

SECOND PARTY OPINION¹

ON THE SUSTAINABILITY OF JAPAN FINANCING ORGANIZATION FOR MUNICIPALITIES' GREEN BOND FRAMEWORK

January 2020

SCOPE

Vigeo Eiris was commissioned to provide an independent opinion (thereafter the "Second Party Opinion" or "SPO") on the sustainability credentials and management of the Green Bonds² (the "Bonds") to be issued by Japan Financing Organization for Municipalities ("JFM" or the "Issuer") under its Green Bond Framework (the "Framework").

Our opinion is established according to Vigeo Eiris' Environmental, Social and Governance ("ESG") exclusive assessment methodology and to the latest version of the Green Bond Principles guidelines (the "GBP") edited in June 2018.

Our opinion is based on the review of the following components:

- 1) **Issuer:** we assessed the Issuer's Integration of ESG factors in its commitments and strategy, the Issuer's management of potential stakeholders-related ESG controversies and its involvement in controversial activities³.
- 2) **Issuances:** we assessed the Issuer's Framework, including the coherence between the Framework and the Issuer's environmental commitments, the Bonds' potential contribution to sustainability and their alignment with the four core components of the GBP 2018.

Our sources of information are multichannel, combining data from (i) public information gathered from public sources, press content providers and stakeholders, (ii) information from Vigeo Eiris' exclusive ESG rating database, and (iii) information provided by the Issuer through documents and interviews conducted with Issuer's managers and stakeholders involved in the Bond issuance, held *via* face-to-face meetings in Tokyo and a telecommunications system.

We carried out our due diligence assessment from October 29th, 2019 to January 13th, 2020. We consider that we were provided with access to all the appropriate documents and interviewees we solicited. We consider that the information made available enables us to establish our opinion with a reasonable level of assurance on its completeness, precision and reliability.

VIGEO EIRIS' OPINION

Vigeo Eiris is of the opinion that the JFM's Green Bond Framework is aligned with the four core components of the Green Bond Principles voluntary guidelines 2018.

We express a reasonable assurance⁴ (our highest level of assurance) on the Issuer's commitments and on the Issuances' potential contribution to sustainability.

In addition, the Eligible Categories are likely to contribute to six of the United Nations' Sustainable Development Goals ("SDGs"), namely: Goal 3. Good Health and Well-being, Goal 6. Water and Sanitation, Goal 11. Sustainable Cities and Communities, Goal 13. Climate Action, Goal 14. Life Below Water and Goal 15. Life on Land.

1) Issuer (see Part I):

- ▶ As of January 2020, JFM's integration of ESG factors in its commitments and strategy is considered moderate. The Issuer's managerial approach appears moderate in the Environmental, the Social and the Governance pillars, respectively.
- ▶ No stakeholders-related ESG controversy involving JFM was identified over the last 3 years.
- ▶ The Issuer is not involved in any of the 15 controversial activities screened under our methodology.

¹ This opinion is to be considered as the "Second Party Opinion" described in the GBP voluntary guidelines (June 2018 Edition) edited by the International Capital Market Association (www.icmagroup.org).

² The "green bond" is to be considered as the bond to be potentially issued, subject to the discretion of the Issuer. The name "green bond" has been decided by the Issuer: it does not imply any opinion from Vigeo Eiris.

³ The 15 controversial activities analysed by Vigeo Eiris are: Alcohol, Animal welfare, Chemicals of concern, Civilian firearms, Fossil Fuels industry, Coal, Tar sands and oil shale, Gambling, Genetic engineering, High interest rate lending, Military, Nuclear power, Pornography, Reproductive medicine, and Tobacco.

⁴ Definition of Vigeo Eiris' scales of assessment (as detailed in the Methodology section).

2) Issuance (see Part II):

The Issuer has described the main characteristics of the Bonds within a formalized Green Bond Framework which covers the four core components of the GBP 2018 (the last updated version of the Framework was provided to Vigeo Eiris on January 10th, 2020). In addition, the Issuer has committed to make this document publicly accessible on its website⁵ on the day the Bond's issuance is announced, in line with good market practices.

We are of the opinion that the Framework is coherent with the Issuer's main sector sustainability issues and that it contributes to achieve its sustainable development commitments.

Use of Proceeds

- ▶ The net proceeds of the Bond will exclusively finance or refinance, in whole or in part, projects (the "Eligible Projects") falling under one single Eligible Green Category (the "Eligible Category"): loans made by JFM to local Japanese municipalities in order to finance sewerage projects.
- ▶ The Eligible Category is formalized in the Framework and considered clearly defined. The Eligible Projects are intended to contribute to 3 main environmental objectives, namely : Pollution Prevention and Control, Water Resource Conservation, and Renewable energy generated from sewage sludge, sewage sludge recycling (Material Recycling). These objectives are formalized in the Framework and considered clearly defined and relevant.
- ▶ The environmental benefits are defined in the Issuer's Framework. The Issuer has committed to assess and, where feasible, to quantify the environmental benefits of the Bonds. An area for improvement consists in defining ex-ante quantified environmental benefits (targets) in the Framework.
- ▶ The Issuer has not transparently communicated on the ex-ante estimated refinancing share. Nevertheless, the Issuer has committed to report the ex-post refinancing share and that, in case of refinancing, a look-back period of maximum 12 months from each Bond's issuance date will be applied, in line with best market practices.

Process for Project Evaluation and Selection

- ▶ The governance and the process for the evaluation and selection of the Eligible Projects are formalized in the Framework. We consider that the process is reasonably structured, transparent and relevant.
- ▶ The evaluation and selection of Eligible Green Projects is based on relevant internal expertise, with defined roles and responsibilities. The traceability and verification are ensured throughout the process.
- ▶ The process relies on explicit eligibility criteria (selection and exclusionary), relevant to the claimed environmental objectives.
- ▶ The identification and management of the material environmental and social risks associated with the Eligible Category are considered good.

Management of Proceeds

- ▶ The rules for the management of proceeds are overall defined and will be verified internally. We consider that they would enable a documented and transparent allocation process.

Reporting

- ▶ The reporting process and commitments appear to be good, covering both the funds allocation and the environmental benefits of the Eligible Projects.

⁵ <http://www.ifm.go.jp/>

JFM has committed that its Bonds issuances will be supported by external reviews:

- A pre-issuance consultant review: the hereby Second Party Opinion delivered by Vigeo Eiris, covering all the features of the Bond, based on pre-issuance assessment and commitments, to be made publicly accessible by the Issuer on its website.
- An annual review: Vigeo Eiris (or any other party appointed by JFM) will conduct a review on allocation of the net proceeds, on an annual basis until full allocation.

This Second Party Opinion is based on the review of the Framework and of the information provided by the Issuer, according to Vigeo Eiris' ESG assessment methodology and to the GBP 2018

January 13th, 2020

Project team

Julien SOURIAU

*Product Manager - Green & Social Bonds
Senior Project Manager*

Muriel CATON

*Sustainable Finance
Director
Supervisor*

For more information, contact:

Paul COURTOISIER

*Head of sustainability bonds & bonds
(+33) 6 85 35 43 51
paul.courtoisier@vigeo-eiris.com*

Disclaimer

Transparency on the relation between Vigeo Eiris and JFM: Vigeo Eiris has not carried out any audit mission or consultancy activity for JFM out of this SPO. No established relation (financial or commercial) exist between Vigeo Eiris and the Issuer.

This opinion aims at providing an independent opinion on the sustainability credentials and management of the Bond, based on the information which has been made available to Vigeo Eiris. Vigeo Eiris has neither interviewed stakeholders out of the Issuer's employees, nor performed an on-site audit nor other test to check the accuracy of the information provided by the Issuer. The accuracy, comprehensiveness and trustworthiness of the information collected are a responsibility of the Issuer. Providing this opinion does not mean that Vigeo Eiris certifies the effectiveness, the excellence or the irreversibility of the assets to be financed by the Bond. The Issuer is fully responsible for attesting the compliance with its commitments defined in its policies, for their implementation and their monitoring. The opinion delivered by Vigeo Eiris neither focuses on the financial performance of the Bond, nor on the effective allocation of its proceeds. Vigeo Eiris is not liable for the induced consequences when third parties use this opinion either to make investments decisions or to make any kind of business transaction.

Restriction on distribution and use of this opinion: the opinion is provided by Vigeo Eiris to the Issuer and can only be used by JFM. The distribution and publication are at the discretion of the Issuer, submitted to Vigeo Eiris approval.

Part I. ISSUER

Japan Finance Organization for Municipalities (JFM) is a joint funding organization, the objective of which is to provide Japanese local governments (prefectures, cities, towns and villages) with long-term funding at low interest rates. Since its establishment, JFM has been playing a pivotal role in the public sector finance in Japan, funding municipalities based on its founding principles.

Level of the Issuer's integration of ESG factors in its commitments and strategy

As of January 2020, the Issuer's Integration of ESG factors in its commitments and strategy is considered moderate.

Domain	Comments	Opinion
Environment	We reach a moderate level of assurance on JFM's capacity to integrate its most material environmental factors in its strategy.	Reasonable
	JFM has issued a formalised environmental policy, promoting environmental protection and sustainable development through its lending activities to the municipalities.	Moderate
	JFM's lending activities are based on the related laws and regulations and therefore related environmental criteria are built-in in its lending practices. Besides, JFM also has a formalised commitment to reduce its environmental impacts in its offices through various initiatives such as the promotion of paperless and material recycling, the enforcement of Cool Biz (the Japanese government's energy-saving campaign for late spring and summer) and sourcing more environmentally friendly lighting devices like LEDs.	Weak
Social	We reach a moderate level of assurance on JFM's capacity to integrate its most material social factors in its strategy.	Reasonable
	As a joint funding organisation for municipalities, JFM has committed to promote social and economic development through its lending activities. JFM's lending activities target only municipalities and all borrowers are expected to comply with all related laws and regulations in Japan. JFM has established a monitoring system to check borrowers' compliance in their lending practices.	Moderate
	As a public entity, JFM's own commitments to the integration of social factors are also based on related laws and regulations. Although JFM has formalised commitments on key issues such as non-discrimination, labour relations, employee training, and health and safety, most of these commitments are not made public, which is considered to be an area of improvement.	Weak
Governance	We reach a moderate level of assurance on JFM's performance in the Governance pillar.	Reasonable
	The Representative Board consists of one prefectural governor, one city mayor, one town/village mayor and three members from among experts in local administration, economics, finance, law or accounting to ensure the board's diversity .	Moderate
	The Representative Board has the authority to make decisions on important matters related to the overall management, including budgets, settlement of accounts and business plans and to appoint and dismiss the President and CEO as well as Corporate Auditors. The Issuer describes in detail its corporate governance framework. It has communicated information on auditors fees and board meetings attendance, but more information is needed on how the board of directors is evaluated.	Weak

Management of stakeholders-related ESG controversies

As of January 13th, 2020, no stakeholders-related ESG controversy involving JFM was identified over the last 3 years.

Involvement in controversial activities

As of today, JFM is not involved in any of the 15 controversial activities screened under Vigeo Eiris methodology, namely: Alcohol, Animal welfare, Chemicals of concern, Civilian firearms, Fossil Fuels Industry, Coal, Tar sands and oil shale, Gambling, Genetic engineering, High interest rate lending, Military, Nuclear Power, Pornography, Reproductive Medicine and Tobacco.

The controversial activities research provides screening on companies and organisations to identify involvement in business activities that are subject to philosophical or moral beliefs. The information does not suggest any approval or disapproval on their content from Vigeo Eiris.

Part II. ISSUANCE

Coherence of the issuance

Context note: In Japan, the legislature creates and decides the national level basic legal frameworks. In the administration phase, based under the laws set by the National Diet, the Japanese national Government is responsible for matters related to the nation's existence and sets policy goals and more detailed standards within the frameworks.

Local Governments act in line with such frameworks and are in charge of a wide range of public services that are closely related to the daily lives of citizens such as public health, social welfare and education. These Local Governments require substantial funds to build and maintain public infrastructures and facilities such as water supply and sewerage systems, roads, schools and hospitals and cover around 60% of the total public expenditure in Japan

We are of the opinion that JFM's Green Bond Framework is coherent with the Issuer's main sector sustainability issues, with its publicly disclosed strategic sustainable development priorities, and that it contributes to achieve its sustainable development commitments.

Today, the sewerage system in Japan is well established, with a penetration rate of 91.4% (approximately 470,000 km - 290,000 miles- in total sewer pipe installed). The number of sewerage treatment plants was approximately 2,200 as of the end of fiscal year 2017⁶. With such a high penetration rate, the need for the maintenance of sewer pipes and treatment plants is growing. Many of the sewer pipes and facilities were rapidly constructed during the 1960s-80s, meaning that the number of pipes aged 50 years and over is expected to grow, while more than half of the water treatment facilities are now over 15 years old. As a result, the demand for reconstruction is strong.

In addition, Japan has seen a rise in natural disasters such as typhoons and earthquakes in recent years, leading to an increased need to protect and upgrade lifeline water facilities to be able to minimize the impact of such natural disasters. The Japanese Government and local municipalities are working together to establish sustainable sewerage systems through protecting and upgrading the system by applying new technologies. The sewerage business is considered to contribute to the improvement of living conditions, prevention of floods through waste water treatment and rain water drainage, and preservation of water quality in area of public waters. In Japan, the sewerage business is operated as a municipal enterprise and the quality of water is regulated under the laws of Japan.

In a broader context, the Japanese Government is moving to create a sustainable and a recycling-oriented society, with the aim of reducing CO2 emission by 26% between 2013 and 2030, in line with the Paris Agreement⁷. Sewerage is not an exception, and the Japanese Government has set a policy goal of achieving a recycle rate of sewage sludge of 85% by fiscal year 2025. Moreover, in accordance with the Act on Promoting of Global Warming Countermeasures and its related policies, Japan has set a policy goal of achieving the utilization rate of sewage sludge as energy of 30% by fiscal year 2020 and 35% by fiscal year 2030. The main form of energy recycling for this purpose is biomass power generation using sewerage remains, which has been promoted in accordance with the Basic Act for the Promotion of Utilization of Biomass⁸.

In light of this, with the objective of providing local governments with long-term funding at low interest rates, JFM is funding the reconstruction and upgrade of sewerage systems through the Local Government Borrowing Programme (LGBP), which is an important guideline to secure the funding source for local governments in Japan. This programme consists of long-term borrowing guidelines for local governments prepared by the national government. It specifies the amount and sources of local government fundraising each fiscal year in parallel with the national budget, and each local government raises funds in accordance with the LGBP. The LGBP specifies the amount and source of fundraising of sewerage business as well as other businesses.

In fiscal year 2019, the total amount of funds to be raised in respect of the sewerage business in Japan is planned to be approximately JPY1.27 tn (USD 11.4bn)⁹, of which funding JFM is expected to cover approximately 30.9%¹⁰. As of 31 March 2019, JFM's total outstanding loans stood JPY 23.5tn (USD 211.9bn), of which over JPY 7.4tn (USD 66.7bn)⁹ was for sewerage, i.e., projects that are characterized as sustainable water and waste management and which JFM believes to contribute to a sustainable economy and to promote public health. The sewerage is the largest loan category, accounting for 31.6% of total loans as of 31 March 2019¹¹.

By issuing Green Financial Instruments to finance or refinance its Green Projects, the Issuer coherently aligns with its sustainability strategy and commitments and it addresses the main issues of its sector in terms of sustainable development.

⁶ Ministry of Land, Infrastructure and Transport

⁷ Agency for Natural Resources and Energy

⁸ Ministry of Land, Infrastructure and Transport

⁹ USD 1 = JPY 110.92 as of 31 March 2019

¹⁰ Ministry of Internal Affairs and Communications

¹¹ JFM Annual Report 2019

Use of proceeds

The net proceeds of the Bond will exclusively finance or refinance, in whole or in part, projects (the “Eligible Projects”) falling under one single Eligible Green Category (the “Eligible Category”): loans made by JFM to local Japanese municipalities in order to finance sewerage projects. The Eligible Category is formalized in the Framework and considered clearly defined.

The Eligible Projects are intended to contribute to 3 main environmental objectives, namely : Pollution Prevention and Control, Water Resource Conservation, and Renewable energy generated from sewage sludge, sewage sludge recycling (Material Recycling). These objectives are formalized in the Framework and considered clearly defined and relevant.







The environmental benefits are defined in the Issuer’s Framework. The Issuer has committed to assess and, where feasible, to quantify the environmental benefits of the Bonds. An area for improvement consists in defining ex-ante quantified environmental benefits (targets) in the Framework.

The Issuer has not transparently communicated on the ex-ante estimated refinancing share. Nevertheless, the Issuer has committed to report the ex-post refinancing share and that, in case of refinancing, a look-back period of maximum 12 months from each Bond’s issuance date will be applied, in line with best market practices.

Eligible Category	Issuer’s Framework		Vigeo Eiris’ Analysis
	Definition and Eligibility criteria	Environmental Objectives and benefits	
Sustainable water and wastewater management	Development, construction, maintenance, updates, operation of sewerage related assets, which comply with sewage drainage standards set by Japanese law ¹² including: <ul style="list-style-type: none"> • Sewerage Management-Related Facilities • Facility/Equipment (e.g. sludge treatment facilities) • Pipes 	Pollution Prevention and Control <i>improvement of water quality</i> --- Water Resource Conservation <i>improvement of water quality</i> ----- Energy use of sewage sludge, sewage sludge recycle <i>efficient use of energy and the recycling of sewage sludge.</i>	The definition of the category is clear. The environmental objective are considered clearly defined and relevant. The expected environmental benefits are defined by the Issuer in its Framework, while not quantified. The Issuer has committed to report on the estimated quantified environmental benefits of the Bonds in the reporting. An area of improvement is to provide ex-ante estimates of the expected environmental benefits.

¹² Sewerage Act (Act No. 79 of 1958, as amended) : <http://www.japaneselawtranslation.go.jp/law/detail/?id=2810&vm=04&re=01>
 Water Pollution Prevention Act(Act No. 138 of 1970, as amended): <http://www.japaneselawtranslation.go.jp/law/detail/?vm=04&re=01&id=2815>
 Purification Tank Ac(Act No. 43 of 1983, as amended): <http://www.japaneselawtranslation.go.jp/law/detail/?printID=&re=01&id=1111&vm=03>

In addition, the Eligible Categories are likely to contribute to six of the United Nations' Sustainable Development Goals ("SDGs"), namely : Goal 3. Good Health and Well-being, Goal 6. Water and Sanitation, Goal 11. Sustainable Cities and Communities, Goal 13. Climate Action, Goal 14. Life Below Water and Goal 15. Life on Land.

Eligible Category	UN SDGs identified	UN SDGs targets
Sustainable water and wastewater management	 <p>The UN SDG 3 consists in ensuring healthy lives and promoting well-being for all at all ages.</p> <p>By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination</p>	3.9
	 <p>The UN SDG 6 consists in ensuring availability and sustainable management of water and sanitation for all.</p> <p>By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally</p>	6.3
	 <p>The UN SDG 11 consists in making cities and human settlements inclusive, safe, resilient and sustainable.</p> <p>By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations</p>	11.5
	 <p>The UN SDG 13 consists in taking urgent action to combat climate change and its impacts.</p> <p>Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.</p>	13.1
	 <p>The UN SDG 14 consists in conserving and sustainably using the oceans, seas and marine resources for sustainable development.</p> <p>By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution</p>	14.1
	 <p>The UN SDG 15 consists in sustainably managing forests, combating desertification, halting and reversing land degradation, halting biodiversity loss.</p> <p>By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements</p>	15.1

Process for Projects Evaluation and Selection

The governance and the process for the evaluation and selection of the Eligible Projects are formalized in the Framework. We consider that the process is reasonably structured, transparent and relevant.

The project funding process is as follows:

1. Local government will consult with either the national government or prefecture as appropriate and formulate a sewerage business plan, compliant with applicable laws
2. Local government will seek consent or approval on the borrowing from either the national government or prefecture accordingly, in order to conduct its business plan
3. Local government will receive consent or approval from the relevant national government or prefecture
4. Local government will apply to JFM for funding, and are funded the approved amount
5. Evaluation and selection by JFM Green Bond Working Group

The evaluation and selection of Eligible Green Projects is based on relevant internal expertise, with defined roles and responsibilities. The traceability and verification are ensured throughout the process.

- JFM's Green Bond Working Group consists of members of the corporate planning department, finance department and the loan department including members who have experience in local government projects related to the environment, and is responsible for ensuring that the allocation of the net proceeds (or an amount equal to the net proceeds) of the issuance of the Green Bonds is in alignment with the eligibility criteria set forth in its Green Bond Framework. The loan department will confirm that the borrower has obtained consent or approval on the borrowing, in accordance with the requirements of Japanese law.
- Following the extension of loans by JFM to the Eligible Projects, JFM's Green Bond Working Group will conduct surveys with the relevant local governments to gain impact metrics.
- The net proceeds (or an amount equal to the net proceeds) of the issuance of the Green Bonds will only be allocated to Eligible Projects, and a portfolio (the Effective Portfolio) will then be selected from the Eligible Projects based on projects run by local governments which return effective responses to a follow-up survey.

The process relies on explicit eligibility criteria (selection and exclusionary), relevant to the claimed environmental objectives.

- Selection criteria: the sewerage business is operated in accordance with the Sewerage Law, Purification Layer Law and Water Pollution Control Law. The law stipulates discharge water standards, and local governments are required to make regular measurements. (For example, BOD is 10 mg / L or 15 mg / L or less, phosphorus is 3 mg / L or less, 1 mg / L or less, or 0.5 mg / L or less) In addition, as environmental targets for sewerage projects, targets for up to 2030 are set for sewage sludge energy conversion rates and greenhouse gas emission reductions based on the Global Warming Countermeasures Plan (decided by the Cabinet on May 13, 2016), etc.
- Exclusionary criteria: Projects without consent or approval from the relevant national government or prefecture.

The identification and management of the material environmental and social risks associated with the Eligible Category are considered good.

- As stated above, to obtain consent or approval on borrowing from the relevant authority, the borrower must formulate a sewerage business plan in accordance with all the applicable laws (covering social and environmental aspects).
- In addition, the sewerage business has to meet standards for effluent water under the Sewerage Act, Septic Tank Act and Water Pollution Control Act. If the standards are not met, penal regulations will be applied.
- JFM identifies the main ESG risks of the eligible projects including, but not limited to, Biodiversity/Pollution prevention and control (for both accidental and chronic contamination), Waste management (of sludges and by-products), User/neighbours safety, Health and safety for workers and Integration of E&S in supply chain (for construction and operation).

- These risks are covered by monitoring and correction processes set by related organizations in all the businesses to which JFM is allowed to finance. When the borrower takes actions that do not comply with the law and the above-mentioned processes, JFM can redeem the loan based on the contract with the borrower. This condition is specified in the special provisions of the borrowed certificate.
- Since JFM only provides loans to local governments, etc., there is no risk of an illegal situation continues to be ignored. However, to take a sewerage project as an example, the process for requesting reimbursement of loans is as follows.
 - (i) Mandatory compliance with local governments in related laws and regulations (Basic Law on Biodiversity, Sewerage Law, Law on Promotion of Global Warming Countermeasures, Labor Standards Law, etc.)
 - (ii) Administrative guidance by the country or prefecture when it violates compliance obligations, such as not meeting drainage standards (JFM's loan management department confirms the administrative guidance)
 - (iii) If the administrative guidance is not followed, or if the business is suspended, JFM's loan management department reviews the situation. And if JFM determines that it is not suitable for the loan, JFM demands reimbursement based on the provisions to the borrower.
- Moreover, JFM regularly conducts borrowers' inspection to see if loans are being used properly through document checks and on-site visits.

An area of improvement would be to have an external verifier to review the compliance of the selection process with the Issuer's commitments.

Management of proceeds

The rules for the management of proceeds are overall defined and will be verified internally. We consider that they would enable a documented and transparent allocation process.

- Prior to the allocation to loans for Eligible Projects, an amount equal to the net proceeds of the issuance of the Green Bonds will be invested in JFM's liquidity portfolio in cash and cash equivalents.
- The Issuer intends to allocate an amount equal to the net proceeds to Eligible Projects before the end of the fiscal year when the Green Bonds are issued.
- The Issuer has committed that the unallocated proceeds, if any, will be exclusively managed in cash and cash equivalent.

An area of improvement would be to specify what will be the Issuer process in case of project postponement, cancellation or ineligibility, and if it will replace the no longer Eligible Project.

Traceability and verification of the funds are partially ensured throughout the process.

- JFM's Green Bond Working Group will track, monitor and account for the allocation of the net proceeds (or an amount equal to the net proceeds) of the issuance of the Green Bonds.
- In addition, JFM will conduct inspections and examinations on projects which JFM has funded to make sure that the net proceeds (or an amount equal to the net proceeds) of the issuance is allocated to the Eligible Projects.

An area of improvement would be to have an external verifier also review the tracking method and the allocation of the proceeds.

Monitoring & Reporting

The reporting process and commitments appear to be good, covering both the funds allocation and the environmental benefits of the Eligible Projects.

The process for data monitoring, collection, consolidation, validation and reporting is defined in the Framework.

- As stated above JFM's Green Bond Working Group will conduct a survey in respect of its local government borrowers in respect of the environmental impact of their sewerage projects and the amounts of the loans made by JFM that have been distributed in respect of such projects.

- Projects with respect to which the relevant local government returns effective responses will form the Effective Portfolio, and JFM will select such projects up to the full amount of the net proceeds of the Green Bonds. The Green Bond Working Group will then report on the Effective Portfolio as set out below.

The Issuer has committed to report annually until full allocation of the proceeds, and to make publicly accessible its reports on the Issuer's official website.

The Issuer has committed to transparently communicate on reporting indicators, at portfolio level:

- **Allocation of proceeds:** the selected reporting indicators of appear to be relevant

Allocation of proceeds indicators
<ul style="list-style-type: none"> - The amount of net proceeds (or amount equal to the net proceeds) allocated to Eligible Projects in the Effective Portfolio - A list of projects (Project-by-project reporting on Effective Portfolio) - A breakdown of the Effective Portfolio by project type (expected to include: sewerage treatment plants, advanced treatment plants, sludge treatment plants, pump stations and pipes, as well as others) - Refinancing rate (in % of the total amount of proceeds)

An area of improvement would be to report on the temporary placement of the unallocated funds.

- **Environmental benefits:** the selected reporting indicators appear to be relevant

Examples of Environmental benefits indicators	
Eligible subcategories of Project	Output, Outcome and Impact Indicators
New Construction / Update of Sewerage Management Related Facilities	<ul style="list-style-type: none"> - Covered area population (nb. of inhabitants) - Water Management Capacity (wastewater treated to appropriate standards in m³ per month/year) - Water Quality Impact (will confirm the treated water is compliant with related laws and regulations in Japan) - Other Positive Environmental Impact (If any)
New Construction / Update of Facility/Equipment	<ul style="list-style-type: none"> - Covered area population (nb. of inhabitants) - Absolute amount of sludges treated and disposed of (in tonnes of dry solids per month/year) (if any). - Other Positive Environmental Impact (If any)
New Construction / Update of Pipes	<ul style="list-style-type: none"> - Newly constructed pipe length (m) and/or Total Pipe length (m) - Covered area population (nb. of inhabitants) - Other Positive Environmental Impact (If any)

JFM also commits to report on case studies of JFM's lending to sewerage projects and overview of sewerage projects in Japan.

In case of material developments relating to the Eligible Projects and assets, including in case of ESG controversies or assets modification, the Issuer has committed to report it to the investors on its website.

An area for improvement is (i) to commit to publicly disclose the key methodologies and assumptions used to calculate the benefits of Eligible Projects in each annual report and (ii) to an external verification of the data used to report on the environmental benefits of the bonds.

METHODOLOGY

In Vigeo Eiris' view, Environmental, Social and Governance (ESG) factors are intertwined and complementary. As such they cannot be separated in the assessment of ESG management in any organization, activity or transaction. In this sense, Vigeo Eiris writes an opinion on the Issuer's Corporate Social Responsibility as an organization, and on the process and commitments applying to the intended issuance.

Vigeo Eiris' methodology for the definition and assessment of the corporate's integration of ESG factors in its commitments and strategy is based on criteria aligned with public international standards, in compliance with the ISO 26000 guidelines, and is organized in 6 domains: Environment, Human Resources, Human Rights, Community Involvement, Business Behaviour and Corporate Governance. Our evaluation framework of the material ESG issues have been adapted, based on our generic Specific Purpose Banks & Agencies ESG assessment frameworks and on specific issues considering the Issuer's business activity.

Our research and rating procedures are subject to internal quality control at three levels (analysts, heads of cluster sectors, and internal review by the audit department for second party opinions) complemented by a final review and validation by the Direction of Methods. Our SPO are also subject to internal quality control at three levels (consultants in charge of the mission, Production Manager, and final review and validation by the Direction of Sustainable Finance and/or the Direction of Methods. A right of complaint and recourse is guaranteed to all companies under our review, following three levels: first, the team linked to the company, then the Direction of Methods, and finally Vigeo Eiris' Scientific Council.

All employees are signatories of Vigeo Eiris' Code of Ethics, and all the consultants have also signed its add-on covering financial rules of confidentiality.

Part I. ISSUER

NB: The Issuer's level of integration of ESG factors in its commitments and strategy has been assessed through a complete process of rating and benchmark developed by Vigeo Eiris.

Level of the Issuer's integration of ESG factors in its commitments and strategy

JFM's ESG strategy has been assessed by Vigeo Eiris on the basis of its:

- Leadership: relevance of the commitments (content, visibility and ownership).

Management of stakeholder-related ESG controversies

A controversy is an information, a flow of information, or a contradictory opinion that is public, documented and traceable, allegation against an Issuer on corporate responsibility issues. Such allegations can relate to tangible facts, be an interpretation of these facts, or constitute an allegation on unproven facts.

Vigeo Eiris reviewed information provided by the Issuer, press content providers and stakeholders (partnership with Factiva Dow Jones: access to the content of 28,500 publications worldwide from reference financial newspapers to sector-focused magazines, local publications or Non-Government Organizations). Information gathered from these sources is considered as long as they are public, documented and traceable.

Vigeo Eiris provides an opinion on companies' controversies risks mitigation based on the analysis of 3 factors:

- Frequency: reflects for each ESG challenge the number of controversies faced. At corporate level, this factor reflects on the overall number of controversies faced and scope of ESG issues impacted (scale: Isolated, Occasional, Frequent, Persistent).
- Severity: the more a controversy will relate to stakeholders' fundamental interests, will prove actual corporate responsibility in its occurrence, and will have adverse impacts for stakeholders and the company, the highest its severity. Severity assigned at corporate level will reflect the highest severity of all cases faced by the company (scale: Minor, Significant, High, Critical).
- Responsiveness: ability demonstrated by an Issuer to dialogue with its stakeholders in a risk management perspective and based on explanatory, preventative, remediating or corrective measures. At corporate level, this factor will reflect the overall responsiveness of the company for all cases faced (scale: Proactive, Remediate, Reactive, Non- Communicative).

The impact of a controversy on a company's reputation reduces with time, depending on the severity of the event and the company's responsiveness to this event. Conventionally, Vigeo Eiris' controversy database covers any controversy with Minor or Significant severity during 24 months after the last event registered and during 48 months for High and Critical controversies.

Involvement in controversial activities

15 controversial activities have been analysed following 30 parameters to verify if the company is involved in any of them. The company's level of involvement (Major, Minor, No) in a controversial activity is based on:

- An estimation of the revenues derived from controversial products or services.
- The precise nature of the controversial products or services provided by the company.

Part II. ISSUANCE

The Framework has been evaluated by Vigeo Eiris according to the GBP 2018 and on our methodology based on international standards and sector guidelines applying in terms of ESG management and assessment.

Use of proceeds

The definition of the Eligible Projects and of their sustainable objectives and benefits are a core element of Green/Social/Sustainable Bonds or Bonds standards. Vigeo Eiris evaluates the definition of the Eligible Categories, as well as the definition and the relevance of the aimed sustainability objectives. We evaluate the definition of the expected benefits in terms of assessment and quantification. In addition, we evaluate the potential contribution of Eligible Projects to the United Nations Sustainable Development Goals' targets.

Process for evaluation and selection

The evaluation and selection process has been assessed by Vigeo Eiris regarding its transparency, governance and relevance. The eligibility criteria have been assessed regarding their explicitness and relevance vs. the intended objectives of the Eligible Projects. The identification and management of the ESG risks associated with the Eligible Projects are analysed based on material issues considered in Vigeo Eiris' ESG assessment methodology based on international standards and sector guidelines applying in terms of ESG management and assessment.

Management of proceeds

The rules for the management of proceeds and the allocation process are evaluated by Vigeo Eiris regarding their transparency, coherence and efficiency.

Reporting

Monitoring process and commitments, Reporting commitments, reporting indicators and methodologies are defined by the Issuer to enable a transparent reporting on the proceeds allocation and tracking, on the sustainable benefits (output and impact indicators) and on the responsible management of the Eligible Projects financed by the issuance. Vigeo Eiris has evaluated the reporting framework regarding its transparency, exhaustiveness and relevance.

VIGEO EIRIS' ASSESSMENT SCALES

Performance evaluation		Level of assurance	
Advanced	Advanced commitment; strong evidence of command over the issues dedicated to achieving the objective of social responsibility. Reasonable level of risk management and using innovative methods to anticipate emerging risks.	Reasonable	Able to convincingly conform to the prescribed principles and objectives of the evaluation framework
Good	Convincing commitment; significant and consistent evidence of command over the issues. Reasonable level of risk management.	Moderate	Compatibility or partial convergence with the prescribed principles and objectives of the evaluation framework
Limited	Commitment to the objective of social responsibility has been initiated or partially achieved; fragmentary evidence of command over the issues. Limited to weak level of risk management.	Weak	Lack or unawareness of, or incompatibility with the prescribed principles and objectives of the evaluation framework
Weak	Commitment to social responsibility is non-tangible; no evidence of command over the issues. Level of insurance of risk management is weak to very weak.		



Vigeo Eiris is an independent international provider of environmental, social and governance (ESG) research and services for investors and public & private organizations. We undertake risk assessments and evaluate the level of integration of sustainability factors within the strategy and operations of organizations.

Vigeo Eiris offers a wide range of services:

- ▶ **For investors:** decision making support covering all sustainable and ethical investment approaches (including ratings, databases, sector analyses, portfolio analyses, structured products, indices and more).
- ▶ **For companies & organizations:** supporting the integration of ESG criteria into business functions and strategic operations (including sustainable bonds, corporate ratings, CSR evaluations and more).

Vigeo Eiris is committed to delivering The Issuer products and services with high added value: a result of research and analysis that adheres to the strictest quality standards. Our methodology is reviewed by an independent scientific council and all our production processes, from information collection to service delivery, are documented and audited. Vigeo Eiris has chosen to certify all its processes to the latest ISO 9001 standard. Vigeo Eiris is an approved verifier for CBI (Climate Bond Initiative). Vigeo Eiris' research is referenced in several international scientific publications.

With a team of more than 240 experts of 28 different nationalities, Vigeo Eiris is present in Paris, London, Brussels, Milan, Montreal, Hong Kong, Casablanca, Rabat, Santiago.

The Vigeo Eiris Global Network, comprising 4 exclusive research partners, is present in Brazil, Germany, Israel and Japan.

For more information: www.vigeo-eiris.com