next 12 months (from April 2023 to March 2024)?

1. Increase (including newly issuing the ESG bonds)
2. Maintain the status quo (including continuing not to issue the ESG bonds at all)
3. Decrease
4. Not decided

(Questions for investors)⁵

Question 15

Have you ever invested in climate change-related ESG bonds⁴ in Japan?

1. Yes (Invested)
2. No (Have not invested)
3. Not applicable (Not an investor)

Question 16

Have you invested in climate change-related ESG bonds in Japan in the past 12 months (from April 2022 to March 2023)?

1. Yes (Invested)
2. No (Have not invested)

(For those who chose "1. Yes" in Question 16)

Question 17-A

Why did you choose to invest in climate change-related ESG bonds in Japan?

(Choose all that apply)

1. To improve the return per risk of the entity's portfolio
2. To make social and environmental contributions through the investment
3. To promote the entity's engagement with the issuers
4. To improve the entity's reputation and/or its ability to give explanations to stakeholders
5. There are more climate change-related ESG bonds that fulfill the entity's investment needs in Japan than in other countries
6. To respond to the needs of asset owners and/or clients
7. Other

If you chose "7. Other," please specify your response.

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(For those who chose "2. No" either in Question 15 or 16)

Question 17-B

Why did you not choose to invest in climate change-related ESG bonds in Japan?

(Choose all that apply)

1. Do not believe the investment will lead to an improvement in the return per risk of the entity's portfolio
2. The volume of the ESG bonds issued in the Japanese market overall is not sufficient
3. There is not enough information to make investment decisions including concerns over 'greenwashing'
4. The entity prioritizes climate change-related ESG investments via other financial means in Japan (e.g., providing loans)
5. There are more climate change-related ESG bonds that fulfill the entity's investment

- needs in other countries than in Japan
6. No need from asset owners and/or clients
 7. Other

If you chose "7. Other," please specify your response.

Question 18

How are you planning to change the investment in climate change-related ESG bonds in Japan in the next 12 months (from April 2023 to March 2024)?

1. Increase (including newly investing in the ESG bonds)
2. Maintain the status quo (including continuing not to invest in the ESG bonds at all)
3. Decrease
4. Not decided

Notes: 5. If your entity is both an issuer and an investor, please answer both sets of questions for issuers and for investors.

3. For the Development of the Markets

Question 19

In the previous (first) survey, "enhancing and/or standardizing information disclosure" was raised by many respondents as a challenge to price climate-related risks and opportunities more into financial instruments and to further advance financial markets.

* Respondents will be asked to answer one of the following questions from A to E depending on their previous answers.

(For issuers)

A. In light of this result, please describe, to the extent possible, the challenges your entity is facing when disclosing information on climate-related risks and opportunities as an issuer.

(For investors)

B. In light of this result, please describe, to the extent possible, the challenges your entity is facing when using information on climate-related risks and opportunities disclosed by issuers as an investor (e.g., difficulties encountered in making investment decisions or structuring financial products, as well as the areas where you anticipate the need for more disclosure).

(For issuers/investors)

C. In light of this result, please describe, to the extent possible, the challenges your entity is facing when (a) disclosing information on climate-related risks and opportunities as an issuer and (b) using the information as an investor (e.g., difficulties encountered in making investment decisions or structuring financial products, as well as the areas where you anticipate the need for more disclosure).

(For rating agencies)

D. In light of this result, please describe, to the extent possible, the challenges that your entity is facing when using information on climate-related risks and opportunities disclosed by issuers in the process of ESG evaluation and/or credit rating determination.

(For respondents that are not issuers, investors, nor rating agencies)

E. In light of this result, please describe, to the extent possible, your opinion on the challenges in improving the disclosure of information on climate-related risks and opportunities in Japan.

Question 20

If you have any opinion regarding the necessary developments for Japanese financial markets to further address climate change, considering the progress observed in overseas markets, please provide your insights below. Specifically, discuss any changes or new challenges you have observed compared to a year ago.

4. Method Used for Responding to the Survey

Question 21

(For online respondents)

Please select the reason you answered this survey online.

1. Answering online was easier even though both the online and Excel surveys were available
2. Unable to respond using the Excel file
3. Other (e.g., received notice only for the online survey)

(For file-based respondents)

Please select the reason you answered this survey using the Excel file.

1. Using the Excel file was easier even though both the online and Excel surveys were available
2. Unable to respond online
3. The deadline for the online survey has passed
4. Other (e.g., received notice only for the Excel survey)

5. Publication of the Name of Your Entity

Question 22

Please indicate whether you consent to the disclosure of your entity's name in the list of survey respondents.

1. We give consent
2. We do not give consent

**B. Second Market Functioning Survey concerning Climate Change: List of Respondents
(Respondents that Consented to Disclosure of Their Participation in the Survey)**

- ADVANTEST CORPORATION
- The Aichi Bank, Ltd.
- AISIN CORPORATION
- Amundi Japan Ltd.
- The Aomori Bank, Ltd.
- Aozora Bank, Ltd.
- Asahi Broadcasting Group Holdings Corporation
- Asahi Life Asset Management Co., Ltd.
- Asahi Mutual Life Insurance Company
- Asset Management One Co., Ltd.
- The Bank of Fukuoka, Ltd.
- THE BANK OF KOCHI, LTD.
- The Bank of Kyoto, Ltd.
- The Bank of Okinawa, Ltd.
- Bank of The Ryukyus, Limited
- The Bank of Toyama, Ltd.
- The Bank of Yokohama, Ltd.
- BIPROGY Inc.
- BNP PARIBAS ASSET MANAGEMENT Japan Limited
- BNP Paribas Securities (Japan) Limited
- BNP PARIBAS, Tokyo Branch
- BROTHER INDUSTRIES, LTD.
- CENTRAL TANSHI CO., LTD.
- The Chugoku Bank, Limited
- The Chugoku Electric Power Company, Incorporated
- The Chukyo Bank, Limited
- CKD Corporation
- COMANY INC.
- COMSYS Holdings Corporation
- Consonant Investment Management Co., Ltd.
- COSMO ENERGY HOLDINGS COMPANY, LIMITED.
- CUBE SYSTEM INC.
- Daiichi Life Realty Asset Management Co., Ltd.
- Daishi Hokuetsu Bank, Ltd.
- THE DAITO BANK, LTD.
- Daiwa House Asset Management Co., Ltd.
- DAIWA HOUSE INDUSTRY CO., LTD.
- Daiwa Real Estate Asset Management Co. Ltd.
- Daiwa Securities Group Inc.
- DENSO CORPORATION
- Dexerials Corporation
- DKS Co. Ltd.
- EBARA CORPORATION
- The Ehime Bank, Ltd.
- Electric Power Development Co., Ltd.
- EPCO Co., Ltd.
- ESPEC CORP.
- FA Daiichi Asset Management Inc.
- FIL Investments (Japan) Limited
- THE FIRST BANK OF TOYAMA, LTD.
- Fukoku Capital Management, Inc.
- Fukoku Mutual Life Insurance Company
- Fukui Computer Holdings, Inc.
- THE FUKUOKA CHUO BANK, LTD.
- THE FUKUSHIMA BANK, LTD.
- Furukawa Electric Co., Ltd.
- Fuyo General Lease Co., Ltd.
- Global Alliance Realty Co., Ltd.
- Goldman Sachs Asset Management Co., Ltd.
- The Gunma Bank, Ltd.
- The Hachijuni Bank, Ltd.
- HC Asset Management Co., Ltd.
- The Higashi-Nippon Bank, Limited
- The Higo Bank, Ltd.
- HIOKI E.E. Corporation
- Hirogin Holdings, Inc.
- HISAKA WORKS, LTD.
- Hitachi, Ltd.
- Hitachi Zosen Corporation
- The Hokkoku Bank, Ltd.
- The Hokuriku Bank, Ltd.
- The Hokuto Bank, Ltd.
- Hoshino Resort Asset Management Co., Ltd.
- THE HOWA BANK, LTD.
- Idemitsu Kosan Co., Ltd.
- IHI Corporation
- IwaiCosmo Holdings, Inc.
- The Iyo Bank, Ltd.
- Japan Airlines Co., Ltd.
- Japan Credit Rating Agency, Ltd.

- Japan Exchange Group, Inc.
- Japan Hotel REIT Advisors Co., Ltd.
- Japan Investment Advisers Association
- JAPAN POST HOLDINGS Co., Ltd.
- JAPAN POST INSURANCE Co., Ltd.
- Japan Pulp & Paper Co., Ltd.
- Japan REIT Advisors Co., Ltd.
- JBCC Holdings Inc.
- JFE Holdings, Inc.
- JGC HOLDINGS CORPORATION
- J-OIL MILLS, INC.
- JPMorgan Asset Management (Japan) Ltd.
- The Juhachi-Shinwa Bank, Ltd.
- THE KAGAWA BANK, LTD.
- The Kagoshima Bank, Ltd.
- THE KANAGAWA BANK, LTD.
- KANEMATSU CORPORATION
- Kansai Mirai Bank, Limited
- Kawasaki Kisen Kaisha, Ltd.
- Kirayaka Bank, Ltd.
- Kirin Holdings Company, Limited
- The Kiyo Bank, Ltd.
- KOKUSAI ELECTRIC CORPORATION
- KONICA MINOLTA, INC.
- KOSÉ Corporation
- The Kumamoto Bank, Ltd.
- LONE STAR JAPAN ACQUISITIONS LTD
- LOTTE CO., LTD.
- Mabuchi Motor Co., Ltd.
- Manulife Investment Management (Japan) Limited
- MARUI GROUP CO., LTD.
- MEIDENSHA CORPORATION
- Meiji Yasuda Asset Management Company Ltd.
- Meiji Yasuda Life Insurance Company
- Mitsubishi Chemical Group Corporation
- Mitsubishi Logistics Corporation
- Mitsubishi Research Institute, Inc.
- Mitsubishi UFJ Financial Group, Inc.
- Mitsubishi UFJ Morgan Stanley Securities, Co., Ltd.
- Mitsuboshi Belting Ltd.
- Mitsui Fudosan Co., Ltd.
- Mizuho Financial Group, Inc. / Mizuho Bank, Ltd.
- Mizuho Securities Co., Ltd.
- MS&AD Insurance Group Holdings, Inc.
- MU Investments Co., Ltd.
- THE NAGANO BANK, LTD.
- The Nanto Bank, Ltd.
- National Mutual Insurance Federation of Agricultural Cooperatives
- NEC Capital Solutions Limited
- Nikko Asset Management Co., Ltd.
- Nippon Building Fund Management Ltd.
- Nippon Life Insurance Company
- NIPPON PILLAR PACKING CO., LTD.
- THE NIPPON ROAD Co., Ltd.
- NIPPON SIGNAL CO., LTD.
- NIPPON STEEL CORPORATION
- Nippon Yusen Kabushiki Kaisha
- The Nishi-Nippon City Bank, Ltd.
- Nissay Asset Management Corporation
- Nomura Asset Management Co., Ltd.
- Nomura Real Estate Asset Management Co., Ltd.
- The Norinchukin Bank
- North Pacific Bank, Ltd.
- OBAYASHI CORPORATION
- The Ogaki Kyoritsu Bank, Ltd.
- Oki Electric Industry Company, Limited.
- THE OKINAWA KAIHO BANK, LTD.
- Okura Industrial Co., Ltd.
- Oriental Shiraishi Corporation
- PGIM Japan Co., Ltd.
- Pigeon Corporation
- Rating and Investment Information, Inc.
- Ricoh Co., Ltd.
- THE SAIKYO BANK, LTD.
- SAKURA internet Inc.
- San ju San Bank, Ltd.
- The San-in Godo Bank, Ltd.
- The Sasakawa Peace Foundation
- SBI Shinsei Bank, Limited
- Schroder Investment Management (Japan) Limited
- SEIBU HOLDINGS INC.
- Sekisui Chemical Co., Ltd.
- Sekisui House Asset Management, Ltd.
- The Senshu Ikeda Bank, Ltd.
- THE SHIGA BANK, LTD.
- The Shikoku Bank, Ltd.

- Shikoku Electric Power Company, Incorporated
- Shimadzu Corporation
- THE SHIMANE BANK, LTD.
- SHINAGAWA REFRACTORIES CO., LTD.
- THE SHIZUOKA BANK, LTD.
- THE SHIZUOKA CHUO BANK, LTD.
- Showa Sangyo Co., Ltd.
- SKYLARK HOLDINGS CO., LTD.
- SMBC Nikko Securities Inc.
- Societe Generale Securities Japan Limited
- SOHGO SECURITY SERVICES CO., LTD.
- Sompo Asset Management Co., Ltd.
- Sompo Holdings, Inc.
- SPARX Group Co., Ltd.
- SUMITOMO CHEMICAL COMPANY, LIMITED
- SUMITOMO HEAVY INDUSTRIES, LTD.
- Sumitomo Life Insurance Co.
- Sumitomo Mitsui Banking Corporation
- Sumitomo Mitsui Construction Co., Ltd.
- Sumitomo Mitsui DS Asset Management Company, Limited
- Sumitomo Mitsui Trust Asset Management Co., Ltd.
- SUZUKI MOTOR CORPORATION
- TAIHEIYO CEMENT CORPORATION
- TAIJU LIFE INSURANCE COMPANY LIMITED
- THE TAIKO BANK, LTD.
- The Tajima Bank, Ltd.
- TAKAOKA TOKO CO., LTD.
- T&D Holdings, Inc.
- TEIJIN LIMITED
- Terumo Corporation
- TOA CORPORATION
- Toagosei Co., Ltd.
- THE TOCHIGI BANK, LTD.
- The Toho Bank, Ltd.
- THE TOHOKU BANK, LTD.
- Tohoku Electric Power Company, Incorporated
- Tokio Marine Asset Management Co., Ltd.
- Tokio Marine Holdings, Inc.
- Tokyo Electric Power Company Holdings, Incorporated
- Tokyo Gas Co., Ltd.
- Tokyo Kiraboshi Financial Group, Inc.
- Tokyo Tatemono Co., Ltd.
- Tokyu Fudosan Holdings Corporation
- TOLI Corporation
- TOTETSU KOGYO CO., LTD.
- Tsukuba Bank, Ltd.
- USEN-NEXT HOLDINGS Co., Ltd.
- WAKACHIKU CONSTRUCTION CO., LTD.
- West Japan Railway Company
- WIN-Partners Co., Ltd.
- XELS JAPAN
- The Yamagata Bank, Ltd.
- Yamaguchi Financial Group, Inc.
- The Yokohama Rubber Company, Limited
- The 77 Bank, Ltd.