Japan

Green finance state of the market – 2019

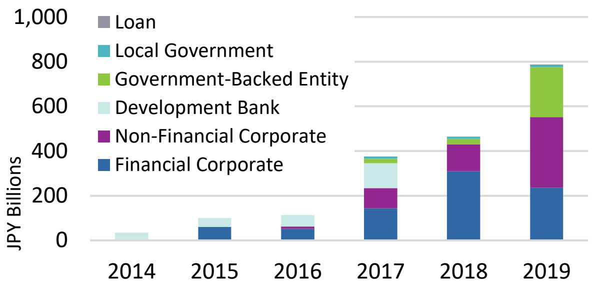
March 2020

Cumulative green bond issuance: JPY1875.2bn (USD17bn), 9th in global country rankings

2019 green bond issuance: JPY786.7bn (2018: JPY464.4bn), 7th in 2019 country rankings

Green bond market growth expected from renewable energy and public transport projects

2019 marks record issuance for Japan

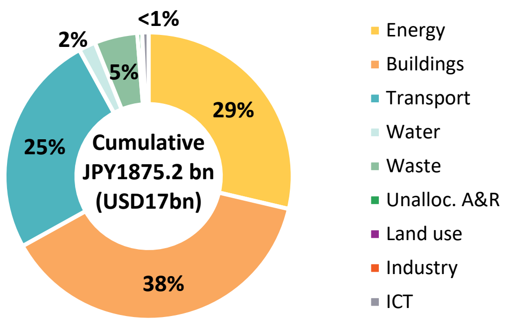


Note: Data Source: Climate Bonds Initiative. All data as at 31 December 2019 unless otherwise stated. Issuer types classified with CBI definitions.

Green bond issuance witnessed a significant increase in 2019 compared to 2018, growing by 70%. Financial corporates dominate the green bond market, accounting for half of cumulative issuance (JPY938.8bn) Non-financial corporates follow at 21% (JPY397.7bn). Both financial and non-financial corporates also dominate 2019 issuance. The largest green bond in 2019 was issued by Mitsubishi UFG (EUR500 m/JPY60.5bn).

Government-backed entities boosted their issuance compared to 2018 (JPY24.5bn in 2018 vs JPY222.4bn in 2019), reaching 14% of the cumulative market share. Government-backed entities **Japan Railway Construction, Transport and Technology Agency** (JRTT) (JPY185.8bn) and **Japan Housing Finance Agency** (JPY153.3bn) were the top two 2019 issuers.

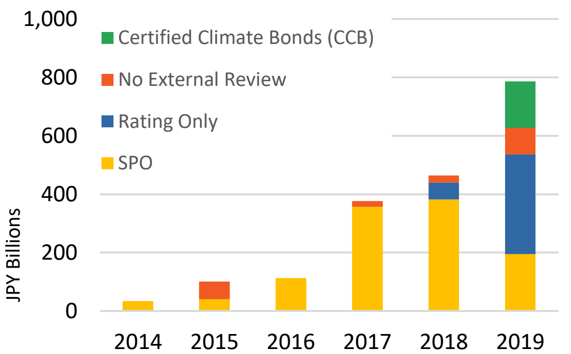
Buildings dominate use of proceeds



Buildings dominate cumulative proceed allocations at 38%. This has mainly come from non-financial and financial corporates (28% and 35%, respectively). Significant contributions in the sector came from the **Development Bank of Japan** (cumulative JPY188.3bn), while **Japan Housing Finance Agency** (JPY70bn) represented the largest green buildings issuer in 2019.

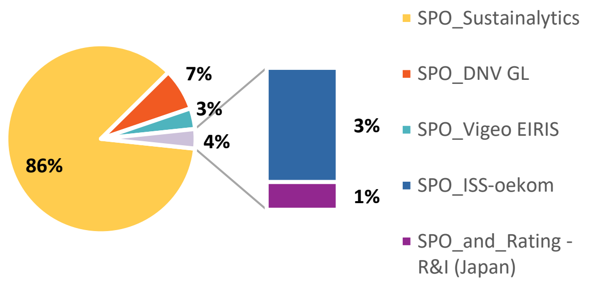
Energy (29%) and transport (25%) follow, with financial corporate **Mitsubishi UFG Financial Group** (JPY216.3bn) and government-backed entity **JRTT** (JPY197bn) representing the top issuers in the respective sectors. The **Tokyo Metropolitan Government** is the first issuer to allocate proceeds to adaptation and resilience, with cumulative JPY 13.5 bn earmarked towards flood prevention mechanisms.

90% of issuance has an external review



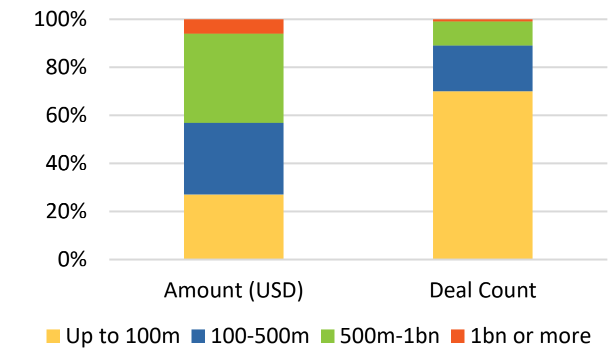
The Japanese green bond market has an exceptional record of external reviews: 60% of deals by volume benefit from a Second Party Opinion (SPO), 21% from at least a green bond rating and 8% from Certification under the Climate Bonds Standard. To date, **DNV GL** is the sole Approved Verifier for Certified Climate Bonds to provide verification services in Japan. **JRTT** has obtained the largest number of Certified bonds: four in total for a cumulative amount of JPY152.3bn.

Sustainalytics is the top SPO provider

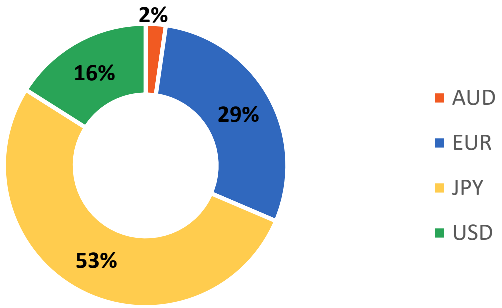


Sustainalytics is the largest SPO provider by both volume and number of deals reviewed (86% and 71%, respectively). **DNV GL** comes in second with 7% of volumes and just below 10% of number of deals. Green bond ratings are also widely used in the Japanese market, with the **Japan Credit Rating Agency** (JCR) and **Rating & Investment Information** (R&I) being, so far, the only two rating providers active in the market. CBI will publish additional research on external reviews and overall transparency in the green bond market later in 2020.

37% of deals are USD 500m or above



53% of deals are JPY-denominated



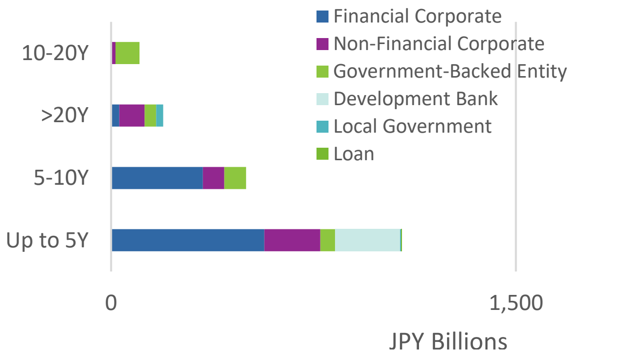
The Development Bank of Japan's USD1bn (JPY113bn) green bond issued in 2017 remains the largest to date in Japan. It is also the only deal in the 1bn or more size bracket. Medium-sized deals come from all issuer types, with government-backed entities taking up the largest share at 42%. Financial institutions, including **Mitsubishi UFG** and **Sumitomo Mitsui Banking Corp** have issued nine deals of USD500m or more.

Deals falling within the USD 500m-1bn size bracket are the most frequent by volume with 37% of the total, while 70% of the deals by number fall into the USD up to 100m (77 bonds). In 2019, the USD 100-500m was the most popular size bucket by volume, while the highest share of the deals by number fall in the USD up to a 100m bucket (52 bonds).

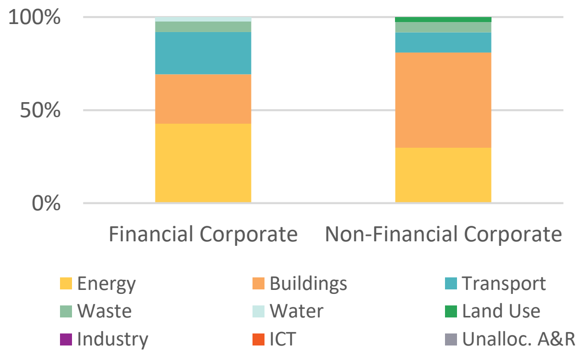
JPY-denominated deals prevail at 53% of total issuance. Green bond issuance in local currency started 2016, with **Nomura Research Institute**'s JPY10bn debut green bond. The second most popular currency is EUR, including Japan's very first green bond from the **Development Bank of Japan** (EUR250m/JPY34.2bn) in October 2017. Financial institutions issue in the largest number of different currencies: for example, **Mitsubishi UFG** has issued two thirds of its cumulative volume in EUR, with the remaining amounts in JPY, USD and AUD.

In 2019, JPY remained the most popular currency with 88% of total annual issuance; EUR and AUD follow with 8% and 5% of market share, respectively. Green bonds in USD have not been issued in 2019.

Most issuers favour tenors up to 10 years



Spotlight: Corporate issuers



Japanese issuers prefer shorter tenors: 57% of bonds have a tenor of up to five years, while 27% fall in the 'five-to-ten years' category. Only 10% of volumes have a tenor of more than 20 years, with examples from non-financial corporate **Renewable Japan** (five bonds) and financial corporate **AEON Product Finance** (two bonds).

Issuance from the **Development Bank of Japan** and around 50% of non-financial corporates volumes have tenors of up to five years. The same tenor bucket is also the most popular amongst financial corporates, with almost 60% (JPY178.7bn) of proceeds from **Mitsubishi UFG** maturing within five years.

Government-backed entities have a preference for slightly longer tenors: they dominate the 'ten-to-twenty' tenor bucket, and feature issuance from **JRTT**, **Japan Housing Finance Agency** and **Konan Ultra Power**.

Half of the proceed allocations from financial institutions go towards energy, while buildings account for just under a third (30%). The remaining proceeds are earmarked towards a variety of sectors: this reflects the nature of commercial banks, non-bank lenders and asset managers, which usually own diversified loan and/or project portfolios. **Mitsubishi UFG** is the top financial corporate issuer, with JPY216.3bn and JPY87.6bn allocated to energy and buildings, respectively.

Non-financial corporations allocated half of their proceeds to buildings and 30% to energy. **Sumitomo Forestry Co., Ltd** is the only non-financial corporation earmarking proceeds towards the acquisition of FSC certified timberlands. **Tokyo Tatemono** is the top non-financial issuer, with JPY50bn allocated to buildings certified with top level of industry certification schemes, i.e. DBJ Green Building and BELS (4 stars or more) and A in or higher in CASBEE.

Top 5 underwriters for Japanese GB

Underwriters	Number of deals	Amount (JPY)
Mitsubishi UFJ Morgan Stanley Securities	38	449.6bn
Mizuho Securities	26	219.5bn
SMBC NIKKO Securities	18	160.5bn
Nomura Securities	17	130.4bn
Mitsubishi UFJ Financial Group	5	120.5bn

Source: *Refinitiv; exchange rate as of 31 December 2019.*

All the underwriters of Japanese deals are headquartered in Japan. Mitsubishi UFJ Morgan Stanley Securities (MUMSS) ranks first, accounting for around 26% of underwritten volumes and with participation in 38 deals. Apart from **Nomura Securities**, the other top underwriters based in Japan have entered the country's green bond market issuers as well.

Top 5 trading venues for Japanese GB

Trading venue	Number of deals	Amount (JPY)
LuxSE	9	193.7bn
LSE	5	111.6bn
All German SE	4	108.5bn
Berlin	5	81.1bn
Frankfurt	5	64.2bn

Source: *Bloomberg, EIKON.* ***Note****: Amount is split equally among venues*

Cumulatively, JPY868.4bn worth of Japanese green bonds have been listed on a variety of trading venues. This accounts for around 46% of total issuance. **Luxembourg Stock Exchange** tops trading venue rankings followed by **LSE**. Four deals are listed on all **German Stock Exchanges**, while five deals have been listed on both **Berlin** and **Frankfurt Stock Exchange**.

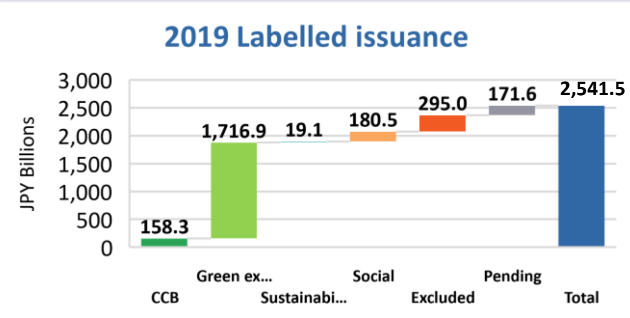
Other labelled bonds

Only bonds with at least 95% proceeds dedicated to green projects that are aligned with the *Climate Bonds Taxonomy*[1] are eligible for inclusion in the CBI Green Bond Database[2]. If more than 5% of proceeds are used for general corporate purposes, working capital, social projects or projects that do not align with the Taxonomy, or if there is insufficient information, the bond will be classified as excluded.

Two Japanese green labelled deals have been excluded for the following reasons:

- One issuer allocated over 5% of the deal's proceeds to energy efficiency in buildings targeting a 10% improvement. Such target falls short of the KPIs in the *Climate Bonds' Taxonomy*, which require a minimum 20% improvement in energy efficiency.
- The other entity earmarked green bond proceeds to finance methanol-fuelled ships. The envisaged CO_2 emission savings have been identified at 8%. Unfortunately, the target is not compliant with the eligibility metrics set out in the *Climate Bonds Taxonomy*.

Japan has also witnessed issuance of bonds with diversified labels, including sustainability/ESG and social bonds.
Social bonds raise funding for projects with positive social outcomes, while sustainability/ESG bonds allow proceeds to be allocated to both green and social projects.
While social bonds have been a feature of the debt capital market in Japan for some time, there are increasing opportunities to issue bonds specifically linked to adaptation and resilience. This would fit the bill especially for local governments given their infrastructure pipelines and associated funding needs. To date, only the **Tokyo Metropolitan Government** has allocated part of the proceeds from a green bond issuance for such purposes.



Climate-aligned companies

The **climate-aligned universe** highlights investment opportunities to finance low-carbon assets and includes:

- bonds from **fully-aligned issuers** that derive 95% or more of revenues from 'green' business lines
- bonds from **strongly-aligned issuers** that derive 75-95% of revenue from 'green' business lines; and
- labelled green bonds.

Climate-aligned issuers are discovering the value of the green label: some have already entered the green bond market, including **Sumitomo Forestry Co Ltd**. However, the green label can be even more powerful for companies looking to transition to low-carbon business lines to signal their sustainability aspirations. For example, **Suncor Energy Inc.**, a top Canadian emitter from the oil and gas sector, generated 1% of its 2017 revenues from ethanol and wind production. Sustainable biofuels are aligned to the Climate Bonds Taxonomy.

Potential green bond issuers

There are substantial opportunities for scaling up the Japanese green bond market. Many companies operating in the transport sector could issue green bonds to finance rail infrastructure. **Tokyo Metro Co Ltd** is an example of a strongly-aligned issuer, which could enter the green bond market to finance railway projects. Future green bond market entrants could also include strongly-aligned companies **Central Japan Railway Co**, **Tobu Railway Co Ltd** and **Kansai Rapid Railway Co Ltd**. Opportunities for green labelling exist also across other sectors: for example **Stanley Electric Co Ltd** manufactures LED-related products for use in buildings and transport, and is also a fully-aligned bond issuer. Many Japanese climate-aligned issuers operate in the land use sector: fully-aligned companies **Japan Pulp & Paper Co Ltd**, **Hokuetsu Corp** and **Wood One Co Ltd** have not issued green labelled bonds yet, while companies such as **Sumitomo Forestry Co Ltd** and **Daio Paper Corp** entered the green bond market in 2018 with JPY10bn and JPY20bn deals, respectively.

Companies in transition

In the aftermath of the Paris Agreement, pressure has been mounting for companies to manage, limit and eventually halt their impact on climate change. This calls for companies to understand and evaluate the risks posed by climate change on their business activities, assets and liabilities. In 2017, the **Task Force on Climate-Related Financial Disclosures**[3] (TCFD) developed recommendations on corporate disclosure with respect to climate-related physical and transitional risks. The initiative is aimed at providing investors and other stakeholders with information which enables the formulation of informed investment strategies while allowing companies to identify and act on their risk exposure.

The **Transition Pathway Initiative**[4] (TPI) has developed a methodology to assess companies' readiness to transition to a low-carbon economy.

In Japan, companies such as **Oji Holdings** and **Toyota** rank high in the 'management quality' assessment; they are also both evaluated by TPI as 'aligned with the Paris Pledges' according to their carbon performance. Companies issuing green bonds also signal their commitment to fight climate change as well as their willingness to transition. Toyota Finance, for example, has already come to the market with one deal financing low-carbon vehicles. However, there are still opportunities for green bond issuance especially for strongly-aligned issuers such as Oji Holdings, which could refinance itself with a green bond and signal to the market its commitment to transition.

Japan Green Finance Policy Landscape

Green Bond Guidelines

In 2017, The Ministry of the Environment (MOEJ) launched the **Japanese Green Bond Guidelines**[5]. Green bond guidelines support the expansion of issuance and seek to promote market integrity and transparency through disclosure. The Japanese guidelines comply with the ICMA Green Bond Principles (GBP), and cover identification of eligible categories, project evaluation and selection, monitoring and reporting. MOEJ released **Green Bond Guidelines 2020 Revised Version**[6] in March 2020 in order to reflect the revision of the Green Bond Principles and green finance trend. The new guidelines broaden its scope to sustainability bond, adds examples of the use of proceeds, clarify matters related to external review and expectations to investors for sound development of green bond market. In addition, MOEJ released the **Green Loan and Sustainability Linked Loan Guidelines** in March 2020. The latter set the process for issuance of sustainability-linked loans.

Market Development Committee

In 2018, MOEJ established the **ESG Finance High Level Panel**[7] in order support business and the government to integrate ESG principles in their investments. In 2020, the Panel established a taskforce for ESG regional finance and impact finance.

Awareness raising for market development

In 2018, MOEJ set up a **Platform for Promoting Green Bond Issuance**[8] whereby information related to green bonds can be collected and disseminated to relevant stakeholders. In 2019, **Green Finance Portal**[9] was also established in order to cover green finance broadly. Information sharing platforms are essential to prevent greenwashing practices, however, there are opportunities to further increase awareness, especially in the context of green bond pre- and post- issuance reporting.

Financial Support Programme for Green Bond Issuance

In 2018, MOEJ introduced a **Financial Support Programme for Green Bond Issuance**[10]. Subsidies in the form grants of up to JPY50m per issuance are available for expenses in respect of external services in the form of granting external reviews (up to 40 million JPY), consultation on establishing a green bond framework, etc. Grants are provided to deals with external reviews, which confirm compliance with the GBP, ASEAN Green Bond Standard, Climate Bonds Standard, etc., taking into account the issuing market and the investor group. Compliance with Japan's Green Bond Guidelines is confirmed by an external review organization prior to issuance.

References: 1. Climate Bonds Initiative, 2019, "Climate Bonds Taxonomy" available at https://www.climatebonds.net/files/files/CBI_Taxonomy_Tables-Nov19.pdf ; 2. Climate Bonds Initiative, 2018, "Green Bond Methodology", available at https://www.climatebonds.net/files/files/Climate-BondsInitiative_GreenBondMethodology_092018%281%29.pdf ; 3. TCFD, 2017, "Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures", available at https://www.fsb-tcfd.org/publications/final-recommendations-report/#; 4. The Transition Pathway Initiative, available at https://transitionpathwayinitiative.org/tpi; 5. MOEJ, 2017, "Green Bond Guidelines" available at https://www.env.go.jp/en/policy/economy/gb/guidelines.html; 6. MOEJ, 2020, available at http://greenfinanceportal.env.go.jp/news/; 7. MOEJ, "ESG Finance High Level Panel", available at http://greenfinanceportal.env.go.jp/en/high-level-panel/; 8. MOEJ, 2018, "Platform for Promoting Green Bond Issuance" available at http://greenbondplatform.env.go.jp/en/policies-data/japan.html; 9. MOEJ, "Green Finance Portal", available at http://greenfinanceportal.env.go.jp/en/; 10. MOEJ, "Financial Support Programme for Green Bond Issuance (Subsidy Project) available at http://greenbondplatform.env.go.jp/en/support/subsidy.html

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Developed for the Green Bond Issuance Promotion Platform – Japan
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