Tokyo Green Finance Initiative (TGFI)

～Proposals for Developing Green Finance～

June 2021

Committee for the realization of the Tokyo Green Finance Market
(tentative name)

Introduction

(Global warming and sustainability: Significance for Tokyo)

The sustainability of the global environment has become an issue shared by all people.

With the global increase in natural disasters such as heavy rains and typhoons, the global environment is reaching a major turning point, intensifying our sense of urgency that we are approaching a "point of no return" where stability and resilience will be irreversibly lost. The Intergovernmental Panel on Climate Change (IPCC)'s[1] special report "Global Warming of 1.5°C," published in 2018, states that limiting temperature rise to a less risky 1.5°C would require achieving net-zero CO_2 emissions globally by around 2050.

Under these circumstances, the world is making efforts on a grand scale to urgently reducing emissions of CO_2 and other greenhouse gases. In addition to Europe, which is leading the way of this movement, the United States under the Biden administration is shifting in the direction of emphasizing sustainability. The Government of Japan has formulated the "Green Growth Strategy Through Achieving Carbon Neutrality in 2050" and set forth its stance on working toward decarbonization.

As one of the world's largest cities, it is extremely important for Tokyo to proactively respond to this issue from the perspective of maintaining and improving the lives of the approximately 14 million residents who live here.

(A "game changer" for economy and industry: Making Tokyo a "place that will be chosen")

As progress is made toward achieving the Sustainable Development Goals (SDGs), ESG, comprising environmental (E), social (S), and governance (G) issues, may significantly change the shape of the global economy, society, and industry in the future.

Consumers around the world are increasingly interested in transforming their own consumption so that it is consistent with environmental and social sustainability, and companies that produce goods and services are expected to increasingly choose "places" where they can create added value. The Tokyo Metropolitan Government (TMG) needs to accelerate its efforts to ensure that Tokyo continues to be selected as a place for diverse economic activities and creation of added value.

The SDGs and ESG will also provide many new investment opportunities, such as industrial structural transformation and technological development. From the perspective of realizing sustainable growth in the post-COVID-19 era, Tokyo and Japan need to take proactive measures to use climate change countermeasures and other measures as seeds for new growth.

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[1]Intergovernmental Panel on Climate Change (IPCC): An intergovernmental organization established in 1988 by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO). It provides policy makers with a comprehensive assessment of global warming from scientific, technological, and socioeconomic perspectives.

In this context, the TMG is promoting “Sustainable Recovery,” which aims for sustainable economic and social recovery with an eye toward the post-COVID-19 era, and has positioned climate change countermeasures as one of the key measures to achieve this. Considering environmental efforts as an investment in growth rather than a cost, the TMG has embarked on actions to achieve “Carbon Half” by 2030 and the “Zero Emission Tokyo” strategy by 2050. Through these actions, it is expected that Tokyo will evolve into a cutting-edge green city that can be chosen by the world as a place for creating added value, and that there will be achievement of both an improvement in the quality of life of Tokyo residents and sustainable growth of Tokyo’s economy.

(The importance of green finance and the significance of TGFI)

Finance plays a key role in promoting the above efforts.

As the world begins making major moves toward achieving the SDGs, a large amount of funds will be needed to accelerate ESG initiatives, including decarbonization, and finance will play an important role in providing private funds to these areas alongside public funds. In particular, in the world of global finance, there is a growing movement by investors and others to demand climate change countermeasures, and there is an urgent need to develop ESG finance,[2] especially green finance aimed at the “E” in ESG that contributes to solving environmental problems. Furthermore, the participation of a wide range of parties, including small and medium-sized enterprises (SMEs), is indispensable for promoting efforts to achieve zero emissions in Tokyo. It is also necessary to maintain an environment that enables a wide range of parties to secure the necessary funds in an appropriate manner.

Moreover, it is necessary to link the abundant personal financial assets in Japan with needs for ESG funds, including those for decarbonization. In addition to its significance in facilitating the procurement of funds for environmental measures, green finance also has major significance for providing promising investment options to individuals and investors, and can serve as an opportunity to encourage shifts from “savings to investment,” a long-standing issue in Japan. Furthermore, it will be important to attract funds not only from within Japan, but also from overseas to Japan.

As ESG finance, especially green finance, is becoming a global trend, Tokyo, as one of the world’s financial centers, needs to play a role as a major ESG finance center to meet finance demands in Japan and of the world. The enhancement of Tokyo’s presence as an international financial city through these efforts will also contribute to the improvement of the lives of Tokyo residents and the development of the economy. In light of this, the TMG needs to take immediate and proactive action in the field of green finance.

Toward the expansion of green finance in Tokyo, in February 2021, the TMG launched a committee for the realization of the “Tokyo Green Finance Market (tentative name)” made up of

[2] ESG finance: Investment and financing that takes into account non-financial information such as the environment, social factors, and corporate governance.

experts, where considerations have progressed. The “Tokyo Green Finance Initiative (TGFI): Proposals for Developing Green Finance” is based on discussions by the “professional staff” comprising academics and finance industry professionals, and provides a summary following the committee’s discussions of the necessary environment for the development of green finance in Tokyo, measures that are considered to be meaningful, and medium- to long-term issues to be considered. The wide-ranging content including not only measures that the TMG can adopt on its own, but also those that can be realized through dialogue and cooperation with the private sector and the national government, and those intended to serve as a guidepost for a wide range of parties.

TGFI will cover financing needs centered on green fields, and provide industries with new opportunities for creating added value and seeds for growth, while offering investors a wide range of options. The TGFI is a strategic initiative to develop Tokyo’s green finance ecosystem, aiming to improve the lives of Tokyo residents and achieve sustainable economic development by creating a virtuous cycle involving the environment and the economy from Tokyo and simultaneously promoting the greenifying of Tokyo’s “urban system” and “financial system.”

Based on these proposals, we strongly urge the TMG to swiftly implement concrete initiatives in cooperation with a wide range of related parties and stakeholders, including the national government and private businesses.

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I The state of green finance around the world

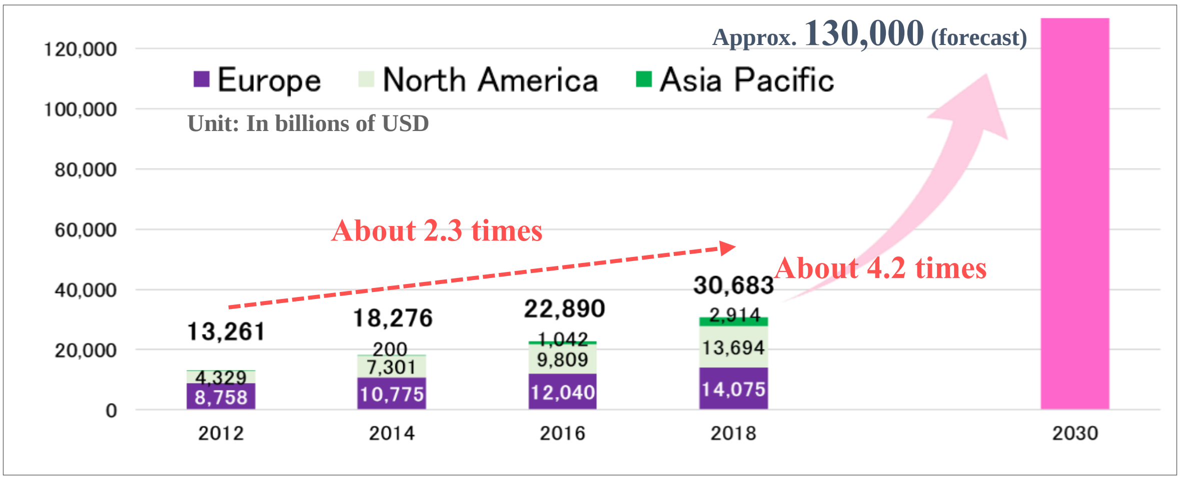
1　Green finance developing around the world

For the TGFI's promotion of green finance, it is necessary to monitor the status of green finance around the world and identify Tokyo's issues by comparison before implementing specific measures. This section confirms the status of "green bonds,"[3] a representative example of green finance, and the broader concept of "ESG investment."[4]

The global balance of ESG investment increased by about 2.3 times in the six years from 2012 to 2018, and it is estimated that it will increase to about 4.2 times the size of 2018 by 2030.

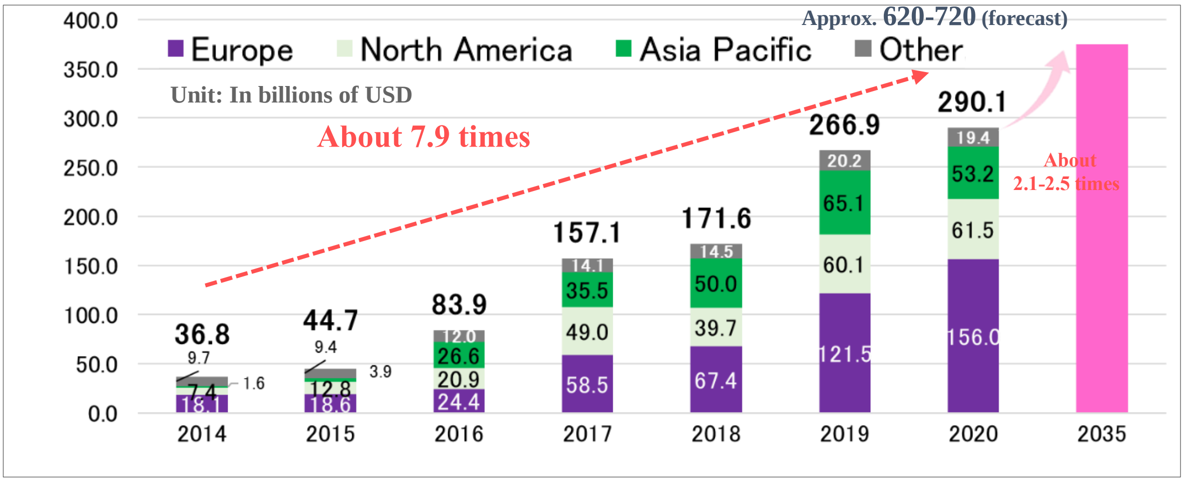
In addition, within green finance, the issuance of green bonds, which are issued to fund the financing needs of green projects, has increased about 7.9 times in the six years from 2014 to 2020, and by 2035 it is estimated to increase to about 2.1 to 2.5 times the size in 2020. As the green bond market expands, issuers and regions are diversifying, and issuance in the Asia-Pacific region has been increasing rapidly in recent years.

<Table 1> Trends in ESG investment balance (By region: 2012-2018, estimate: 2030)



Reference: 2018 Global Sustainable Investment Review, Global Sustainable Investment Alliance (Accessed: June 1, 2021)
Climate Change and Corporates: Past the Tipping Point with Customers and Stock Markets, Deutsche Bank

<Table 2> Trends in the annual issuance of green bonds (By region: 2014-2020, estimate 2035)



Reference: Market Data Platform, Climate Bonds Initiative (Accessed June 1, 2021)
OECD, Analysing Potential Bond Contributions in a Low-Carbon Transition

[3] Green bonds: Bonds issued by companies, local governments, and others to raise funds for green projects in Japan and abroad.
[4] ESG investment: Investment that takes into account not only conventional financial information but also environmental, social, and governance factors. ESG investments include bonds, stocks, loans, real estate, and other ESG assets. Figure 1 shows the investment balance including these.

2 Initiatives by various countries to develop green finance

Various countries are currently advancing initiatives to develop green finance.

From the perspective of inclusive and sustainable growth, the EU has formulated a comprehensive strategy for the development of sustainable finance[5] and is implementing various initiatives to encourage investment in sustainable projects, including for climate change, and to make Europe a center of sustainable finance. Specifically, the European Commission released the final report of the High-Level Expert Group (HLEG) in January 2018 and the action plan in March 2018. Since then, the EU has been successively conducting consideration and advancing procedures for the EU taxonomy (classification and requirements for sustainable activities), the EU green bond standard, benchmark standards for climate change, and review of corporate information and accounting standards. Furthermore, the action plan is being revised as part of the European Green Deal, which was announced in December 2019 and sets out a goal of zero net greenhouse gas emissions by 2050.

In the UK, the government issued its Green Finance Strategy in July 2019, which aims to develop the London market by attracting new domestic and international demand in the green finance field. In addition, in terms of stock exchanges, the London Stock Exchange has launched an ESG investment information platform, and the Luxembourg Stock Exchange has established the Luxembourg Green Exchange (LGX), a disclosure platform for green bonds and social bonds[6] that issuers can use on a voluntary basis. In addition, the Luxembourg Stock Exchange has established the Luxembourg Green Exchange (LGX), a disclosure platform for green and social bonds that issuers can use on a voluntary basis.

As described above, European countries initially took the lead in green finance initiatives, but now initiatives are also rapidly progressing in Asian countries. In 2017, the Monetary Authority of Singapore introduced the Green Bond Grant Scheme to support the external costs of issuing green bonds, which has since been expanded to include support for social bonds and sustainability bonds.[7] Most recently, in November 2020, the Green and Sustainability-Linked Loans Grant Scheme (GSLS) was announced with a system to subsidize the cost of third-party evaluation and certification of green loans[8] and sustainability loans[9] especially for SMEs that have been slow to respond to green finance. Hong Kong Exchanges and Clearing Limited has also launched a platform for ESG products called STAGE, which also provides information on ESG finance, including webinars and research results.

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5 Sustainable finance: A concept that encompasses a wide range of funding methods, including not only ESG investments, but also sustainable loans, bonds, and a variety of other financial services.
6 Social bonds: Bonds that use funds for projects to address social issues
7 Sustainability bonds: Bonds that use funds for projects that contribute to both environmental and social development.
8 Green loans: Loans limited to environmentally friendly businesses.
9 Sustainability loans: Loans limited to initiatives aimed at achieving a sustainable society.

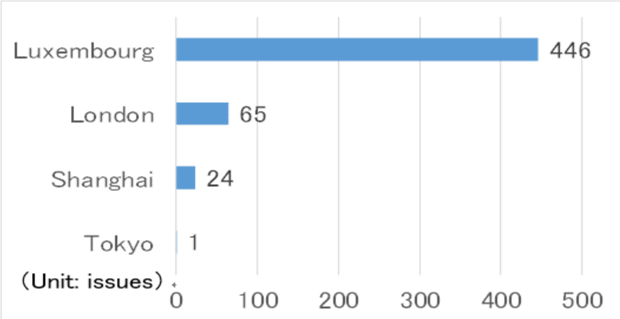
As interest in green finance grows worldwide, it is necessary to monitor such global trends in a timely and accurate manner when promoting TGFI.

【Column ①】 Luxembourg's initiatives

In Europe, bonds are usually listed on stock exchanges such as the Luxembourg Stock Exchange and the London Stock Exchange because being a listed bond is often a requirement for investment by institutional investors. These exchanges have established disclosure platforms for green bonds and social bonds that issuers can use on a voluntary basis. A representative example is the Luxembourg Green Exchange (LGX) of the Luxembourg Stock Exchange. If an issuer with bonds listed on the exchange wishes to use the LGX, it can do so by committing to comply with the Green Bond Principles of the International Capital Market Association (ICMA) and posting relevant documents. This helps minimize the additional burden on issuers without requiring the exchange's own standards. As a result, about a third of the green bonds listed on global stock exchanges in 2019 were listed on the Luxembourg Stock Exchange.

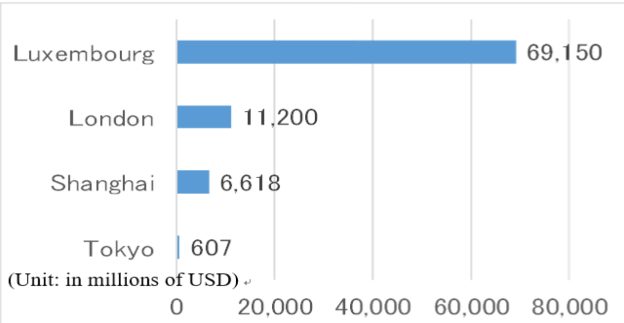
In Luxembourg, various initiatives have been implemented since around 2012 based on discussions between the public and private sectors, including the introduction of various certification labels and the use of public-private partnership funds to secure funding for the transition to a low-carbon society. The core policies of the initiatives are set out in the Luxembourg Sustainable Finance Roadmap. The LGX was realized as part of the Government of Luxembourg's efforts to make Luxembourg a sustainable finance hub.

<Number of green bond issues listed (by stock exchange)>



*As of January 2021 for Luxembourg, December 2019 for London, August 2017 for Shanghai, and January 2021 for Tokyo
Reference: Prepared based on the materials of the second meeting on the Advisory Panel for "Global Financial City: Tokyo" Vision on January 29, 2021

<Listed par value of green bonds (by stock exchange)>



*Points in time and reference: ibid.

3　The state of green finance in Japan

Next, we will confirm the current situation in Japan regarding ESG investment and green finance, taking into account the state of ESG bond issuance in Japan and government initiatives.

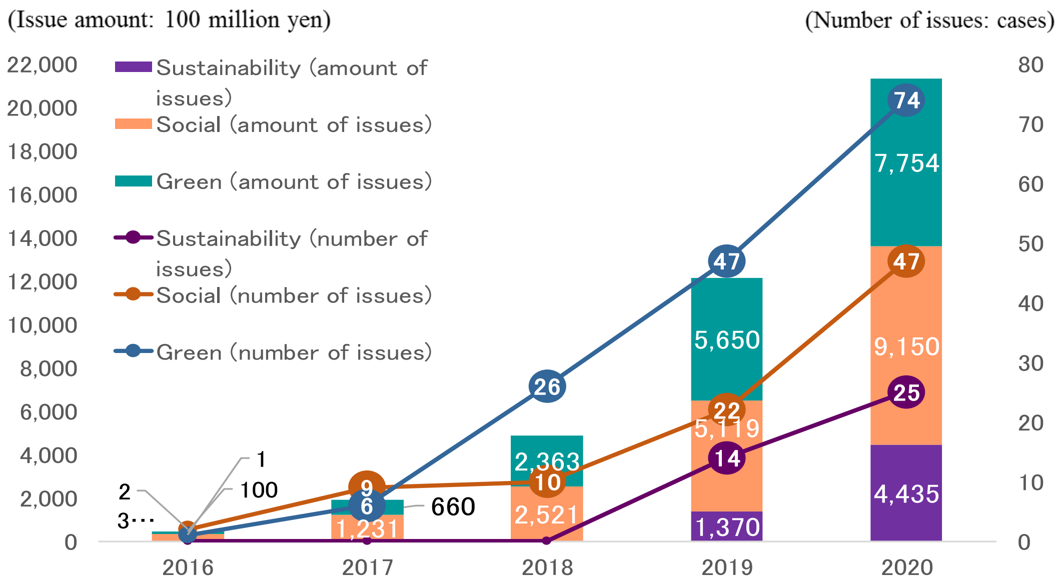
(1) State of issuance of ESG bonds in Japan

The issuance of ESG bonds[10] in Japan has been on an upward trend in recent years, driven by growing interest in ESG investment and the national government's initiatives, including those of the Ministry of the Environment.

Looking at ESG bonds as a whole, the issuance amount increased about 47 times and the number of issues increased about 49 times between 2016 and 2020, with major growth in the issuance amount of not only green bonds but also social bonds and sustainability bonds. However, the issuance amount of green bonds was 775.4 billion yen in 2020, which is still low compared to the global issuance amount of 290 billion USD (about 30 trillion yen) in the same year.

The movement toward decarbonization is accelerating, and demand for green finance is expected to increase significantly in Japan. ESG finance is becoming a major trend in global finance, and further development is expected in the future. Amidst this, in order to catch up with Europe and the U.S., Japan needs to majorly develop green finance under cooperation among the government, private businesses, and others.

<Table 3>Trends in the amount and number of ESG bonds issued publicly in Japan (2016-2020)



[10] ESG bonds: A term used in this report to refer to bonds that aim to solve ESG-related issues, such as green bonds, social bonds, and sustainability bonds. The content is the same as that of "SDGs bonds," which is the term used in the domestic market.

<Table 4> Growth in the amount and number of ESG bond issues in Japan (2016-2020)

Bond type	Item	2016	2020	Growth in 2016-2020
Green bonds	Amount of issues (100 million yen)	100	7,754	78 times
	Number of issues (cases)	1	74	74 times
Social bonds	Amount of issues (100 million yen)	350	9,150	26 times
	Number of issues (cases)	2	47	24 times
Sustainability bonds	Amount of issues (100 million yen)	—	4,435	—
	Number of issues (cases)	—	25	—
Total	Amount of issues (100 million yen)	450	21,339	47 times
	Number of issues (cases)	3	146	49 times

Reference: Prepared by the TMG from materials prepared by the Japan Securities Dealers Association

Looking at the issuance of green bonds in Japan, the Development Bank of Japan issued the first green bond as a domestic issuer in 2014, and since then, the number of green bond issuances by corporations and other entities has been increasing. Looking at issuers by category, finance, real estate, and energy have a high weighting, and many green bonds are issued by large corporations or real estate investment trusts (REITs).

From the perspective of the development of green finance, in addition to the continuation and expansion of bond issuance by these existing issuers, it is also important for the TGFI to consider the development of issuers in unconventional sectors and sizes, the fostering of investors who can respond to these issuers, and attracting market players, including the invitation and fostering of human resources who are responsible for ESG.

<Table 5> Major green bond issuers in Japan

Category	Issuer
Energy	Kurimoto Holdings
	JAG Energy
	Canadian Solar Group
	Renewable Japan
	Konan Ultra Power
	JA Solar Japan
	Ichigo ECO Energy
	Nogata Solar Farm
	Shizen Energy
	Tess Engineering
	Tohoku Electric Power
	Looop
	Eurus Energy Holdings
	GPSS Holdings
	Campo
	Renova
	Tokyo Gas
	ENEOS Holdings
	J-POWER
Finance	Development Bank of Japan
	Sumitomo Mitsui Banking Corporation
	Mitsubishi UFJ Financial Group
	Sumitomo Mitsui Financial Group
	Mizuho Financial Group
	Mitsubishi UFJ Lease
	Ricoh Leasing
	Sumitomo Mitsui Trust Bank
	Tokyo Century
	Fuyo General Lease
	Daiwa Securities Group
	Aeon Product Finance
	Hitachi Capital
	Orient Corporation
	JACCS
	Toyota Finance
	The Gunma Bank
	The Bank of Nagoya
	Orix
	Mitsubishi UFJ Trust and Banking
	Sumitomo Mitsui Finance and Leasing
	Mitsubishi Electric Credit
	NTT Finance
	Honda Finance

Issuer	Issuer
Finance, energy	Daiwa Energy & Infrastructure
Finance, transportation, traffic	Sumitomo Mitsui Auto Service
Finance, FILP agency	Japan Housing Finance Agency
	Japan Finance Organization for Municipalities
Finance, real estate	Japan Retail Fund Investment Corp
	Japan Excellent
	Nippon Prologis REIT
	Japan Real Estate Investment Corporation
	Invesco Office J-REIT
	GLP
	Kenedix Office Investment Corporation
	United Urban Investment Corporation
	Activia Properties
	Sekisui House Reit
	ORIX JREIT
	Advance Residence Investment Corporation
	Japan Prime Realty Investment Corporation
	Japan Hotel REIT Investment Corporation
	Nomura Real Estate Master Fund
	Daiwa House REIT Investment Corporation
	AEON REIT Investment Corporation
	ITOCHU Advance Logistics Investment Corporation
	Aruhi
	LaSalle Logiport REIT
	Nippon Accommodations Fund
	Comforia Residential Reit
	CRE Logistics REIT
	Daiwa Office Investment Corporation
	Hankyu Hanshin REIT
	Hulic Reit
	Mori Hills REIT Investment Corporation
Construction	Toda Corporation
	Obayashi Corporation
	Toenec Corporation
	Takasago Thermal Engineering
	Shimizu Corporation
	Kajima Corporation
	Daiwa House Industry
	Penta-Ocean Construction
Construction, energy	West Holdings

Category	Issuer
Retail	Marui Group
Transportation, traffic	NYK
	Mitsui O.S.K.Lines
	ANA Holdings
	Odakyu Electric Railway
	Seibu Holdings
	SENKO Group Holdings
Transportation, traffic, other	Japan Railway Construction, Transport and Technology Agency
Local government	Tokyo Metropolitan Government
	Nagano Prefectural Government
	Kanagawa Prefectural Government
Manufacturing industry	Hitachi Zosen
	Daio Paper
	Meidensha
	Kaneka
	Daiken
	Nidec
	Eco Research Institute
	Daiki Axis
	Asahi Holdings
	Asahi Kasei
	Komatsu
	Seiko Epson
	Asahi Group Holdings
	Mitsubishi Heavy Industries
Manufacturing industry, energy	Giga Solar Materials Corp.
Other	Nomura Research Institute
	Airport construction
	Central Nippon Expressway Company
Other, energy	Okuibuki
Real estate	Mitsubishi Estate
	Sumitomo Forestry
	Tokyo Tatemono
	Mitsui Fudosan
	The Sumitomo Warehouse
	Mori Building Company
	Tokyu Fudosan Holdings
	Mitsui-Soko Holdings

*Company names are listed in the order of when they first issued green bonds

Reference: Compiled by the TMG from examples of major green bond issuances by domestic issuers in the Ministry of the Environment’s Green Bond Issuance Promotion Platform

(2) State of initiatives by the government and others

In implementing measures that will contribute to the development of green finance, the national government, private sector entities (including issuer companies, investors, financial institutions such as securities companies and asset management companies, and exchanges), and the TMG need to closely coordinate, cooperate, and collaborate. It is also important to clarify the role of the TGFI as much as possible, while fully taking into account the responsibilities and mandate (delegated authority) of each entity.

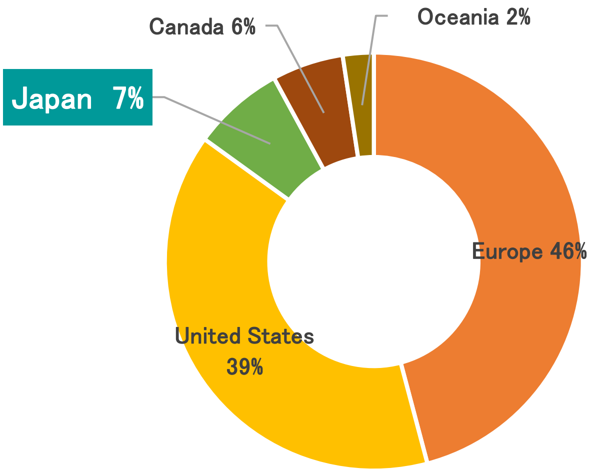
<Figure 6: Initiatives by the national government, JPX, and the TMG to develop green finance>

	Initiative content
National government	**Ministry of Economy, Trade and Industry (METI)** The Study Group on Environmental Innovation Finance, which includes members from financial institutions and industries and other experts, discussed plans to promote the provision of funds to companies that are actively pursuing innovation initiatives for decarbonization and steady transitions to combat climate change. Its interim report was compiled in September 2020. In addition, METI, the Ministry of the Environment, and the Financial Services Agency have co-hosted the Taskforce on Preparation of the Environment for Transition Finance since January 2021, and are currently advancing consideration of important issues related to transition finance, including the formulation of basic guidelines. **Ministry of the Environment (MOE)** From FY2018, the MOE began to register and publicize those who support the issuance of green bonds, etc., and launched the Financial Support Programme for Green Bond Issuance to provide support for the additional costs of issuance through a subsidy system. From FY2020, support has been provided aimed at sustainability bonds in which 50% or more of the funds are allocated for green projects (CO_2 reduction within Japan). **Financial Services Agency (FSA)** In January 2021, the FSA established the Expert Panel on Sustainable Finance comprising members from industry, finance, academia, and relevant ministries and agencies. The panel has begun consideration of themes such as the promotion of sustainable finance by financial institutions, the provision of investment opportunities to investors through financial and capital markets, and the enhancement of climate-related disclosure by companies. In March 2021, the Dedicated International Financial Center Page was launched. Furthermore, at the meeting of the Expert Panel on Climate Change held on April 19, the concept of realizing an “international green finance center” was presented, centered on the FSA. In order to develop the sustainable finance market, where green bonds, transition bonds, and the like are actively traded, it is expected that the FSA, in cooperation with the Tokyo Stock Exchange, will establish an information base for companies and investors and develop a certification framework for green bonds.
JPX	In January 2018, a platform was established for bonds listed on the Tokyo Pro-Bond Market in the Tokyo Stock Exchange, enabling information on green bonds to be posted on the JPX website.
TMG	The initial annual issuance of green bonds, which started in FY2017, was 20 billion yen, and the issuance amount was later increased to 30 billion yen. The issuance amount is planned to be 40 billion yen in FY2021. In November 2020, a roundtable of experts was launched to revise the “Global Financial City: Tokyo” vision that was formulated in November 2017. One of the priority areas to be addressed in the future is the expansion of the green finance market.

(３) Japan’s position in global ESG investment and green finance

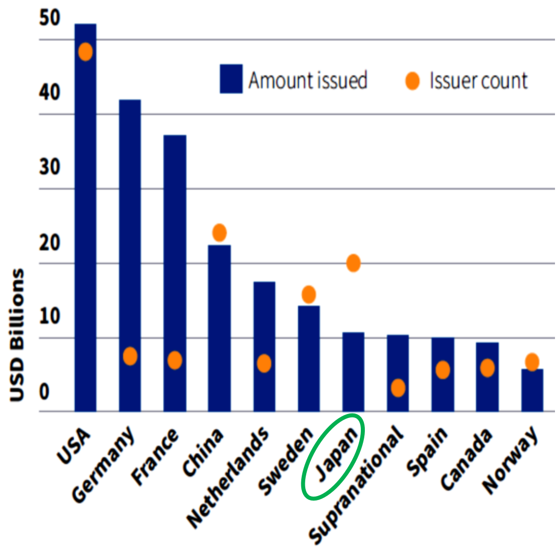
As mentioned above, the amount of green bond issuance and the scale of ESG investment are rapidly increasing in Japan. However, as shown in the figures below, compared to Europe, the U.S., China, and others, Japan’s green finance and ESG investment are still not sufficiently advanced, and there is major room for growth.

<Figure 7> Investment balance by country (region) (2018)



Reference: Prepared by the TMG based on the 2018 Global Sustainable Investment Review by the Global Sustainable Investment Alliance

<Figure 8> Green bond issuance amount by country (2020)



Reference: Excerpt from Sustainable Debt: Global State of the Market 2020 by the Climate Bonds Initiative

<Figure 9> ESG investment balance by country (region)

Country/region	ESG investment balance in 2016 (Unit: in billions of USD)	ESG investment balance in 2018 (Unit: in billions of USD)
Europe	12,040	14,075
United States	8,723	11,995
Japan	**474**	**2,180**
Canada	1,086	1,699
Oceania	516	734
Total	22,890	30,683

Reference: Prepared by the TMG based on the 2018 Global Sustainable Investment Review by the Global Sustainable Investment Alliance

4 Issues for the development of green finance

Considering the enormous amount of funds needed to become carbon neutral by 2050 and to mitigate and adapt to climate change, the development of green finance to financially support that is essential for making Tokyo and Japan’s environments as well as the global environment sustainable, improving the lives of Tokyo residents, and sustainably developing the post-COVID-19 economy and society. In this context, TGFI has been working on the development of a green society. In this context, the TGFI must play an important role as a strategy for the development of green finance.

However, there are still many issues in developing green finance. The term “green finance” encompasses a wide range of stakeholders. It goes without saying that there are companies, local governments, individuals, institutional investors, and other end-investors who raise funds. In addition, there are the major players in the financial markets, such as banks and securities companies, asset management companies that create investment products, exchanges that provide platforms, information vendors, and evaluation agencies.

Therefore, in-depth discussions were held with the “professional staff” of members from these entities and other important players in the promotion of TGFI. A number of issues for the development of green finance were identified in the discussions. The following is a list of representative issues raised in the above discussion.

○ **Issues surrounding information disclosure and evaluation**

At present, there is no uniform, rules-based disclosure standard for ESG-related information like there is for financial information, nor is there a uniform disclosure medium or platform. Green bonds are principle-based, and most green bonds are issued in compliance with the ICMA’s Green Bond Principles, so the items of information to be disclosed are relatively the same. However, the methods of disclosing the use of funds and external reviews is still left up to each issuer.

Furthermore, there are a number of organizations, mainly overseas, that evaluate the disclosure of ESG initiatives of companies as a whole, rather than individual bonds, in the form of ratings. However, there is no widely shared methodology, and actual evaluations currently vary considerably from one evaluation organization to another.

○ **Costs of green finance**

Compared to conventional finance, green finance requires additional costs, such as for disclosure of information through the preparation of reports and other documents to show that the funds will be used for decarbonization and green initiatives, and obtaining reviews from external organizations, in order to prevent greenwashing,[11] as stated in the ICMA's Green Bond Principles. In the current eased financial environment with low interest rates, creditworthy issuers are unlikely to be constrained in their ability to raise funds even if they do not choose green finance, as long as the conversion to green finance does not lead to a clear decrease in the coupon or increase in the offering price. On the other hand, for investors as well, if green finance does not lead to higher real returns and lower risks, it is likely to be a less attractive product, except for factors such as reputation.

○ **Intensifying international inter-market competition**
During the past few years, based on the recognition that ESG and green finance will become important pillars of financial securities markets in the future, major overseas financial markets have all strengthen their efforts on this front. Amidst this, competition has intensified for the development of various platforms, the attraction of fundraisers, managers, and related players, the acquisition of human resources, and other such matters.

○ **Narrow range of the corporate bond market and restrictions on financing methods**
The scale of the Japanese corporate bond market is small compared to other major markets, and issuers are limited to a few large corporations and the like. In addition, the secondary market is not very deep. Reflecting these factors, the scale of the green bond market in Japan is also limited at present.
On the other hand, the participation of a wide range of parties including SMEs is important for the decarbonization of Tokyo and Japan, but it is virtually impossible for SMEs to use green bonds to raise funds for decarbonization investments due to the additional costs and effort involved with green bonds.

○ **Structure of deposits and savings in the financial assets of Japanese households**
Japan has about 1.9 quadrillion yen in personal financial assets, of which more than one quadrillion yen is held in cash and deposits. Amidst this, the policy theme of "savings to investment" has been continuously promoted, but this trend has not yet progressed sufficiently at present. This has led to the fact that the actual resources for ESG finance and green finance are still not large, despite the abundant potential sources of funds.

○ **Lack of human resources**
Japan does not yet have sufficient human resources to handle a variety of tasks related to ESG and green finance, including information disclosure and project evaluation. On the other hand, the competition for ESG-related human resources is intensifying worldwide. This shortage of human resources has also become a constraint on the use of green finance by corporations and ESG investment by investors in Japan.

[11] Greenwashing: Actions that make it appear as if the environment is being taken into consideration, even though there are no environmental improvement effects.

II The purpose and ideal state of the TGFI

1　The purpose of the TGFI: The significance of the TMG's work on the TGFI

(The climate crisis faced by the world)

The sustainability of the global environment is now an issue faced by the world. Tokyo is one of the largest cities in the world and promotes many values. Today, as there is a strong need to respond to climate change, questions are being asked about the ideal state of cities worldwide. Amidst this, there is a strong need for Tokyo to take the lead in addressing humanity's shared issues of climate change and decarbonization. As damage caused by weather-related disasters such as typhoons and torrential rains is increasing around the world, it has become an urgent matter for the TMG to work on decarbonization and ensuring environmental sustainability in order to protect the lives, health, and property of the people of Tokyo. Together with accelerating decarbonization efforts, the TMG needs to work on making Tokyo a sustainable city by reforming the entire socioeconomic structure of the city, including the very nature of the city and how people work and live within it.

(Making Tokyo a city chosen as a "place for creating added value")

As interest in global warming as well as SDGs and ESG issues grows around the world, consumers in various countries are becoming increasingly interested in whether goods and services are produced in a way that is consistent with sustainability and ESG values. Amidst this, companies are also placing greater emphasis on the processes by which their products are made. Centered on global companies, efforts are accelerating to reduce CO_2 emissions throughout supply chains. In this context, it is expected that consumers and companies around the world will increasingly choose "places for creating added value." Thus, it is important for Tokyo to take initiatives to evolve into the world's most advanced green city that is chosen by consumers and companies around the world as a "place for creating added value."

(Importance of finance in promoting green initiatives)

Finance is extremely important in promoting such efforts. In order to accelerate decarbonization and climate change response, massive investments will be required both domestically and internationally in the long-term. Also, in order to achieve sustainable economic development in the post-COVID-19 era, these investments must be used as a new source of growth and lead to stable economic growth.

On the other hand, a considerable amount of financing will be needed in the future to make such investments a reality. No matter how excellent a company's environmental technologies may be, without financial backing, it will be difficult to fully utilize these technologies. In addition, due to the nature of investment, needs for long-term financing are expected to increase. Furthermore, the participation of a wide range of companies including SMEs, such as for energy conservation in office buildings, will be important in promoting the decarbonization of Tokyo. Therefore, there can be a wide range of financing entities.

There is a strong need for financial functions that can smoothly meet such financing demands. In this context, it is also important to look at how the abundant personal financial assets in Japan can be used as an anchor for the development of green finance. Personal financial assets total about 1.9 quadrillion yen in Japan. More than one quadrillion yen is still held in cash or deposits, despite calls over the years for the importance of encouraging people to shift from saving to investing. Green finance, which acts as a bridge between personal financial assets and investments aimed at decarbonization, will help companies and other organizations meet their demand for funds to invest in decarbonization and energy conservation, while providing individuals and investors with a wide range of investment options. In this way, green finance can serve as a trigger to encourage a trend of shifting from savings to investment in a healthy way.

(Intensifying competition to become a hub city for green finance)

Interest in the SDGs and ESG is growing worldwide, and ESG finance is now becoming a major trend in global finance. In addition, as huge sums of money are needed for investment to respond to climate change and for decarbonization, there is an awareness of the importance of obtaining global funds to promote innovation and investment in decarbonization technologies. Countries are working to make their financial markets into hubs for green finance, and global competition among financial markets to develop ESG finance is expected to intensify going forward.

(The purpose and significance of the TGFI)

In light of the above, as it promotes the "Global Financial City: Tokyo" vision, the TMG must quickly advance the two mutually complementary objectives of making Tokyo a green city through the promotion of decarbonization and initiatives for the development of green finance, while maintaining sufficient cooperation with the national government, financial institutions, industries, universities, and other parties. The TGFI formulated this time is based on this awareness of the issues. Its content is not limited to measures that the TMG can adopt on its own, but rather covers a wide range of topics, including measures to be realized through dialogue and cooperation with the private sector and the national government, and measures that are intended to serve as a guidepost for a wide range of parties.

Through the development of green finance in Tokyo, the TGFI will support corporate investment in decarbonization, the development of environmentally friendly technologies, and more. At the same time, it will provide promising investment options to individuals and investors. Through this, it will connect the financial assets of individuals with investments for environmental measures. Furthermore, investment funds will be attracted from abroad, as well as influential players and human resources in ESG finance, to develop the Tokyo financial market. Such initiatives will promote the transformation of Tokyo into a green city and improve the safety and lives of its residents. At the same time, the TGFI will contribute to the sustainable development of the post-COVID-19 economy by using investment in climate change response as a source of growth and realizing a virtuous cycle between the environment and the economy. In this way, the TGFI will contribute to the greenifying of both the “urban system” and the “financial system.” It will strongly support green strategies, growth strategies, and the use of technology not only in Tokyo but also throughout Japan.

２ Ideal state of the TGFI

(1) Positioning of the "Global Financial City: Tokyo" project in the "Future Tokyo: Tokyo's Long-Term Strategy"

In the TMG's long-term strategy known as the "Future Tokyo: Tokyo's Long-Term Strategy" formulated in March 2021, the realization of the "Global Financial City: Tokyo" vision is positioned as one of the major projects that will lead the creation of "Tokyo's future." One of the project's goals for 2030 is to lead the world in green finance and achieve a 15% share[12] of the global ESG investment balance.

(2) Ideal state: The TGFI will create the future of green finance in Tokyo

- A digital platform for information on green finance and other ESG-related corporate initiatives has been established, and this platform is being used to develop green finance and support the financing of decarbonization investments and other investments, including those by SMEs.
- The number of players (issuers, investors, external review organizations, etc.) participating in green finance is increasing, and the scope of the market is expanding.
- Tokyo's decarbonization initiatives and the exceptional environmental technologies of its companies have been communicated to the world, creating a market that attracts green finance funds from around the world. In addition, the environmental technologies of Japanese companies that have developed as a result of these efforts are contributing to global warming countermeasures.
- Individuals and investors are being provided with profitable investment opportunities, and the trend of shifting "from savings to investment" is progressing in a healthy way.
- Human resources with expertise in ESG finance and green finance are gathering in Tokyo, and the industry is developing.

(3) Consideration of KPIs

In order to realize the goals for 2030 set forth in the Future Tokyo: Tokyo's Long-Term Strategy" and achieve the "ideal state" of the TGFI, it is important to clarify intermediate goals and work toward them. For example, for the intermediate targets of FY2025, it is desirable to set indicators that can be measured quantitatively, continuously, and at low cost, such as "the amount of issuance of Japanese green bonds, social bonds, etc., and the issuance support by the TMG," "the number of overseas finance companies (asset management companies active in ESG investment, fintech companies, certification bodies, etc.) attracted," and "the number of joint events/seminars held with the national government and private sector." The established indicators should be reviewed flexibly in response to changes in circumstances.

[12] ESG investment balances include bonds, equities, loans, real estate and other ESG investment assets. Japan's ESG investment balance includes domestic and foreign equities, bonds, and loans, and the investors are located in Japan.

III Policy direction of the TGFI

The following is a summary of the basic concepts and policy directions of the TGFI to address the current status of Japan's green finance market and the issues arising from it.

1 Accelerate the development of Tokyo's green finance market

(1) Development of an information platform on ESG-related corporate initiatives, etc.

<Basic concept>

- As ESG investment spreads around the world, there is an accelerating trend of institutional investors and asset managers incorporating ESG factors into their investment decisions and engagement, leading to a growing requirement for investee companies to further disclose ESG information.
- The development of an information platform that is easy for both investors and companies to use regarding a variety of corporate information on green finance and ESG can be an important factor to promote dialogue between issuers and investors and to attract new issuers and investors to the Tokyo market.

<Policy direction>

- Consideration should be conducted on the ideal form of effective disclosure of ESG-related information on companies, etc., held by the TMG, while taking into account the moves by the national government to establish an information infrastructure and certification framework for green bonds.
- It is necessary to advance exchanges of views with asset managers and external certification organizations to monitor the information that these entities need in the fields of ESG and green finance, and to disclose it in a way that is easy for everyone to use, such as by making it open data, after considering the potential room for cooperation with information vendors. In doing so, it will be necessary to disclose information in English to encourage use by domestic and foreign issuers and investors.
- Since more than 70% of Tokyo's CO_2 emissions come from buildings, along with measures to promote green buildings, consideration should be conducted on the ideal ways to effectively disclose information so that real estate that is superior from the perspective of decarbonization and energy conservation can also be evaluated in terms of finance.

(2) Support for green bond issuers

<Basic concept>

- When issuing green bonds, issuers are required or recommended to obtain reviews and certifications by external organizations in relation to the formulation of evaluation and selection processes for projects to which the raised funds are to be applied, and the calculation of environmental improvement effects of the projects. [13]

[13] Reviews by external organizations have various names, such as "second party opinion," "verification," "certification," and "rating." According

- Obtaining such reviews and certifications by external organizations imposes a burden on issuers in terms of cost and procedures, which in turn is the main factor for their reluctance to engage in green finance.
- In addition to issuing green bonds as yen-denominated bonds, issuing green bonds as foreign currency-denominated domestic bonds (origami bonds) will be a promising field from the perspective of diversifying issuers' means of raising foreign currency.

<Policy direction>

- In addition to the use of the aforementioned information platform and support in terms of data, consideration should be conducted as necessary on measures to reduce the burden of obtaining external reviews, etc., which are necessary for issuing green bonds.
- When designing the specific system, attention needs to be paid to developing content that is easy for issuers to use and to avoid giving preferential treatment to specific evaluation organizations, by means such as cooperation with national government systems.

(3) Leading the market as an anchor issuer and investor

<Basic concept>

- The TMG became the first local government in Japan to issue green bonds in FY2017, and has continued to issue green bonds to institutional and individual investors every year since then, accumulating knowledge and know-how as an issuer. The TMG also plans to issue social bonds in FY2021.
- Currently, many local governments are strengthening their efforts to address climate change issues, and an increasing number of local governments have announced their intention to achieve net zero CO_2 emissions by 2050. It is considered effective to utilize the green bond structure as one of the means to meet the financial needs of local governments for promoting decarbonization initiatives and projects.[14]
- In addition, public pension funds and the like are leading ESG investments overseas. In order to further expand ESG investment in society as a whole, it is important to further increase the presence of local governments as investors.

<Policy direction>

- It is important for the TMG to maintain and improve its presence as an anchor issuer by continuing to issue green bonds of a certain scale.
- At the same time, the TMG should share its accumulated knowledge and know-how on green bond issuance with other local governments and others in order to increase the momentum for green bond issuance by a wide range of parties and accelerate the flow

to the ICMA's Green Bond Principles, obtaining a review by an external organization is recommended.

[14] Cooperation with residents and companies is essential for the implementation of business and projects, and the involvement of residents and companies in the environment-related business of local governments, even as investors, through the issuance of green bonds may have a positive impact on the promotion of environment-related business themselves.

of utilization of domestic and foreign funds for environmental policies in Japan.

- From the perspective of improving the efficiency of monitoring the relationship between green bonds and the use of funds, as well as streamlining the clearing, settlement, and related administrative work involved in the issuance and distribution of green bonds, the application of blockchain and other distributed ledger technologies to green bonds should also be studied and researched.
- The TMG also participates in the financial and capital markets as an investor. It should further consider non-financial factors, including ESG, in its investments, not only from the perspective of increasing long-term investment returns on assets under management, but also from the perspective of accumulating know-how and fostering markets.

【Column ②】 Utilization of blockchain and other distributed ledger technologies advancing around the world

Blockchain and other distributed ledger technologies (DLT), which have emerged as fintech-related technologies in recent years, enable network participants to share the same ledger data under a distributed structure. These technologies have the growing potential to build infrastructure that can operate 365 days a year, 24 hours a day, without being affected by the operating hours of specific computers, and that is resistant to forgery and falsification. In addition, the technologies could also have advantages including improvement of the traceability of transactions and the use of smart contracts (automatic execution of transactions).

Global financial markets are already using these technologies to raise funds. The bond-i issued by the World Bank in August 2018 is said to be the world's first example of a global, public bond issuance using blockchain. According to Yoshiyuki Arima (Japan Representative, Treasury, World Bank), "By sharing investors' bond holdings on the blockchain, there is no need to go through a central clearing house or paying agent as in the conventional transaction process, making transactions more efficient and shorter."*

These technologies are expected to have great potential for application in green finance.

The two most important pieces of information in finance have conventionally been risk and return. However, in green finance, in addition to risk and return, information such as the use of funds and impact on sustainability are also important. Blockchain and other DLT can become important technologies to realize smooth financing based on these factors.

For example, in April 2018, Verbund, a major Austrian power company, raised funds through Grüner Schuldschein (an ESG-related financial instrument that is a loan under German law, also known as a debt instrument, where the funds raised are to be used for environmentally friendly projects) utilizing blockchain. Digitizing the process from issuer to investor improved the fundraising process in terms of communication, transparency, and automation, and is considered to have reduced fundraising-related costs by 15%.

In this way, the application of blockchain and other DLT to green finance is an area that is expected to see innovative efforts by financial market players around the world, and its future development will be closely watched. The TMG should also actively consider the potential of application of these new technologies.

Reference material: "The Future of ESG-themed Fundraising Expanded by Blockchain: Grüner Schuldschein by Verbund of Austria," *Nomura Capital Markets Quarterly* summer 2018.
"The World Bank's 'Blockchain World Bank Bonds' and Future Developments," *Nomura Capital Markets Quarterly* autumn 2018.

* "The World's First Bond Issuance Scheme Utilizing Blockchain by the World Bank," Yoshiyuki Arima, *Financial Affairs*, December 3, 2018.

2 Attract market players and support business development

(1) Attracting and fostering green finance-related asset managers, etc.

<Basic concept>

- In order to develop ESG finance and green finance in the Tokyo market, it is important to attract and foster asset managers with knowhow in this field, a wide range of related companies including fintech start-ups, and human resources in this field.
- From this perspective, support could be implemented for entering Japan toward attracting foreign companies, as well as support measures for fostering related companies in Japan.

<Policy direction>

- In addition to reducing the burden of starting a business in Tokyo on foreign financial companies engaged in green finance, consideration should be given to support measures such as business matching with companies in Tokyo and, if necessary, support for obtaining financial licenses. When implementing support measures, it is necessary to properly grasp the effects of the policy by calculating the ripple effects of the attracted companies on the Tokyo economy in as objective a manner as possible.
- Tokyo's presence in the field of green finance should be elevated by awarding financial businesses that promote ESG investment through the Tokyo Financial Award (ESG Investment Category).
- At the same time, the TMG should actively disseminate information on its green finance initiatives through public conferences, seminars, speeches, publications, websites, etc., in order to raise awareness of Tokyo as a center for ESG finance and green finance. In doing so, the TMG should always be aware of the need to disseminate information in English.

(2) Encouraging green finance among SMEs

<Basic concept>

- More than 90% of the companies in Tokyo are SMEs. In order to achieve "Carbon Half" by 2030, it is important to promote SMEs' decarbonization efforts, such as enhancing energy efficiency at office buildings.
- Concerns are rising mainly among global companies about the emissions of their entire supply chain, and decarbonization efforts are expected to become an important factor for SMEs to continue to win demand for their products and orders from business partners.
- In Japan, the ratio of indirect finance is high, and in particular, many SMEs raise funds mainly through borrowing and other such means rather than direct finance. Therefore, in order to develop green finance, it is necessary to promote making bank loans and the like green in the field of direct finance.
- In addition, there are some industries and companies for which it is difficult to immediately achieve decarbonization in a tangible way. It is also important to provide

financial support to these industries and companies so that they can make a steady transition to low-carbon operations.

<Policy direction>

- From the perspective of encouraging cooperation and coordination toward decarbonization, the TMG should provide sufficient information to SMEs through seminars and workshops on global trends and initiatives related to decarbonization, the SDGs and ESGs, and the financing that supports these initiatives.
- In order to promote the use of green loans for SMEs, cooperation with regional financial institutions and the like should be considered. In doing so, effective use of data held by the TMG on corporate ESG initiatives should also be considered. Measures to encourage SMEs to disclose their ESG-related information should also be considered.
- Measures to support transitions by SMEs should also be considered, taking into account the guidelines on transition finance formulated by the national government.

(3) Attracting individual investors

<Basic concept>

- In light of the changes in socioeconomic activities caused by COVID-19, individuals are becoming increasingly interested in social issues, including measures to combat global warming and climate change. The same is true for decarbonization and contributions to the SDGs and ESG through finance.
- It is important to seize this opportunity to expand the scope of green finance by offering ESG investment options not only to institutional investors but also to individual investors, and by using this opportunity to bridge the gap between the 1.9 quadrillion yen in personal financial assets and investments aimed at realizing a decarbonized society.

<Policy direction>

- It is important to develop an environment that facilitates the entry of individuals into ESG-related investments, such as by requesting the national government to incorporate the ESG index into the reference index for the *Tsumitate* NISA (Dollar-Cost Averaging NISA).
- At the same time, the TMG should provide to Tokyo residents information on global trends related to the SDGs and ESGs, as well as the TMG’s green finance initiatives, and work to improve financial literacy in this field.

3 Share information and nurture ESG expertise

(1) Promotion of Tokyo's advanced environmental policies and dissemination of the projects

<Basic concept>

- In response to the major crisis of climate change facing the world, it is important to send a message about the major policy of envisioning a sustainable city in harmony with nature and strongly promoting the greenifying of the entire city.

- It is important to attract the world's attention as a city that takes the lead in decarbonization by proactively developing and disseminating globally acclaimed measures such as the Tokyo Cap-and-Trade Program, which was launched in 2010 aimed at large-scale businesses (business and industrial sectors) that emit large amounts of greenhouse gases.

- Also, in the industrial world, including start-up companies, movements are increasing toward innovation and social implementation of decarbonization technologies, and many projects are underway.
- In order to promote decarbonization, cooperation and coordination among a wide range of parties is essential. From the perspective of encouraging such cooperation and coordination, it is important to actively disseminate information on the various efforts of industry, government, and academia to achieve the Zero Emission Tokyo Strategy, which aims to achieve net zero CO_2 emissions by 2050.
- The establishment of an ecosystem through such efforts will also contribute to the creation of an environment in which young people and start-up companies will be actively involved in these fields.

<Policy direction>

- The TMG should powerfully set forth the policy of strongly promoting greenifying of the entire city, and generate demand for green financing by developing a number of projects that lead to "Sustainable Recovery," such as the Tokyo Bay eSG Project announced in April 2021.
- In addition to the information on finance that has been provided so far, the TMG should actively disseminate its decarbonization measures and projects to the world through Access to Tokyo and the Business Development Center TOKYO which serve as the TMG's overseas contact points, as well as through overseas diplomatic missions, and the expansion of the TMG's website and materials.
- The TMG should attract the attention of investors and financial companies around the world by strengthening its overseas promotion in cooperation with FinCity.Tokyo (The Organization of Global Financial City Tokyo), which disseminates information with the aim of enhancing Tokyo's attractiveness as a financial market and making it a world-class international financial city, and through opportunities such as international conferences and seminars.
- Because it is important to disseminate information to the world, it is desirable that all disseminated information also be translated into English in principle, while making use of AI translation and other technologies.
- It is desirable to actively solicit ideas for global warming prevention and decarbonization

from the residents and companies of Tokyo, to explore the use of excellent ideas, and to raise awareness of these issues.

【Column ③】 Innovation in the emissions trading market

Emissions trading has been attracting attention as a way to utilize the market mechanism to address global warming. For example, in a typical "cap and trade" scheme, each country or company is assigned a certain "cap" on the amount of greenhouse gases it emits. If the country or company is unable to reduce its emissions to under the cap, it buys allowances for the excess emissions (emission credits) from companies or countries that can reduce their emissions to a level lower than the cap. Emissions trading was introduced with cross-national trading under the Kyoto Protocol formulated in 1997, and is now being introduced at the national level in various regions of the world, including the EU's intra-regional emissions trading scheme started in 2005.

If emissions credits are not traded, each entity will only make efforts to reduce greenhouse gas emissions up to the cap allocated to them. However, if emissions credits can be traded, it is expected that countries and companies will work to reduce their emissions as much as possible, and sell the excess up to the cap as emissions credits. It is hoped that this will lead to further progress in dealing with global warming.

Emissions trading is also important for balancing addressing global warming with sustainable economic development. For example, a Tokyo company could use its outstanding environmental technologies to reduce greenhouse gas emissions in developing and emerging countries overseas, acquire the equivalent worth in emissions credits, and then sell the credits to other companies.

In addition, if emissions credits can be made smaller, it will be possible to divide up a large lot of emission credits created by a large company, which can then be purchased by many companies in the quantities they need.

Trading of various types of derivatives could also be used for emissions trading. It is considered that there could be future trading of "caps" as in the EU, or derivatives based on credits expected to be obtained in the future through absorption of greenhouse gases.

Many issues remain to be resolved in order to realize advanced trading of emissions credits. Today, companies' supply chains are global, crossing national borders. It is necessary to properly grasp the amount of greenhouse gas emissions and other factors in each manufacturing process, and to be able to share this data. Moreover, it is necessary to accurately link the emission credits to be traded with their sources. The use of digital technology will be the key to achieving this at a reasonable cost and in a highly transparent manner.

(2) Dissemination of information on companies with superior environmental technologies and promotion of technology development

<Basic concept>

- In Japan, there are many companies with excellent environmental technologies, but it cannot be said that they are necessarily well-known worldwide.
- In addition, Tokyo and Japanese companies can contribute to solving global environmental problems by utilizing their excellent environmental technologies or developing promising environmental technologies and applying them to climate change countermeasures not only in Tokyo and Japan but also overseas. Furthermore, emissions credits and carbon credits could be obtained as compensation.
- In light of the above, it is necessary to provide information on corporate initiatives and technologies for decarbonization to investors and external evaluation organizations in a prompt and appropriate manner. This is also important for attracting foreign investment in the excellent technologies of Japanese companies. Efforts are also needed for financial support of the development of excellent environmental technologies by companies.
- In addition, fostering companies with excellent environmental technologies, including start-up companies with original ideas, is also important as part of Tokyo's growth strategy.

<Policy direction>

- Greentech trade fairs and exhibitions should be held both physically and virtually to disseminate information on companies with excellent technologies. The TMG could also award SMEs with excellent decarbonization technologies. In doing so, it should aim to disseminate information in English.
- In these efforts, there should be consideration on whether there is room to utilize data held by the TMG, such as on products certified by the TMG and examples of excellent environmental initiatives by companies. This consideration could be important in determining the usefulness of so-called impact investment and in preventing "greenwashing."
- Approaches from the procurement side should also be considered, such as actively adopting advanced technologies at government sites, and providing start-up companies with opportunities for demonstration experiments to build their track records and lead to external PR.
- In the development of environmental technologies, support should be provided to promote the growth of SMEs and start-ups with excellent technological capabilities and ideas, in cooperation with the Startup Ecosystem Tokyo Consortium, which is forming a platform to create new connections by taking advantage of Tokyo's concentration of such companies.

(3) Attracting and nurturing highly-skilled human resources who will be responsible for

ESG finance

<Basic concept>

- To stimulate the green finance market, it is necessary to attract and foster foreign financial companies as well as to accumulate highly-skilled financial professionals in Tokyo who will be responsible for green finance. In order to achieve this, efforts must be made both to attract foreign talent and to train human resources in Tokyo.

<Policy direction>

- In order to attract highly-skilled and experienced financial professionals in the field of green finance to Tokyo and make the most of their capabilities, the TMG should consider proactive measures to attract them, in addition to improving business and living environments.
- Measures should be considered to develop highly-skilled financial professionals in the field of green finance, including the use of the highly-skilled financial professional training program at the Tokyo Metropolitan University Graduate School of Management.
- For human resources development, efforts should be made to create learning opportunities that are unique to Tokyo, while also utilizing networking with companies, universities, financial institutions, and others. Collaboration with overseas human resource development institutions should also be considered.
- Promoting Tokyo as a metropolis leading creation of green cities that promotes advanced decarbonization initiatives in not only finance but also in all other policy fields, will lead to the accumulation of human resources with advanced expertise. Taking this into account, the TMG should further strengthen information dissemination.

IV How to proceed with the TGFI

1 Scope of the TGFI and how to proceed

In the ESG finance field, there are many forms of products in the bond market, stock market, and indirect finance, including green bonds which have already achieved a certain level of success. In particular, a global trend can be seen of development of not only green bonds but also sustainability bonds and social bonds, as well as loans, equity, and a wide range of other financial instruments. Amidst this, from the perspective of stimulating ESG finance in Tokyo, it is desirable to keep in mind a wide range of financing options, without limiting the scope of products such as bonds and loans, or target areas such as green and social finance (respectively the “E” and “S” in ESG).
At the same time, addressing climate change is an urgent issue on a global scale, and the world is entering an era of great competition for decarbonization. It is important for the TMG to speedily take concrete measures for decarbonization and the development of finance to support it.

Therefore, for the TGFI, the TMG should promptly put into practice various measures in the green field, especially those related to green bonds, toward resolving environmental problems that threaten the sustainability of the Earth. As for green bonds, which the TMG issued ahead of other local governments in Japan and has already built up a track record as an issuer, it is desirable to quickly take concrete steps, including supporting the issuance of green bonds by entities other than the TMG. Starting from the dissemination of know-how on issuing green bonds, it is necessary to balance both speed and scale by advancing expansion to other forms of finance, including green loans.

To achieve this, a realistic response would be to expand efforts into other fields, such as social finance (the “S” in ESG which aims to solve social issues), in order to develop ESG finance as a whole. Of course, this does not mean that it is fine to spend time considering and implementing measures in areas other than green bonds and green finance. Given the wide range of issues that need to be addressed and the need to respond quickly, concrete measures should be launched immediately in fields where there is already know-how, and at the same time, other fields should be addressed in a speedy manner.

2 Roadmap

	Item	FY2021	FY2022	FY2023-2025
Accelerate the development of Tokyo's green finance market	Development of an information platform for ESG-related corporate initiatives, etc.	Consideration of information items → Preparation for website creation	Website creation → Increasing and updating information	Increasing and updating information
	Support for green bond issuers	Designing the system → Implementation of subsidies	Consideration and implementation of other support measures	Consideration and implementation of other support measures
	Leading the market as an anchor issuer	Continued issuance of green bonds	Sharing issuing know-how with other municipalities and continued issuance of bonds	Sharing issuing know-how with other municipalities and continued issuance of bonds
Attract market players and support business development	Attracting and fostering green finance-related asset managers, etc.	Designing the system → Continued implementation of the subsidy system and financial business awards	Continued implementation of the subsidy system and financial business awards	Continued implementation of the subsidy system and financial business awards
	Encouraging green finance among SMEs	Interviews with related people → Measures consideration	Implementation of cooperation measures with financial institutions	Implementation of cooperation measures with financial institutions
	Attracting individual investors	Consideration of initiatives content → Holding seminars, etc., and making requests to the national government	Holding seminars, etc., and making requests to the national government	Holding seminars, etc., and making requests to the national government
Share information and nurture ESG expertise	Promotion of Tokyo's advanced environmental policies and dissemination of the projects	Consideration of information items → Information gathering	Website creation → Increasing and updating information	Increasing and updating information
	Dissemination of information on companies with superior environmental technologies and promotion of technology development	Consideration of information items → Information gathering	Website creation → Increasing and updating information	Increasing and updating information
	Attracting and nurturing highly-skilled human resources who will be responsible for ESG finance	Coordination with universities, etc.	Implementation of human resources development programs	Implementation of human resources development programs

Conclusion

Green finance is a global trend, and new developments toward decarbonization are arising one after another even as we consider these proposals. While accurately grasping the ever-changing global situation as well as strengthening and reviewing the TGFI initiatives, it is important to deepen analysis and consideration and have this lead to concrete initiatives while continuing to utilize the “professional staff” meeting framework in regard to issues that could not be explored in depth in a short period of time.

Directly confronting the challenges of decarbonization and taking effective measures in a timely manner will be extremely important for Tokyo to achieve sustainable growth and emerge victorious in competition among cities. We cannot stop even for a moment.

Under this recognition, these proposals are not limited to the financial sector, but also refer to initiatives that will lead to the transformation of the very nature of the city itself in order to realize “Sustainable Recovery.”

The TGFI should ultimately be perceived as a starting point for Tokyo’s efforts to develop green finance. Decarbonization is not just a matter of technological and financial innovation, but also calls for major transformation of the allocation of resources in the economy and society, and is expected to continue to be a major global agenda for decades to come. In this context, global efforts for green finance are accelerating and changing every moment. In light of this situation, all parties concerned must work to implement concrete measures in a speedy manner, and continue to conduct consideration and take proactive action in areas that are not necessarily covered by these proposals.

By working hand in hand with a variety of stakeholders, including the national government, financial institutions, market players, universities, the industrial world, and others, and by promoting the TGFI initiatives outlined in these proposals, we hope that Tokyo will elevate its presence in green finance and achieve sustainable growth as a city.

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[As of June 8, 2021, names in alphabetical order, titles omitted, ◎ symbol indicates chairperson]

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[As of June 8, 2021, names in alphabetical order, titles omitted]