

Second-Party Opinion

The Gunma Bank, Ltd. Green Bond Framework



Evaluation Summary

Sustainalytics is of the opinion that the Gunma Bank, Ltd. (“the Gunma Bank” or “the Bank”) Green Bond Framework is credible and impactful and aligns with the four core components of the Green Bond Principles 2018 (GBP). This assessment is based on the following:



USE OF PROCEEDS The eligible categories for the use of proceeds, 1) renewable energy, 2) energy efficiency, 3) clean transportation, and 4) green buildings are aligned with those recognized by the GBP. Sustainalytics considers that the eligible projects will lead to positive environmental impacts and advance the UN Sustainable Development Goals 7, 9 and 11.



PROJECT EVALUATION / SELECTION Eligible projects are selected by the Business Management Office of Corporate Planning Department (“Business Management Office”) based on the eligibility criteria which are set out by the Business Management Office and the Business Planning Group of the Corporate Planning Department (“Business Planning Group”). Sustainalytics considers that the Gunma Bank’s evaluation and selection process is in line with market best practice.



MANAGEMENT OF PROCEEDS The Business Management Office ensures that the amount of green bond issuance does not exceed the total amount of eligible assets by tracking the proceeds of the green bond annually using an internal filing system. Unallocated funds will be managed as cash or cash equivalents. The Gunma Bank’s process for management of proceeds is in line with market practice.



REPORTING The Gunma Bank intends to disclose information on proceeds allocation and environmental impact on its website annually until the proceeds are fully allocated. Allocation reporting covers items such as the amount of allocated proceeds, the amount of unallocated proceeds, and balance of its green bonds and impact reporting covers metrics such as CO2 reduction for each category and types and levels of third-party certification. In Sustainalytics’ view, the Gunma Bank’s reporting is in line with market practice.

Alignment with Japan’s Green Bond Guidelines 2017

Sustainalytics is of the opinion that the Gunma Bank’s Green Bond Framework is in line with the Japan’s Green Bond Guidelines 2017. The guidelines communicate what an issuer should do to issue a credible green bond, and also highlight what an issuer is recommended to do. Sustainalytics assessed the alignment between the Gunma Bank Green Bond Framework and the ‘requirements of’ items outlined in the Japan’s Green Bond Guidelines.

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Issuer Location	Gunma, Japan

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Introduction

Headquartered in Gunma Prefecture of Japan, the Gunma Bank is a regional bank founded in 1932. With a major operational base in Gunma Prefecture and its surrounding area, it provides banking services as its core business, as well as leasing, securities, consulting, guarantee and other services through its group companies.

The Gunma Bank has developed the Gunma Bank, Ltd. Green Bond Framework under which it is planning to issue green bonds to finance or refinance eligible green projects that contribute to climate change countermeasures. The framework sets out eligibility criteria in the following fields:

1. Renewable energy
 - a. Solar power generation
 - b. Biomass power generation
 - c. Hydropower generation
2. Energy efficiency
3. Clean transportation
4. Green buildings

The Gunma Bank engaged Sustainalytics to review the Framework, dated September 2019, and provide a second-party opinion on the Framework's environmental credentials and its alignment with the GBP,¹ and Japan's Green Bond Guidelines 2017. A summary overview of this Framework has been provided in Appendix 1.

As part of this engagement, Sustainalytics held conversations with members of Business Management Office, which is in charge of the Gunma Bank's finance, to understand the sustainability impact of their business processes and planned use of proceeds, as well as management of proceeds and reporting aspects of the Gunma Bank's green bond. Sustainalytics also reviewed relevant public documents and non-public information.

This document contains Sustainalytics' opinion of the Framework and should be read in conjunction with that Framework.

¹ The GBP are administered by the International Capital Market Association and are available at: <https://www.icmagroup.org/green-social-and-sustainability-bonds/green-bond-principles-gbp/>.

Sustainalytics' Opinion

Section 1: Sustainalytics' Opinion on the Gunma Bank Green Bond Framework

Summary

Sustainalytics is of the opinion that the Gunma Bank Green Bond Framework is credible and impactful, and aligns with the four core components of the GBP. Sustainalytics highlights the following elements of the Gunma Bank's green bond framework:

- Use of Proceeds:
 - The four eligible categories for the use of proceeds, 1) renewable energy, 2) energy efficiency, 3) clean transportation, and 4) green buildings, are recognized by the GBP as project categories with clear environmental impact. Sustainalytics believes that the Gunma Bank will contribute to the transition to low-carbon society by allocating the proceeds as above. Please refer to Section 3 for our assessment on the environmental impact of the use of proceeds.
 - Under the eligibility criteria of renewable energy, the Gunma Bank intends to allocate the proceeds to solar power generation, biomass power generation, and hydropower generation businesses through underwriting loans and private placement bonds. For the biomass power generation projects, the allocated proceeds will be limited to waste sources. Moreover, for the hydropower generation projects, the allocated proceeds will be limited to small projects whose capacity is less than 25MW. Sustainalytics holds a positive view that these restrictions will help reduce potential environmental and social risks.
 - Under the eligibility criteria for energy efficiency, the Gunma Bank intends to allocate the proceeds to energy efficiency projects for buildings and related equipment (including LED lighting and air conditioning equipment). Sustainalytics acknowledges that there is no explicit reference to the rate of improvement in energy efficiency within the framework, and it recommends the Gunma Bank to commit to allocating the proceeds to projects that contribute to improving energy efficiency by 15% or more in order to create a clear improvement effect.
 - The Gunma Bank intends to allocate the proceeds to electric vehicles (EVs), fuel-cell vehicles (FCVs), and supporting infrastructure. In Sustainalytics' view, these capital investments and operating expenses are important for maintaining positive environmental impact.
 - Under the green building category, the Bank targets buildings that have obtained or will obtain the following certifications: CASBEE² S, A, or B+; DBJ Green Building five stars, four stars, or three stars; BELS five stars, four stars, or three stars (See Appendix 2 for Sustainalytics' assessment on each certification). Though Sustainalytics recognizes that obtaining either of the top two levels of these certifications is market best practice, it considers the inclusion of the third level as having clear positive environmental impact.
 - The Gunma Bank plans to allocate the proceeds to new and existing investments, loans, and expenses and sets the lookback period for refinancing at five years or less preceding the date of the issuance of the green bond. Sustainalytics acknowledges that investors' preferences are to refinance recent projects, which is generally considered the lookback period of two or three years.
- Project Evaluation and Selection:
 - The Gunma Bank's eligible projects are selected by the Business Management Office and based on the eligibility criteria, which were set out by the Business Management Office, the group that originates green bond issuance, and the Business Planning Group, the group that identifies material issues and establishes action plans based on its SDGs Declaration. Sustainalytics considers that the Gunma Bank's evaluation and selection process is in line with market best practice.
- Management of Proceeds:
 - The Business Management Office ensures that the amount of green bond issuance does not exceed the total amount of eligible assets by tracking the proceeds of the green bond annually using an internal filing system. Although the Gunma Bank intends to fully allocate the proceeds immediately after the issuance of the green bond, unallocated funds, if any, will be managed as cash or cash

² Including CASBEE Certification for Real Estate and Certification for Buildings (New Construction, Existing Buildings, and Renovation)

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equivalents. Sustainalytics believes that the Bank's process for management of proceeds is in line with market practice.

- Reporting:
 - As long as the balance of green bonds exists, the Gunma Bank intends to annually disclose information on proceeds allocation and environmental impact on its website. Allocation reporting will cover items such as the amount of proceeds allocated to each eligible category, the amount of unallocated proceeds, and balance of its green bonds. Impact reporting will cover environmental impact metrics such as CO2 reduction for renewable energy, energy efficiency, and clean transportation; and the number of allocated buildings and types and levels of third-party certification obtained or to be obtained for green buildings. The Bank's reporting is in line with market practice.

Alignment with Green Bond Principles 2018

Sustainalytics has determined that the Gunma Bank's green bond framework aligns to the four core components of the GBP. For detailed information please refer to Appendix 3: Green Bond/Green Bond Programme External Review Form.

Alignment with Japan's Green Bond Guidelines 2017

The Japanese Green Bond Guidelines communicate what an issuer should do to issue a credible green bond, and also highlight what an issuer is recommended to do. Sustainalytics assessed the alignment between the Gunma Bank Green Bond Framework and the 'requirements of' items outlined in the Japan's Green Bond Guidelines.

ICMA Green Bond Principles and Japan's Green Bond Guidelines, 2017 ³	Alignment with GBP and with Japan's Green Bond Guidelines?	Sustainalytics' comments on alignment with Japan's Green Bond Guidelines 2017. ⁴
1. Use of Proceeds	Yes	The eligible categories for the use of proceeds set out in the Gunma Bank's framework, 1) renewable energy, 2) energy efficiency, 3) clean transportation, and 4) green buildings, are aligned with those recognized by Japan's Green Bond Guidelines as having a clear environmental impact. Also, the Bank describes in the framework how to reduce environmental risks associated with eligible projects, and it is accessible to investors.
2. Process for Project Evaluation and Selection	Yes	The issuance of green bonds contributes to the achievement of the Gunma Bank's environmental policy, SDGs Declaration, and Mid-Term Business Plan formulated based on the SDGs Declaration concept. The above policy and goals are described in the framework, which also explains that eligibility criteria are set out and that eligible projects are selected by the Business Management Office based on the eligibility criteria.
3. Management of Proceeds	Yes	The Business Management Office of the Gunma Bank ensures that the amount of green bond issuance does not exceed the total amount of eligible assets by tracking the proceeds of the green bond annually using an internal filing system. It is

³ Green Bond Guidelines, 2017, Summary, Ministry of the Environment, Japan: <https://www.env.go.jp/en/policy/economy/gb/summary2017.pdf>.

⁴ For detailed comments on alignment with ICMA GBP, please see Appendix 2.

		explained that unallocated funds, if any, will be managed as cash or cash equivalents.
4. Reporting	Yes	The Gunma Bank explains in the framework that it will disclose information on proceeds allocation and environmental impact on its website annually as long as the balance of green bonds exists. Allocation reporting will cover items such as the amount of proceeds allocated to each eligible category, the amount of unallocated proceeds, and balance of its green bonds. After full allocation, the Gunma Bank commits to disclosing as necessary in the event of significant changes regarding the allocation. Impact reporting will cover environmental impact metrics such as the amount of CO2 reduction for renewable energy, energy efficiency and clean transportation; and the number of allocated buildings and types and levels of third-party certification obtained or to be obtained for green buildings.

Section 2: Sustainability Strategy of the Issuer

Contribution of framework to the Gunma Bank's sustainability strategy

Based on its corporate philosophy "Dedication to Sound Development of Local Communities," the Gunma Bank has formulated the environmental policy and SDGs Declaration, and promises to work to resolve environmental and social challenges through its business activities as follows:

- The Gunma Bank formulated its environmental policy in 2009, and promises to reduce environmental burdens in its business activities, provide support to customers exploring environmental preservation, promote environmental education for officers and employees, and support environmental preservation activities in local communities.⁵ To solve environmental challenges through its financial business, the Gunma Bank provides loans for solar power generation businesses and energy-saving loans for the purchase and installation of environment-friendly housing equipment, and underwrites private placement bonds that support environmental management, regional revitalization, and environmental preservation. It also provides investment trust products whereby it donates part of commission fees to nature conservation groups and local governments.⁶ To reduce environmental burdens in its business activities, the Gunma Bank is committed to energy saving, resource saving, and recycling; it has a plug-in station for EVs at its headquarters parking lot and has achieved an estimated 11% reduction in power consumption by shifting to LED lighting.⁷
- To work to achieve SDGs, the Gunma Bank set out the Gunma Bank Group SDGs Declaration in February 2019 and specified seven SDGs it would focus on and the corresponding initiative policy. In terms of the environment, it has selected SDGs 7 and 15 and declared that it would work to achieve those goals by supporting environmental activities of client companies and reducing environmental burdens in its business activities.⁸ It has also formulated the FY2019–2021 Mid-Term Business Plan and stated that it would aim for the sustainable development of local communities through the achievement of the plan.⁹

Sustainalytics considers that the Gunma Bank has integrated sustainability initiatives into its management strategy through the above policy and declaration and that the bank is sufficiently prepared to issue green bonds. Furthermore, Sustainalytics is of the opinion that the Gunma Bank's framework will contribute to the achievement of its environmental policy and SDGs Declaration.

⁵ The Gunma Bank, "Environmental Initiatives (Japanese only)": at <https://www.gunmabank.co.jp/about/csr/torikumi/kankyo.html>.

⁶ The Gunma Bank, "Gunma Bank Report 2019 (Japanese only)", at: https://www.gunmabank.co.jp/ir/library/pdf/2019/report-3a_all.pdf.

⁷ The Gunma Bank, "Gunma Bank Report 2019 (Japanese only)", at: https://www.gunmabank.co.jp/ir/library/pdf/2019/report-3a_all.pdf.

⁸ The Gunma Bank, "About Gunma Bank Group SDGs Declaration (Japanese only)", at: <https://www.gunmabank.co.jp/info/news/20190226a.html>.

⁹ The Gunma Bank, "Briefing Session for Mid-Term Business Plan(Japanese only)", at: <https://www.gunmabank.co.jp/ir/hosin/pdf/setsumeikai.pdf>.

Well positioned to address common environmental and social risks associated with the projects

While the Gunma Bank's eligible projects generate positive environmental impacts, Sustainalytics acknowledges that the eligible projects expose the Bank to environmental and social risks. Possible risks include negative influences on ecosystems, water pollution, noise, and negative influences on local residents and workers' health and safety that may be caused by the development and management of renewable energy power generation facilities and green buildings. Despite the Gunma Bank's indirect involvement in eligible projects as a lender, Sustainalytics recognizes that the above risks may damage its reputation. To reduce environmental and social risks, the Gunma Bank has the following processes in place:

- In the Green Bond Framework, as a policy to reduce environmental and social risks, the Gunma Bank explains that, by checking contract documents, the Credit Department examines whether an environmental impact assessment was conducted by the borrower and whether necessary environment-related legislation is complied with. It also promises that if the result of the assessment is severe, no investment or loan will take place.
- In selecting solar power generating companies for underwriting green private placement bonds, the Gunma Bank has set eligibility criteria requiring external certification of the environmental management system. The ISO 14001 international standard and the Ministry of the Environment's Eco-Action 21 certification requires continuous evaluation and improvement as to the reduction of environmental burdens and compliance with environment-related laws and regulations in accordance with the PDCA cycle.

Based on the fact that, the Gunma Bank ensures its investees and borrowers have conducted an environmental impact assessment, and complies with related laws and regulations, as well as the introduction of environmental management systems, by the above processes, Sustainalytics is of opinion that the Gunma Bank is well-positioned to manage and reduce environmental and social risks associated with eligible green projects.

Section 3: Impact of Use of Proceeds

Four use of proceeds categories that are described in the Gunma Bank's Green Bond Framework are recognized by the GBP and Japan's Green Bond Guidelines 2017 as projects that produce positive environmental impacts. Sustainalytics explains why those project categories produce positive environmental impacts in Japan as follows:

Importance of promoting the use of renewable energy

Based on the 2015 Paris Agreement, the Japanese government has promised a 26% reduction in greenhouse gas (GHG) emissions by FY2030 compared to FY2013.¹⁰ In addition, in the Long-term Strategy under the Paris Agreement¹¹ approved by the cabinet in June 2019, Japan has set the long-term goal of reducing GHG emissions by 80% by 2050 and aiming for zero GHG emissions as early as possible within the second half of this century, and positioned renewable energy as one of the most important measures for decarbonization. Since energy-related CO₂ emissions derived from power generation and energy consumption account for about 90% of Japan's GHG emissions,¹² the reduction of CO₂ emissions through the expanded use of renewable energy is important for Japan to achieve its GHG reduction goal.

In response to the Great East Japan Earthquake and the Fukushima-Daiichi nuclear disaster in 2011, the Japanese government has changed its energy policy and announced plans to reduce dependence on nuclear power generation and maximize the use of renewable energy in the 2014 Strategic Energy Plan.¹³ The Japanese government has also shown the target of increasing its ratio of renewable energies to the total power generation in FY2030 from 10% before the earthquake to 22%–24% (solar: 7.0%; biomass: from 3.7% –

¹⁰ UNFCCC, "Japan's Intended Nationally Determined Contribution (INDC)", at:

https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Japan%20First/20150717_Japan's%20INDC.pdf.

¹¹ Ministry of Environment (2019), "Long-term Strategy under the Paris Agreement", at: <https://www.env.go.jp/press/111781.pdf>.

¹² Ministry of Environment, "Japan's National Greenhouse Gas Emissions in Fiscal Year 2017 (Final Figures) (Japanese only)", at: https://www.env.go.jp/earth/ondanka/ghg-mrv/emissions/results/JNGI2019_1.pdf.

¹³ Ministry of Economy, Trade and Industry (2014), "Strategic Energy Plan", at:

https://www.enecho.meti.go.jp/en/category/others/basic_plan/pdf/4th_strategic_energy_plan.pdf.

4.6%; hydropower: from 8.8%–9.2%) in the Long-term Energy Supply and Demand Outlook published in 2015,¹⁴ and revealed the policy of converting renewable energy into a major power source towards 2050 in the Fifth Strategic Energy Plan (2018).¹⁵

In its Green Bond Framework, the Gunma Bank describes that it will allocate the proceeds to projects related to solar power, biomass power, and hydropower generation. Sustainalytics is of opinion that the Gunma Bank's use of proceeds will contribute to the expanded use of renewable energy and to the achievement of Japan's mid- and long-term GHG reduction goals and energy policy.

Importance of expanding the use of EVs and FCVs

In FY2017, CO₂ emissions from the transportation sector accounted for 17.9% of Japan's total CO₂ emissions. And CO₂ emissions from automobiles accounted for 86.2% of the sector's total CO₂ emissions; the automobile is the largest emission source in the transportation sector.¹⁶ Based on the Paris Agreement, the Japanese government has promised a 26% reduction in GHG emissions by FY2030 compared to FY2013. To that end, it aims for a 27.6% reduction in CO₂ emissions in the transportation sector compared to FY2013.¹⁷ To reduce CO₂ emissions from automobiles, the Japanese government aims to have next-generation vehicles (EVs, FCVs, HVs, etc.) account for 50%–70% of new passenger vehicle sales by 2030; in FY2017 they represented 36.7%. While HVs (hybrid vehicles) reached 31.7%, both EVs and FCVs were below 1%, far behind the goal. The government is working to expand the use of next-generation vehicles in Japan by providing subsidies for the purchase of EVs and FCVs and the installation of charging infrastructure as well as by introducing tax breaks.¹⁸

The Gunma Bank's framework specifies that its green bond proceeds are allocated to the purchase and maintenance of EVs, FCVs, and supporting infrastructure in its loan business and group business. Sustainalytics considers that this use of proceeds will help reduce CO₂ emissions from automobiles and drive the achievement of the government's climate goals towards FY2030, through the expanded use of next-generation vehicles.

Necessity to strengthen energy saving measures in buildings

In FY2017, CO₂ emissions from buildings accounted for about 30% of Japan's total CO₂ emissions. The breakdown was as follows: business sector (offices, buildings, commercial facilities, etc.) 17.4%; residential sector 15.6%.¹⁹ Energy consumption of buildings (business sector and residential sector) has increased by about 20% compared with 1990, while energy consumption of other sectors (industry sector and transportation sector) decreased or increased only slightly.²⁰ So, energy performance of buildings needs to be improved. Based on this situation, the Japanese government enacted the Act on the Improvement of Energy Consumption Performance of Buildings (Building Energy Efficiency Act) in 2015, providing for regulatory measures for mandatory compliance with energy efficiency standards for large-scale non-residential buildings.²¹ In its Intended Nationally Determined Contribution submitted to the UNFCCC in advance of the Paris Agreement, Japan has set the goal of reducing CO₂ emissions from the business sector and the residential sector by about 40% respectively by FY2030 compared to FY2013. Measures to that end include energy saving performance improvements of newly constructed buildings, the renovation of existing buildings, the thorough implementation of energy management, and the introduction of high-efficient lighting.²²

¹⁴ Ministry of Economy, Trade and Industry (2015), "Long-term Energy Supply and Demand Outlook", at: http://www.meti.go.jp/english/press/2015/pdf/0716_01a.pdf.

¹⁵ Ministry of Economy, Trade and Industry (2018), "Strategic Energy Plan", at: https://www.meti.go.jp/english/press/2018/pdf/0703_002c.pdf.

¹⁶ Ministry of Land, Infrastructure, Transport and Tourism, "CO₂ Emissions in the Transportation Sector (Japanese only)", at: https://www.mlit.go.jp/sogoseisaku/environment/sosei_environment_tk_000007.html.

¹⁷ UNFCCC, "Japan's Intended Nationally Determined Contribution (INDC)", at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Japan%20First/20150717_Japan's%20INDC.pdf.

¹⁸ Ministry of Land, Infrastructure, Transport and Tourism and Ministry of Economy, Trade and Industry, "The Current Spread of EVs/PHVs (Japanese only)", at: https://www.meti.go.jp/shingikai/enecho/shoene/shinene/sho_energy/jidosha_handan/pdf/2018_007_01_00.pdf.

¹⁹ Ministry of Environment, Japan's National Greenhouse Gas Emissions in Fiscal Year 2017 (Final Figures) (Japanese only)", at: <https://www.env.go.jp/earth/ondanka/ghg-mrv/emissions/results/honbun2017-2.pdf>.

²⁰ Ministry of Land, Infrastructure, Transport and Tourism, About Future Energy-Saving Measures for Houses and Buildings (second report) (Japanese only)", at: <https://www.mlit.go.jp/common/001275971.pdf>.

²¹ Ministry of Land, Infrastructure, Transport and Tourism, "Overview of the Building Energy Efficiency Act (Japanese only)", at: <https://www.mlit.go.jp/common/001178846.pdf>

²² UNFCCC, "Japan's Intended Nationally Determined Contribution (INDC)", at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Japan%20First/20150717_Japan's%20INDC.pdf

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The Gunma Bank's framework specifies that its green bond proceeds are allocated to loans for the construction, purchase and renovation of green buildings that have obtained or will obtain third-party certification, as well as loans for the installation and renovation of equipment that contribute to improving energy efficiency, including LED lighting, air conditioning equipment upgrades, and building refurbishment. Based on the above, Sustainalytics expresses a view that this use of proceeds will help reduce energy consumption in the housing and building sectors and contribute to the achievement of Japan's emission reduction goals related to climate change countermeasures.

Alignment with/contribution to SDGs

The Sustainable Development Goals (SDGs) were set in September 2015 and form an agenda for achieving sustainable development by the year 2030. This green bond advances the following SDG goals and targets:

Use of Proceeds Category	SDG	SDG target
Renewable Energy	7. Affordable and Clean Energy	7.2 By 2030, increase substantially the share of renewable energy in the global energy mix
Energy efficiency	7. Affordable and Clean Energy	7.3 By 2030, double the global rate of improvement in energy efficiency
Clean transportation	11. Sustainable Cities and Communities	11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons
Green buildings	9. Industry, innovation and infrastructure	9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities

Conclusion

The Gunma Bank plans to issue green bonds based on its Green Bond Framework and allocate the proceeds for financing or refinancing related to renewable energy, energy efficiency, clean transportation, and green buildings. Having formulated its environmental policy and the SDGs Declaration, the Gunma Bank promises to support environmental activities of client companies through its financial business and reduce environmental burdens in its business activities, thus aiming to contribute to the sustainable development of local communities. Sustainalytics considers that the use of proceeds specified in the Gunma Bank's Green Bond Framework will contribute to the achievement of its sustainability goals, and will also contribute to the achievement of Japan's emission reduction goals related to climate change countermeasures and to the advancement of SDGs 7, 9 and 11.

The eligible categories for the Gunma Bank's use of proceeds are aligned with project categories recognized by the GBP and Japan's Green Bond Guidelines 2017 as having a clear positive environmental impact. In Sustainalytics' view, the project evaluation and selection process, management of proceeds, and allocation and impact reporting that the Gunma Bank has identified in its framework are all in line with market practice.

Based on the above, Sustainalytics considers the Gunma Bank's framework to be robust, credible, and in alignment with the four core components of the GBP as well as Japan's Green Bond Guidelines 2017.

Appendices

Appendix 1: Framework Overview

For the purpose of issuing green bonds, the Gunma Bank has developed the following framework which addresses the four key core components of the GBP: use of proceeds, project evaluation and selection process, management of proceeds, and reporting, on September 2019. The framework belongs to the Gunma Bank.

1. Introduction

The Gunma Bank, headquartered in Maebashi City, Gunma Prefecture, was founded in 1932 as Gunma Daido Bank and was renamed the Gunma Bank in 1955. As a regional financial institution with a major operational base in Gunma Prefecture, it provides banking, leasing and other financial services. Its corporate philosophy reads: "Dedication to Sound Development of Local Communities—This is our main business activity." In line with this philosophy, it set out the Gunma Bank Group SDGs Declaration in February 2019, based on which it is strengthening efforts to address social and environmental challenges through business activities and is striving to build a sustainable society and generate economic value. It also involves local communities in realizing a sustainable society by making local customers aware of SDGs and providing support to customers contributing to the achievement of SDGs.

2. Use of proceeds

The proceeds of the green bond will be allocated by the Gunma Bank towards new and existing loans or expenses that meet the following eligibility criteria.

Eligibility criteria

a. Renewable energy

Loans for the following power generation businesses, including the leasing, purchase, construction, operation and expansion of power generation facility assets

- i. Solar power generation business (including expenses related to leasing business conducted by Gungin Leasing Co., Ltd., a subsidiary of the Gunma Bank)
- ii. Biomass power generation business
 - * Limited to businesses using waste-derived biomass
- iii. Hydropower generation business
 - * Limited to businesses with capacity is less than 25MW

b. Green private placement bonds

Underwriting of bank-guaranteed private placement bonds for solar power companies that meet either of the following criteria:

- i. Companies that have obtained ISO 14001 certification
- ii. Companies that have obtained the Ministry of the Environment's Eco-Action 21 certification
- iii. Companies that have obtained Gunma Prefecture's Environment GS certification

c. Energy efficiency

Loans for installation and renovation of equipment that contributes to improving energy efficiency, including LED lighting, upgrade of air conditioning equipment and refurbishment of buildings. The loans applicable to the category (e) are exempted from the category (c).

d. Clean transportation

Loans and expenses for the purchase or maintenance of electric vehicles (EVs), fuel-cell vehicles (FCVs), and supporting infrastructure, including the following businesses or initiatives:

- i. Loans offered by the Gunma Bank
- ii. Car leasing business by Gungin Leasing Co., Ltd., a subsidiary of the Gunma Bank
- iii. Promotion of the introduction of eco-cars as companies' cars, in group companies

e. Green buildings

Loans for the construction, purchase or repair of buildings that have obtained or meet standards for green building certification recognized nationally.

- i. CASBEE: S, A, or B+
- ii. DBJ Green Building Certification: five stars, four stars, or three stars
- iii. BELS: five stars, four stars, or three stars

f. The target will be loans that have been agreed and projects that have been decided to be launched, or expenses (a) within five years prior to the date of the issuance of the relevant green bond or (b) after the issuance of the green bond and before the date of the redemption of the relevant green bond.

3. Process for project evaluation and selection

3.1 Application of Eligibility Criteria in Project Selection

The eligibility criteria were drafted by the Business Management Office of the Corporate Planning Department (hereinafter, the "Business Management Office"), which proposes the issuance of the green bond, and their consistency with the priority issues and initiative policy of the Gunma Bank Group SDGs Declaration was confirmed through discussions between the Corporate Management Office and the Business Planning Group of the Corporate Planning Department (hereinafter, the "Business Planning Group"), which formulated the priority issues and initiative policy of the Gunma Bank Group SDGs Declaration. In the selection of eligible loans, the Credit Department examines them and then the Business Management Office checks their consistency with the eligibility criteria.

3.2 Environmental Objectives

Aiming to realize truly enriched local communities in which the environment and the industry can coexist, the Gunma Bank has formulated its environmental policy consisting of the following four pillars:

- 1) Reduce environmental burdens by promoting resource saving, energy saving, and recycling
- 2) Provide support to customers engaging in environmental preservation, through the provision of financial products and services
- 3) Promote environmental education for directors and employees, and help them implement environmental preservation activities
- 4) Support environmental preservation activities in local communities

Besides, in the Gunma Bank Group SDGs Declaration set out in February 2019, the Gunma Bank positions "preservation and creation of the global environment" as one of the priority issues as part of its efforts to build a sustainable society and generate economic value. Based on the above environmental policy, it provides support to customers engaging in environmental preservation and working to create a beautiful environment, and also seeks to reduce environmental burdens from its business activities. The 2019 Mid-Term Business Plan ("Innovation New Dimension"—Toward delivering value), whose first year has started in April 2019, was formulated based on the above SDGs Declaration concept. By working to achieve the plan, the Gunma Bank strives to contribute to the sustainable development of local communities.

3.3 Process to mitigate environmental and social risks

To reduce environmental and social risks with regard to investment and loan projects, the Gunma Bank evaluates environmental and social risk-related information for each category of eligibility criteria as necessary. Specifically, the Credit Department examines whether an environmental impact assessment was conducted by a borrower at the time of considering the launch of the relevant project, and ensures that necessary environment-related legislation is complied with. If, as a result of the assessment, the project is deemed to have a serious impact, then no investment or loan will take place.

4. Management of Proceeds

The proceeds of the green bond will be allocated by the Gunma Bank towards new and existing loans or expenses that meet the eligibility criteria. The Business Management Office will ensure on an annual basis that the total amount of green eligible assets is not less than the amount of green bond issuance. The total amount of green eligible assets is not expected to fall below the amount of green bond issuance, but if happens to do so, then the gap amount will be managed as cash or cash equivalents.

5. Reporting

5.1 Allocation reporting

As long as the balance of green bonds exists, the Gunma Bank will annually disclose the following items regarding the proceeds allocation on its website:

- The amount of proceeds allocated for each category (a–e) of eligibility criteria
- The amount of unallocated proceeds

- The balance of green bonds

The Gunma Bank will disclose any significant changes to the status of allocation, even after all funds are allocated.

5.2 Impact reporting

As long as the balance of green bonds exists, the Gunma Bank will annually disclose the following metrics on its website:

Categories of eligibility criteria	Impact reporting metrics
a. Renewable energy	Total CO ₂ reduction (I) + (II)+(III)
Solar power generation business	CO ₂ reduction (I)
Biomass power generation business	CO ₂ reduction (II)
Hydropower generation business	CO ₂ reduction (III)
b. Green private placement bonds	CO ₂ reduction
c. Energy efficiency	CO ₂ reduction
d. Clean transportation	CO ₂ reduction
e. Green buildings	<ul style="list-style-type: none"> • The number of green buildings funded • Type of certification obtained • Level of certification obtained

Appendix 2: Overview of Real Estate Certification Schemes

	CASBEE Certification ²³	DBJ Green Building Certification Programme ²⁴	BELS ²⁵
Background	CASBEE (Comprehensive Assessment System for Built Environment Efficiency) Certification is a green building certification scheme in Japan, which a third party certifies the evaluation of the environmental performance of buildings. The scheme includes, based on types of buildings: CASBEE for Buildings, CASBEE for Real Estate, and CASBEE for Housing.	DBJ Green Building Certification Programme was launched by Development Bank of Japan in 2011 and is operated together with Japan Real Estate Institute (JREI). The programme is recognized as one of regional standards. The certification is available for office buildings, logistics, residential & retail facilities.	BELS (Building-Housing Energy-efficiency Labelling System) is an energy performance label, issued under guidelines established by the Ministry of Land, Infrastructure, Transport, and Tourism. The BELS system evaluates primary energy consumption to measure conservation performance.
Certification levels	C (Poor) B- (Slightly Poor) B+ (Good) A (Very Good) S (Excellent) * 4-grade evaluation for CASBEE for Real Estate excluding C rank	1 Star (Properties with satisfactory environmental & social awareness) 2 Stars (Properties with high environmental & social awareness) 3 Stars (Properties with excellent environmental and social awareness) 4 Stars (Properties with exceptionally high environmental & social awareness) 5 Stars (Properties with the best class environmental & social awareness)	1 Star 2 Stars 3 Stars 4 Stars 5 Stars
Areas of Assessment: Environmental Project Management	CASBEE assesses two main factors: inside and outside the building site, which translate into Q (Built Environment Quality) and, respectively, L (Built Environment Load). * The above are not applied to CASBEE for Real Estate	Evaluation of DBJ Green Building Certification includes construction specifications, environmental features as well as the following factors: - Disaster-prevention and anticrime measures; - Tenants' comfort and convenience; - Harmony with the surrounding environment; -	None

²³ Institute for Building Environment and Energy Conservation, "CASBEE certification scheme (Japanese only)", at: <http://www.ibec.or.jp/CASBEE/certification/certification.html>.

²⁴ Development Bank of Japan, Japan Real Estate Institute (JREI), "DBJ Green Building", at: <http://igb.jp/en/index.html>.

²⁵ Association for Housing Performance Evaluation & Labeling, "Building-Housing Energy-efficiency Labelling System Building Energy-efficiency Performance Labeling System (Japanese only)", at: <https://www.hyoukakyokai.or.jp/bels/bels.html>.

		Collaboration with stakeholders (including tenants and investors); and - Environmental Investor Relations activities.	
Areas of Assessment: Environmental Performance of the Building	<ul style="list-style-type: none"> • Energy Efficiency • Resource efficiency • Local environment • Indoor environment <p>* Areas for assessment of CASBEE for Real Estate are energy/GHG, water, resource, biodiversity, indoor environment</p>	<p>Assessment include three areas with some examples of following subcategories:</p> <p>Ecology</p> <ul style="list-style-type: none"> • Energy conservation • Water resources conservation • 3R (Reduce, Reuse and Recycle) • Use of renewable energy <p>Risk management & amenities/diversity</p> <ul style="list-style-type: none"> • Security & Safety of tenant users • Convenience of tenant users <p>Community & partnership</p> <ul style="list-style-type: none"> • Landscape • Biodiversity • Relation with the local community • Owner & stakeholder relationship 	Energy efficiency
Requirements	<p>Score-based performance level</p> <p>CASBEE uses the BEE (Built Environment Efficiency) as its assessment indicator, which is calculated from Q (Built Environment Quality) as the numerator and L (Built Environment Load) as the denominator. Q and L are obtained through the classification and rearrangement of the four areas of assessment.</p> <p>Buildings may receive ranks ranging from C (poor) to S (excellent), in order of increasing BEE value.</p> <p>For authorization, a building must receive a report from the CASBEE Certification system, which is afterwards assessed by the local government.</p>	<p>Score-based performance level Assessment structure composed of the following three pillars:</p> <p>1. Areas of assessment The features and characteristics of the green building will be classified into three main categories: ecology, risk management & amenities/diversity, and community & partnership. Each main area consists of five subcategories and has a full score of 100 points. The entire assessment consists of 58 questions.</p> <p>2. Comprehensive assessment Among the conventional assessment points, some particular importance is attached to the owner operation of the property, such as, in the risk management part, disaster prevention & anticrime measures, and in the</p>	<p>Score-based performance level.</p> <p>The BELS score is based on the Building Energy Index, obtained by comparing the energy consumption of a building to the standard primary energy consumption of the building type in official guidelines.</p> <p>A two-star rating is equivalent to meeting existing energy conservation standards, with higher star ratings implying greater savings.</p> <p>The score is calculated by an accredited third party.</p>

	<p>* CASBEE for Real Estate does not use BEE, additional point system. Certification will not be given, if required item are not met.</p>	<p>community & partnership part, local environment-awareness initiatives.</p> <p>3. Innovation point system An additional point system is adopted to reflect exceptionally innovative initiatives in each subcategory. Such initiatives need not fit in the scope of the respective questions.</p> <p>JREI will conduct on the ground review of building performance on the indicators above, and a committee set in JREI will decide the result of certification rank.</p>	
<p>Performance Display</p>			
<p>Qualitative considerations</p>	<p>CASBEE is continuously developed based on industry-government-academia collaboration under the support of Ministry of Land, Infrastructure, Transport and Tourism. In Japan, many local governments have made CASBEE assessment results mandatory for building permits.</p> <p>Compared to similar tools available internationally, CASBEE displays a unique and simple structure.</p>	<p>In addition to LEED and CASBEE, DBJ Green Buildings Certification Programme is considered as one of the green building standards in Japan. According to its website, as of March 2019, 695 properties in Japan are certified by the programme.²⁹</p>	<p>BELS is aligned with official government standards.</p> <p>The scheme assesses only energy performance, without any broader consideration of holistic environmental factors.</p>

²⁶ Institute for Building Environment and Energy Conservation, "Method of Evaluation and Built Environment Efficiency (BEE) ", at: http://www.ibec.or.jp/CASBEE/CASBEE_outline/method.html.

²⁷ Development Bank of Japan, "DBJ Green Building", at: http://www.dbj.jp/en/pdf/service/finance/g_building/gb_presentation.pdf.

²⁸ Institute for Building Environment and Energy Conservation, "Display example of BELS (Japanese only)", at: https://www.hyoukakyukai.or.jp/bels/pdf/170401bels_07.pdf.

²⁹ Development Bank of Japan, Japan Real Estate Institute (JREI), "DBJ Green Building", at: <http://igb.jp/en/index.html>.

Appendix 3: Green Bond / Green Bond Programme - External Review Form

Section 1. Basic Information

Issuer name:	The Gunma Bank, Ltd.
Green Bond ISIN or Issuer Green Bond Framework Name, if applicable: <i>[specify as appropriate]</i>	The Gunma Bank Green Bond Framework
Review provider's name:	Sustainalytics
Completion date of this form:	24 October 2019
Publication date of review publication: <i>[where appropriate, specify if it is an update and add reference to earlier relevant review]</i>	

Section 2. Review overview

SCOPE OF REVIEW

The following may be used or adapted, where appropriate, to summarise the scope of the review.

The review assessed the following elements and confirmed their alignment with the GBPs:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Use of Proceeds | <input checked="" type="checkbox"/> Process for Project Evaluation and Selection |
| <input checked="" type="checkbox"/> Management of Proceeds | <input checked="" type="checkbox"/> Reporting |

ROLE(S) OF REVIEW PROVIDER

- | | |
|---|--|
| <input checked="" type="checkbox"/> Consultancy (incl. 2 nd opinion) | <input type="checkbox"/> Certification |
| <input type="checkbox"/> Verification | <input type="checkbox"/> Rating |
| <input type="checkbox"/> Other <i>(please specify)</i> : | |

Note: In case of multiple reviews / different providers, please provide separate forms for each review.

EXECUTIVE SUMMARY OF REVIEW and/or LINK TO FULL REVIEW *(if applicable)*

Please refer to Evaluation Summary above.

Section 3. Detailed review

Reviewers are encouraged to provide the information below to the extent possible and use the comment section to explain the scope of their review.

1. USE OF PROCEEDS

Overall comment on section *(if applicable)*:

The eligible categories for the use of proceeds, 1) renewable energy, 2) energy efficiency, 3) clean transportation, and 4) green buildings are aligned with those recognized by the GBP. Sustainalytics considers that the eligible projects will lead to positive environmental impacts and advance the UN Sustainable Development Goals 7, 9 and 11.

Use of proceeds categories as per GBP:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Renewable energy | <input checked="" type="checkbox"/> Energy efficiency |
| <input type="checkbox"/> Pollution prevention and control | <input type="checkbox"/> Environmentally sustainable management of living natural resources and land use |
| <input type="checkbox"/> Terrestrial and aquatic biodiversity conservation | <input checked="" type="checkbox"/> Clean transportation |
| <input type="checkbox"/> Sustainable water and wastewater management | <input type="checkbox"/> Climate change adaptation |
| <input type="checkbox"/> Eco-efficient and/or circular economy adapted products, production technologies and processes | <input checked="" type="checkbox"/> Green buildings |
| <input type="checkbox"/> Unknown at issuance but currently expected to conform with GBP categories, or other eligible areas not yet stated in GBPs | <input type="checkbox"/> Other <i>(please specify)</i> : |

If applicable please specify the environmental taxonomy, if other than GBPs:

2. PROCESS FOR PROJECT EVALUATION AND SELECTION

Overall comment on section (if applicable):

Eligible projects are selected after the Business Management Office checks their consistency with the eligibility criteria set out by the Business Management Office and the Business Planning Group. Sustainalytics considers that the Gunma Bank's evaluation and selection process is in line with market best practice.

Evaluation and selection

- | | |
|---|--|
| <input checked="" type="checkbox"/> Credentials on the issuer's environmental sustainability objectives | <input type="checkbox"/> Documented process to determine that projects fit within defined categories |
|---|--|

- | | |
|--|---|
| <input checked="" type="checkbox"/> Defined and transparent criteria for projects eligible for Green Bond proceeds | <input checked="" type="checkbox"/> Documented process to identify and manage potential ESG risks associated with the project |
| <input type="checkbox"/> Summary criteria for project evaluation and selection publicly available | <input type="checkbox"/> Other <i>(please specify)</i> : |

Information on Responsibilities and Accountability

- | | |
|--|--|
| <input checked="" type="checkbox"/> Evaluation / Selection criteria subject to external advice or verification | <input type="checkbox"/> In-house assessment |
| <input type="checkbox"/> Other <i>(please specify)</i> : | |

3. MANAGEMENT OF PROCEEDS

Overall comment on section *(if applicable)*:

The Business Management Office ensures that the amount of green bond issuance does not exceed the total amount of eligible assets by tracking the proceeds of the green bond annually using an internal filing system. Unallocated funds will be managed as cash or cash equivalents. The Gunma Bank's process for management of proceeds is in line with market practice.

Tracking of proceeds:

- | |
|---|
| <input checked="" type="checkbox"/> Green Bond proceeds segregated or tracked by the issuer in an appropriate manner |
| <input checked="" type="checkbox"/> Disclosure of intended types of temporary investment instruments for unallocated proceeds |
| <input type="checkbox"/> Other <i>(please specify)</i> : |

Additional disclosure:

- | | |
|--|---|
| <input type="checkbox"/> Allocations to future investments only | <input checked="" type="checkbox"/> Allocations to both existing and future investments |
| <input type="checkbox"/> Allocation to individual disbursements | <input type="checkbox"/> Allocation to a portfolio of disbursements |
| <input type="checkbox"/> Disclosure of portfolio balance of unallocated proceeds | <input type="checkbox"/> Other <i>(please specify)</i> : |

4. REPORTING

Overall comment on section *(if applicable)*:

The Gunma Bank intends to disclose information on proceeds allocation and environmental impact on its website annually until the proceeds are fully allocated. Allocation reporting covers items such as the amount of allocated proceeds, the amount of unallocated proceeds and balance of its green bonds, and impact reporting covers metrics such as CO2 reduction for each category and types and levels of third-party certification. In Sustainalytics' view, the Gunma Bank's reporting is in line with market practice.

Use of proceeds reporting:

- | | |
|--|--|
| <input type="checkbox"/> Project-by-project | <input checked="" type="checkbox"/> On a project portfolio basis |
| <input type="checkbox"/> Linkage to individual bond(s) | <input type="checkbox"/> Other (<i>please specify</i>): |

Information reported:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Allocated amounts | <input type="checkbox"/> Green Bond financed share of total investment |
| <input type="checkbox"/> Other (<i>please specify</i>): | |

Frequency:

- | | |
|---|--------------------------------------|
| <input checked="" type="checkbox"/> Annual | <input type="checkbox"/> Semi-annual |
| <input type="checkbox"/> Other (<i>please specify</i>): | |

Impact reporting:

- | | |
|--|--|
| <input type="checkbox"/> Project-by-project | <input checked="" type="checkbox"/> On a project portfolio basis |
| <input type="checkbox"/> Linkage to individual bond(s) | <input type="checkbox"/> Other (<i>please specify</i>): |

Frequency:

- | | |
|---|--------------------------------------|
| <input checked="" type="checkbox"/> Annual | <input type="checkbox"/> Semi-annual |
| <input type="checkbox"/> Other (<i>please specify</i>): | |

Information reported (expected or ex-post):

- | | |
|---|--|
| <input checked="" type="checkbox"/> GHG Emissions / Savings | <input type="checkbox"/> Energy Savings |
| <input type="checkbox"/> Decrease in water use | <input checked="" type="checkbox"/> Other ESG indicators (<i>please specify</i>): Number of green buildings funded, Type and level of certification obtained |

Means of Disclosure

- | | |
|--|---|
| <input type="checkbox"/> Information published in financial report | <input type="checkbox"/> Information published in sustainability report |
| <input type="checkbox"/> Information published in ad hoc documents | <input checked="" type="checkbox"/> Other (<i>please specify</i>): |

- Reporting reviewed (if yes, please specify which parts of the reporting are subject to external review):

Where appropriate, please specify name and date of publication in the useful links section.

USEFUL LINKS (e.g. to review provider methodology or credentials, to issuer's documentation, etc.)

SPECIFY OTHER EXTERNAL REVIEWS AVAILABLE, IF APPROPRIATE

Type(s) of Review provided:

- | | |
|--|--|
| <input type="checkbox"/> Consultancy (incl. 2 nd opinion) | <input type="checkbox"/> Certification |
| <input type="checkbox"/> Verification / Audit | <input type="checkbox"/> Rating |
| <input type="checkbox"/> Other (<i>please specify</i>): | |

Review provider(s):

Date of publication:

ABOUT ROLE(S) OF INDEPENDENT REVIEW PROVIDERS AS DEFINED BY THE GBP

- i. Second Party Opinion: An institution with environmental expertise, that is independent from the issuer may issue a Second Party Opinion. The institution should be independent from the issuer's adviser for its Green Bond framework, or appropriate procedures, such as information barriers, will have been implemented within the institution to ensure the independence of the Second Party Opinion. It normally entails an assessment of the alignment with the Green Bond Principles. In particular, it can include an assessment of the issuer's overarching objectives, strategy, policy and/or processes relating to environmental sustainability, and an evaluation of the environmental features of the type of projects intended for the Use of Proceeds.
- ii. Verification: An issuer can obtain independent verification against a designated set of criteria, typically pertaining to business processes and/or environmental criteria. Verification may focus on alignment with internal or external standards or claims made by the issuer. Also, evaluation of the environmentally sustainable features of underlying assets may be termed verification and may reference external criteria. Assurance or attestation regarding an issuer's internal tracking method for use of proceeds, allocation of funds from Green Bond proceeds, statement of environmental impact or alignment of reporting with the GBP, may also be termed verification.
- iii. Certification: An issuer can have its Green Bond or associated Green Bond framework or Use of Proceeds certified against a recognised external green standard or label. A standard or label defines specific criteria, and alignment with such criteria is normally tested by qualified, accredited third parties, which may verify consistency with the certification criteria.
- iv. Green Bond Scoring/Rating: An issuer can have its Green Bond, associated Green Bond framework or a key feature such as Use of Proceeds evaluated or assessed by qualified third parties, such as specialised research providers or rating agencies, according to an established scoring/rating methodology. The output may include a focus on environmental performance data, the process relative to the GBP, or another benchmark, such as a 2-degree climate change scenario. Such scoring/rating is distinct from credit ratings, which may nonetheless reflect material environmental risks.

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For more information, visit www.sustainalytics.com

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