



Japan Credit Rating Agency, Ltd. (JCR) announces the following Green Finance Framework Evaluation Results.

## UACJ Corporation

Green Finance Framework
Assignment



Issuer/Borrower	UACJ Corporation (security code: 5741)
Subject	Green Finance Framework of UACJ Corporation

### Evaluation Overview

#### ▶▶▶ 1. Overview of UACJ Corporation

UACJ Corporation ("UACJ"), the Japan's largest aluminum rolling company, was established in October 2013 through the merger between the former Furukawa-Sky Aluminum Corporation, the once-leading manufacturer for aluminum rolled products, and the former Sumitomo Light Metal Industries Ltd., then the second in rank. Both are long-established companies with over 100 years of history and highly competitive for their technical expertise and product development capabilities over the years and extensive product lineup. The production capacity of flat-rolled aluminum products exceeds one million tons annually, placing it among the world's top-class companies. UACJ overseas operations mainly include UACJ Thailand ("UATH") based in Thailand and Tri-Arrows Aluminum ("TAA") and UACJ Automotive Whitehall Industries ("UWH") located in North America.

#### ▶▶▶ 2. UACJ's ESG Management and Decarbonization Initiatives

UACJ's corporate philosophy is to "contribute to a prosperous and sustainable society with technologies that bring out the innate power of materials," and its vision is "Aluminum is our

passion. It inspires our work in building a better world and a healthier environment." UACJ looks to contribute to the global-scale reductions of environmental impacts through aluminum, particularly when the aluminum characteristics of being lightweight, strong, and excellent in recyclability are drawing attention on the back of the most recent moves to solve environmental issues. Sustainability Policies, UACJ's long-term roadmap, and UACJ Vision 2030 indicate its intention to take sustainability activities as the core element challenging the *raison d'être* of business management.

UACJ focuses on "building a recycling-oriented society" among other goals from the perspective of enhancing corporate value. Aluminum has a substantial impact on the environment for GHG and pollutant emissions from the use of virgin aluminum. Thus, recycling more aluminum (closed loop recycling) will contribute to combating climate change and conserving, restoring, and creating nature (nature positive). UACJ positions "promoting recycling" as the most important growth and added value strategy included in the fourth mid-term management plan, for extensive value created by recycling aluminum.

### ▶▶▶ 3. About the Green Finance Framework

The subject of this evaluation is Green Finance Framework (the "Framework") published by UACJ to use the proceeds only to expenditures to the projects to improve environment. JCR evaluates whether the Framework aligns with *the Green Bond Principles*<sup>1</sup>, *the Green Loan Principles*<sup>2</sup>, *the Green Bond Guidelines*<sup>3</sup> and *the Green Loan Guidelines*<sup>4</sup>. These principles and guidelines are voluntarily published by the International Capital-Marketing Association ("ICMA"), Loan Market Association ("LMA") etc., and the Ministry of Environment, respectively, and are not legally regulated based on evidence. JCR, however, refers these principles and guidelines as they are referred to as unified standards domestically and globally.

UACJ sets forth in the Framework that the proceeds are allocated to equipment to perform the end-to-end process for used beverage cans ("UBCs"), which begins with separating aluminum from other materials and ends with melting the aluminum, and to buildings necessary for its installation. JCR considers that eligible projects in the Framework offer environmental benefits of reducing GHG emissions and making the best use of resources and are important to create a recycle-oriented society, which UACJ seeks for. Eligible projects are required to be implemented properly in consideration of negative impacts on the environment and society. Based on the above, JCR evaluates the use of proceeds in the Framework is expected to improve the environment.

A specialist department with expertise will be involved in the project selection process. There is a system in place to monitor the proceeds to be allocated to eligible projects without fail. The reporting will contain quantitative environmental benefits and use applicable indicators. Based on the above, JCR evaluated that the management and operation system of UACJ has been appropriately established and is transparent.

Based on JCR Green Finance Evaluation Methodology, JCR assigned "g1(F)" to "Greenness Evaluation (Use of Proceeds)" and "m1(F)" to "Management, Operation and Transparency

<sup>1</sup> International Capital Market Association (ICMA) (2021, with June 2022 Appendix 1) *Green Bond Principles*  
<https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/green-bond-principles-gbp/>

<sup>2</sup> Loan Market Association (LMA), Asia Pacific Loan Market Association (APLMA), and Loan Syndications and Trading Association (LSTA) (2023) *Green Loan Principle*  
<https://www.lsta.org/content/green-loan-principles/>

<sup>3</sup> Ministry of the Environment (2024) *Green Bond Guidelines*  
<https://www.env.go.jp/content/000128193.pdf>

<sup>4</sup> Ministry of the Environment (2024) *Green Loan Guidelines*  
<https://www.env.go.jp/content/000128193.pdf>

Evaluation." As a result, JCR assigned "Green 1(F)" to the overall "JCR Green Finance Framework Evaluation." JCR considers that the Framework meets the standards for the items required in the Green Bond Principles, the Green Loan Principles, the Green Bond Guidelines, and the Green Loan Guidelines.

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## Evaluation Phase 1: Greenness Evaluation

g1(F)

### I. Use of Proceeds

#### JCR's Key Consideration on This Factor

In this section, JCR first confirms whether the proceeds set out in the Framework is used for green projects that have clear environmental improvement effects. Then, in cases where the use of proceeds is expected to have a negative impact on the environment and society, JCR confirms whether the impact is fully examined by an internal specialist department or an external third party and whether necessary measures have been taken for its workaround and mitigation. Finally, JCR confirms the consistency with the Sustainable Development Goals (SDGs).

#### ▶▶▶ Current Status of Evaluation Targets and JCR's Evaluation

The eligible project that UACJ sets forth in the Framework finances the equipment to perform the end-to-end process for UBCs, which begins with separating aluminum from other materials and ends with melting the aluminum, and the buildings necessary for its installation. They are crucial elements to form an aluminum recycling-oriented society and will offer environmental benefits.

### Framework for Use of Proceeds

#### Eligibility Criteria for Green Finance Investments

The proceeds from green bonds or green loans (green finance) will be used to acquire or refinance equipment and buildings that meet the following eligibility criteria:

##### [Eligibility Criteria]

Facilities for the separation and melting of used beverage cans (UBC) and the buildings required to house them

##### Environmental improvement effect:

- Expansion of aluminum resource recycling (processing capacity of 48,000 t/year)
- CO<sub>2</sub> reduction(120,000 t/year compared to FY2022 )
- Pollution prevention and control as well as circular economy adapted products, production technologies and processes in the ICMA GBP
- Pollution prevention and control as well as circular economy adapted products, production technologies and processes in the Green Bond and Sustainability Linked Bond Guidelines published by the Ministry of the Environment

#### Method of raising funds and investment targets

- Method: Bonds or borrowings
- Investment targets: New investments or refinancing

## JCR's Evaluation for the Framework

### 1. Environmental Improvement Effects of Project

Use of proceeds is for capital investment in the equipment to perform the end-to-end process for UBCs, which begins with separating aluminum from other materials and ends with melting the aluminum, and the buildings necessary for its installation. This project falls under "pollution prevention and control," "circular economy adapted products, production technologies, and processes" in the Green Bond Principles and the Green Loan Principles, and "projects for pollution prevention and control" and "projects for circular economy adapted products, production technologies, and processes and/or certified eco-efficient products" in the Green Bond Guidelines and the Green Loan Guidelines.

#### (i) Project Overview

UACJ allocates proceeds to UBC processing facilities in the Framework. The project is aimed at promoting the "Can to Can" initiative, which recycles UBCs consumed in Japan back into the same aluminum cans. More specifically, the scope of the project includes the equipment to crush, sort, and roast UBCs to produce Delacquered Can Chip (DCC) without paint and to melt DCC to process it into rolled materials, and the building for its installation and its ancillary facilities. UACJ is advancing this project in collaboration with Yamaichi Metal Corporation ("Yamaichi") with expertise in UBC collection and DCC processing. The DCC processing will be performed by a joint venture company<sup>5</sup> established with Yamaichi.

**Table 1: Overview of Use of Proceeds<sup>6</sup>**

<b>Main Target Facility</b>	Equipment to process UBCs into DCC	Equipment to melt DCC to produce rolling materials
<b>Operator</b>	Joint venture company with Yamaichi	UACJ
<b>Location</b>	Premises of UACJ Fukui Works	
<b>Start of Operations</b>	During 2025	

The 3000 series of aluminum alloys containing manganese are applied to the body of the aluminum can. The 5000 series containing magnesium are used for the lid to increase the strength. If these different materials remain mixed together, the recycled aluminum will not meet its original standards. Yamaichi has an established technology to separate other materials of aluminum cans. The facility funded by the project utilizes this Yamaichi's technology, which will make the closed loop recycling even more efficient.

Domestic consumption of aluminum cans is roughly 310,000 tons (approximately 21 billion cans), out of which as high as 97.5% are collected in Japan. UBCs collected in Japan are recycled into cans (Can to Can), exported overseas, or recycled for other uses. The proportion of UBCs recycled into cans (Can to Can usage rate) is not more than 73.8%. (Either of these figures is as of the FY2023.)<sup>7</sup> UACJ intends to increase Can to Can usage rate through the project, to gain environmental benefits, such as GHG emissions reductions and a recycling-oriented society, and to ensure the stable supply of resources by recycling in Japan.

<sup>5</sup> UACJ Press Release (March 7, 2023) <https://www.uacj.co.jp/release/20230307.htm>

<sup>6</sup> Created by JCR based on materials provided by UACJ

<sup>7</sup> Japan Aluminum Can Recycling Association website <https://www.alumi-can.or.jp/pages/98/>

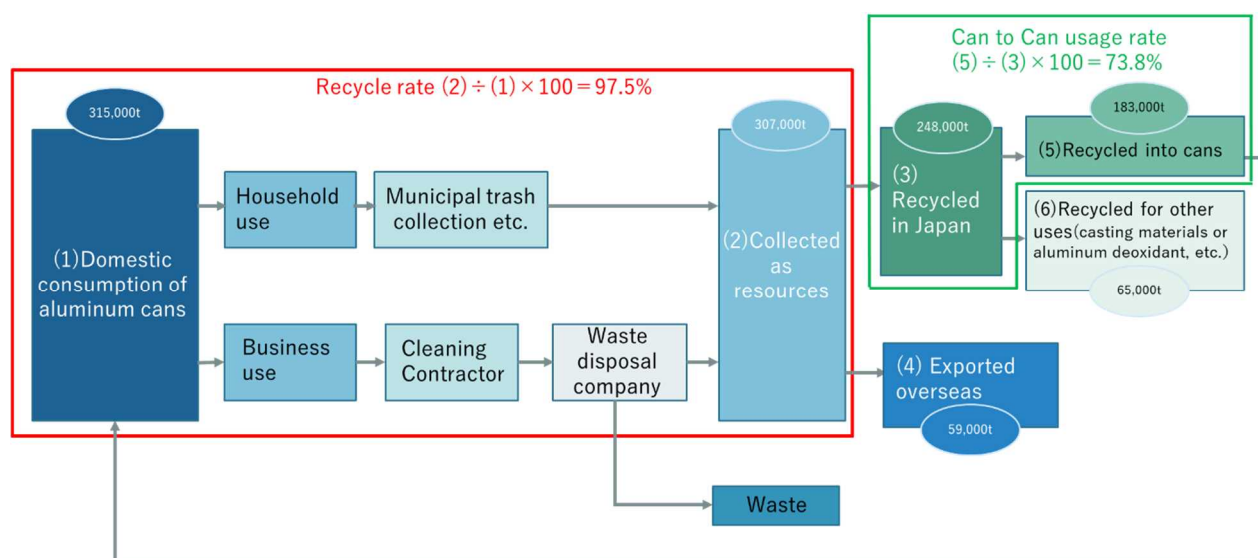


Figure 1: Recycling Flow of Aluminum Cans (FY2023 figures)<sup>8</sup>

## (ii) Environmental Benefits

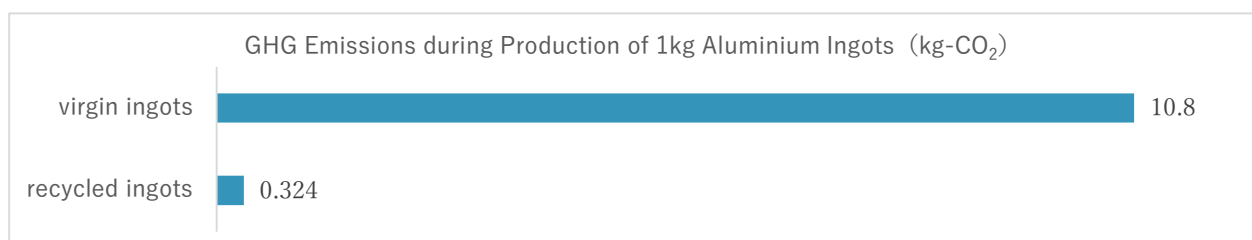
### a. GHG Emissions Reductions

Aluminum cans are made of aluminum ingots rolled and molded into unique product components. Aluminum ingots are divided into two types, namely virgin ingots made of virgin aluminum and recycled ingots made of recycled products. Virgin ingots are produced by the following process: 1. extract alumina from raw material bauxite, using caustic soda and other substances, and 2. manufacture virgin ingots by electrolysis of alumina in molten cryolite. Particularly in the step 2, a large amount of electricity is used for electrolysis, resulting in high GHG emissions during the production of virgin ingots. Other than that, substantial amounts of GHG are also emitted during the transportation of bauxite, which is the raw material for virgin ingots, from its place of origin in Australia and other countries, and when raising the temperature to about 1,000°C<sup>9</sup> during the step 2 to melt alumina.

In the meantime, aluminum cans are recycled by the following process: 1. scrap collected UBCs, and 2. melt the scrap into recycled ingots. As this process needs no alumina electrolysis, the energy required to produce recycled ingots will be minimal relative to virgin ingots, plus reducing GHG emissions from the transportation. Based on the above, as shown in the figure 2 below, GHG emissions during the production of recycled ingots are only about 3% of those of virgin ingots, which is extremely small.

<sup>8</sup> Created by JCR based on FY2022 Aluminum Can Recycling Flow (<https://www.alumi-can.or.jp/pages/96/>) and the FY2023 recycling rate (<https://www.alumi-can.or.jp/pages/98/>) on Japan Aluminum Can Recycling Association website

<sup>9</sup> Lower the melting point of 2,000°C of alumina to around 1,000°C by adding cryolite, which acts as a melting point depressant. in industrial production



**Figure 2: Comparison of GHG Emissions during Production of 1kg Aluminum ingots<sup>10</sup>**

According to UACJ's estimates, once the UBC processing equipment funded by the project gets up and running, the use of recycled ingots derived from UBCs will increase. This would result in the reduction of the use of virgin ingots, and annual CO<sub>2</sub> emissions would decrease by approximately 120,000 t-CO<sub>2</sub><sup>11</sup>.

### **b. Importance of Can to Can Initiative (Effective Use and Stable Supply of Resources)**

Aluminum products are divided into wrought aluminum, which are deformed and rolled by applying pressure as with aluminum cans, and casting materials, which are formed by pouring molten metal into molds as with automotive engine blocks. High concentration of other metals in the rolling process causes cracking, which will result in an inability of flexible processing. Therefore, recycled ingots derived from scrap possibly containing mixed metals are often used to manufacture casting materials. However, growing demand for wrought aluminum for the shift to lighter and electrified vehicles and waning demand for casting materials may upset the balance between scrap generated and the supply-demand for casting materials, which will generate scrap going nowhere. Thus, the application of recycled ingots to wrought materials is being sought.

**Figure 3: Forecasted Production Volume of Wrought Aluminum, Casting Metal, and Scrap Generation**

*Please refer the material of New Energy and Industrial Technology Development Organization (NEDO)*

*(Japanese)<sup>12</sup>*

When using recycled ingots for wrought aluminum, it is necessary to ensure that other aluminum alloys are not mixed in the phase of collecting scrap metals and to avoid the deterioration of aluminum purity by the mixture of other aluminum alloys. That will be enabled by the Product-to-Product closed loop recycling, which is to collect alloys of the same kind from used wrought aluminum and recycle them to utilize as a component for the same kind of product. The separate collection system for aluminum cans has been established across Japan, mainly in municipalities. Aluminum cans are one of the few wrought aluminums for which, a closed loop recycling system is almost well-developed<sup>13</sup>. However, approximately 30% (as of FY2023, the green line of Figure 4) of domestically recycled UBCs are used as casting materials or aluminum deoxidant<sup>14</sup> and are outside the loop. From the perspective of effectively using resources, it is important to recycle these UBCs back into aluminum cans, a process known as the Can-to-Can closed loop recycling. One factor contributing to UBCs being recycled for other purposes is the capacity shortage of

<sup>10</sup> Life Cycle Assessment Survey Committee, Japan Aluminum Association (March 2023) Report on Inventory Analysis on Scrap Melting for Wrought Aluminum

The life cycle inventory includes mining (only virgin ingots), transportation of fuel and materials, and manufacturing.

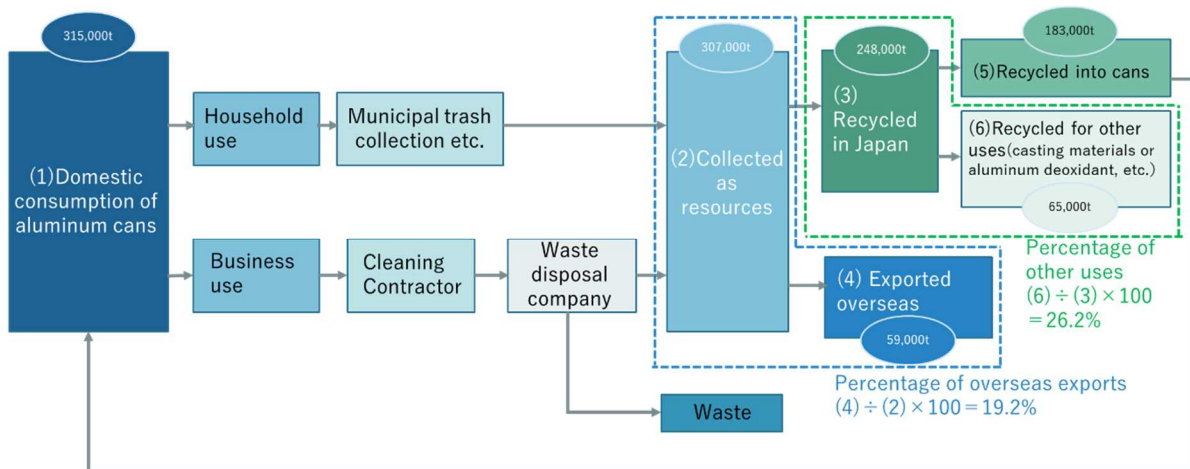
<sup>11</sup> CO<sub>2</sub> emissions reductions are an estimate of the CO<sub>2</sub> emissions reductions in UACJ's Scope 3 (raw materials), calculated by UACJ based on the CO<sub>2</sub> emission intensity figures published by Japan Aluminum Association.

<sup>12</sup> New Energy and Industrial Technology Development Organization (NEDO) (interim review for five years from FY2021 to FY2025) Aluminum Material Advanced Resource Recycling System Development Project  
<https://www.nedo.go.jp/content/100962502.pdf>

<sup>13</sup> Japan Aluminum Association (September 2020) Aluminum VISION 2050  
[https://www.aluminum.or.jp/wp-content/themes/dp-colors/img/VISION2050\\_main.pdf](https://www.aluminum.or.jp/wp-content/themes/dp-colors/img/VISION2050_main.pdf)

<sup>14</sup> An ancillary material used in steel manufacturing to remove residual oxygen from molten steel in the converter as slag, which is necessary for the process of producing molten steel to create high-quality viscous steel.

closed loop recycling facilities. UACJ aims to play a role in increasing the volume of closed loop recycling and preventing UBCs from being used for other purposes, by introducing equipment funded by the project.



**Figure 4: Recycling Flow of Aluminum Cans (repeat)<sup>15</sup>**

As indicated in Figure 4, nearly 20% (as of FY2022, as shown in blue in Figure 4) of the UBCs collected domestically are exported overseas. Japan Aluminum Association argues in its Aluminum VISION 2050, "The aluminum industry in Japan relies 100% on overseas virgin aluminum ingots. For the industry, flexibility in stable supply of raw material resources is an issue directly linked to the competitiveness of aluminum businesses. It is crucial to secure recycled aluminum materials from the perspective of securing raw material resources as well." Given excessive energy required for transportation, UBCs should be recycled back into aluminum cans in Japan rather than overseas from the viewpoint of energy efficiency. Based on the above, from the aspects of stable supply of resources and energy efficiency, it is vital to reuse UBCs in Japan, where they are consumed, rather than exporting them overseas.

### c. Other Environmental Benefits

Decreased use of virgin ingots will reduce environmental pollutants generated during bauxite mining and alumina refining. Reported incidents to date include heavy metal leakage during mining and red mud<sup>16</sup> discharge during alumina refining.

Bauxite mining mainly involves open-pit mining, where ores are directly extracted from the land surface, requiring large mining areas. As bauxite is abundant in forest area as represented by tropical rainforests in Brazil, Guinea, and other countries, the use of virgin ingots can lead to deforestation.

Based on the above, JCR considers that the project will help form a circular society through the increased volume of UBCs recycled back into new cans and the best use of resources as well as GHG emissions reductions. JCR also considers that the project is meaningful as it would lead to the stable supply of resources within Japan. And it will help prevent the release of hazardous chemicals into the environment and protect forest resources. Hence, JCR considers that it offers great environmental benefits.

<sup>15</sup> Created by JCR based on Aluminum Can Recycling Flow (FY2022, <https://www.alumi-can.or.jp/pages/96/>) and recycling rate (FY2023, <https://www.alumi-can.or.jp/pages/98/>) provided by Japan Aluminum Can Recycling Association

<sup>16</sup> By-product of alumina refining consisted mainly of iron(III) oxide and containing basic components, heavy metals, etc., which adversely affects the ecosystem

## 2. Negative Impacts on the Environment and Society

UACJ has identified the generation of air pollutants during the construction and use of the facility as an environmental risk in this capital investment. UACJ ensures compliance with environmental laws and regulations in dealing with the risk. UACJ will assess and manage the risk on a regular basis after the launch.

UACJ has also identified noise impact on the surrounding area as a social risk. UACJ will address the risk by taking a different approach to respective noise sources and installing soundproof walls. In addition, UACJ takes care of the safety of workers by not only complying with laws such as Industrial Safety and Health Act but also by introducing intrinsically safe equipment in line with the Basic Policy for Safety and Health.

JCR considers that UACJ is conscious about negative impacts on the environment and society and takes appropriate measures against them.

## 3. Consistency with SDGs

JCR evaluated the use of proceeds set out in the Framework contributes to the following SDGs' goals and targets in reference to ICMA's SDGs mapping.



### Goal 7: Affordable and Clean Energy

Target 7.3. By 2030, double the global rate of improvement in energy efficiency



### Goal 9: Industry, Innovation and Infrastructure

Target 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



### Goal 12: Responsible Consumption and Production

Target 12.2. By 2030, achieve the sustainable management and efficient use of natural resources  
Target 12.5. By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse

## Evaluation Phase 2: Management, Operation and Transparency Evaluation

m1(F)

### I. Selection Standards and Processes for Use of Proceeds

#### JCR's Key Consideration on This Factor

In this section, JCR confirms that the objectives to be achieved through green financing, the appropriateness of green project selection standards and processes, and whether or not a series of processes are properly disclosed to investors/lenders and others.

#### ▶▶▶ Current Status of Evaluation Targets and JCR's Evaluation

JCR believes that specialized divisions with expertise and the management team are appropriately involved in target-setting and selection standards and processes for green projects and their transparency is ensured.

#### 1. Goals

UACJ recognizes that promoting the recycling of aluminum (closed loop recycling) contributes to not only reducing GHG emissions, thereby addressing climate change, but also decreasing the consumption of virgin ingots and bauxite mining and ultimately preserving, restoring, and creating nature (nature positive). This means that extensive value created by advanced recycling elevates UACJ's long-term corporate value, and thus UACJ focuses on "driving a recycling-based society for aluminum (circular economy)" among other key issues (materiality), which were revised in FY2023. UACJ positions "promote recycling" as the top of the agenda in its growth and added value strategies included in the fourth mid-term management plan.

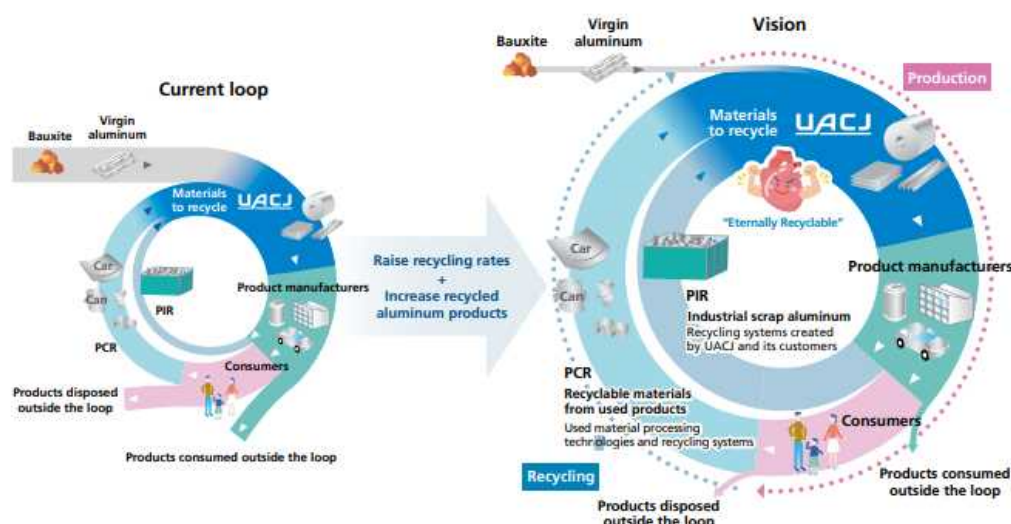
The recycling loop that UACJ seeks for is as shown in Figure 4. Traditionally, large amounts of virgin aluminum have entered the aluminum recycling loop as it is difficult to use recycled aluminum in wrought aluminum while comparatively smaller amounts of industrial scrap aluminum and recyclable materials from used products were fed back into the loop as much of the scrap aluminum remaining after product manufacturing was not recycled into wrought aluminum and outside the recycling loop. UACJ intends to form a recycling loop which maximizes the amount of scrap leaving the loop and the amount of virgin aluminum entering the loop in order to maximize the recycling process. In the meantime, UACJ will work to expand the scale of the recycling loop by increasing the overall amount of aluminum for recycling and the types of products from which the aluminum is obtained. In this way, the recycling process will contribute even more to reducing environmental impacts.

UACJ has been working in parallel on recycling aluminum cans, which already have established recycling systems, and products other than cans, whose recycling systems have yet to mature and published a roadmap<sup>17</sup> for initiatives to follow. Specific measures for aluminum cans laid out toward the targeted UACJ's recycling rate<sup>18</sup> of 80% by FY2030 include an increase in the Can

<sup>17</sup> UACJ website [https://www.uacj.co.jp/sustainability/environment/circular\\_economy.htm](https://www.uacj.co.jp/sustainability/environment/circular_economy.htm)

<sup>18</sup> "Recycled aluminum (the total amount of PIR scrap, PCR scrap, and scrap generated during all the processes within UACJ)" divided by "the amount charged to the melting furnace (the total amount of virgin aluminum ingots, added metals, PIR scrap,

to Can usage rate through the promotion of the closed loop recycling and the vertical startup of UBC processing facilities. Hence, the project under the Framework aligns with the description of the roadmap.



**Figure 5: Recycling Loop that UACJ Seeks for<sup>19</sup>**

UACJ recognizes that climate change is an imminent issue that the whole society should tackle and positions "achieving carbon neutrality" including GHG emissions reductions as one of the key issues. The Scope 1 and 2 targets are to reduce CO<sub>2</sub> emissions per unit by 30% by FY2030 (compared to FY2019) and to achieve carbon neutrality by FY2050. The Scope 3 target for Category 1 (purchased products and services) is to reduce CO<sub>2</sub> emissions per unit by 30% by FY2030. The project will significantly contribute to reducing emissions from Category 1, Scope 3 through the promotion of recycling. Emissions from Category 1, Scope 3 accounts for roughly 80%<sup>20</sup> of the total GHG emissions of the UACJ Group, which means that reducing emissions from this category has a significant impact on UACJ.

Therefore, JCR considers that UACJ's purpose for executing green finance is aligned with its vision.

## 2. Selection Criteria

The eligibility criteria for the Framework are described in Evaluation Phase 1 of this report. JCR assesses that the selection criteria for the project are appropriate.

PCR scrap, and scrap generated during all the processes within UACJ), expressed as a percentage. PIR stands for Post-Industrial Recycled (scrap generated in the manufacturers' material processing) while PCR, Post-Consumer Recycled (scrap derived from used products).

<sup>19</sup> Source: UACJ Report 2024

<sup>20</sup> Calculated by JCR based on the data from UACJ website (<https://www.uacj.co.jp/sustainability/environment/warming.htm>). Scope1 and Scope2 were calculated, using the location-based data.

### 3. Processes

#### Framework for Processes

The projects in which the funds will be used are proposed by the flat rolled products division and are approved by the Capital Investment Council and the Board of Directors, following discussions with relevant departments. The final decision regarding green finance procurement is made by the General Manager of the Finance Department.

#### JCR's Evaluation for the Framework

Eligible projects funded by green finance are selected by the following process: the Flat Rolled Products Division and the Corporate Sustainability Division, which are UACJ's specialized divisions, to assess their greenness; relevant divisions to discuss the matter; and the Board of Directors to give final approval. Fundraising is approved by the Board of Directors, and, subsequently, the amount to be raised is approved by Chief Executive of the Finance and Accounting Division. JCR considers that the management team and specialized divisions are appropriately involved in the project selection process set forth by the Framework.

UACJ's green finance targets and selection standards and processes are disclosed in this evaluation report and on its website. And UACJ plans to explain eligible projects to investors and lenders before executing green finance. Hence, JCR considers that transparency is also ensured for investors and other stakeholders.

## II. Management of Proceeds

### JCR's Key Consideration on This Factor

It is usually assumed that the management of the proceeds varies widely depending on issuers/borrowers. JCR confirms whether the proceeds are surely appropriated to the green project and whether a mechanism and internal system are in place to make tracking easy.

JCR also focuses on whether the proceeds are scheduled to be used for green projects at an early stage and the management and operation methods for unallocated proceeds.

### ▶▶▶ Current Status of Evaluation Targets and JCR's Evaluation

JCR considers that the management of proceeds is highly transparent as UACJ has a well-established system to manage the proceeds and discloses how it manages the proceeds in this evaluation report and the Framework on its website.

## Framework for Management of Proceeds

### Management of Proceeds

#### **Allocation plan for the funds raised**

The funds to be allocated to projects are planned to be raised through corporate bonds or long-term borrowings.

The funds raised will be deposited in our dedicated account and then transferred to our settlement account. The funds will be used promptly thereafter as new investments or partial refinancing to cover the installation costs of the target equipment.

#### **Method of tracking the funds raised**

As stated above, funds will essentially be allocated immediately after they are raised because fund raising will be carried out based on actual expenditures and expenditure plans for the month of procurement.

In case there is a discrepancy between the amount raised and the amount allocated, we plan to manage the funds raised and their allocation status on an Excel spreadsheet.

We plan to use an accounting system to manage the funds in cooperation with the Facilities Department, which manages capital investments, and the Procurement Department, which manages payments.

Tracking management will be handled by the Finance Department, and the final approval will be given by the Chief Executive of the Finance Division (who oversees the Finance, Accounting, and Investor Relations departments).

#### **Internal control and external audits related to the tracking of funds**

Internal audits will check whether the loan balance (balance certificate) and the ledger balance match, while external audits will check the content of the loan agreement and the loan balance once a year (the content of the contract are checked only at the time of contract conclusion).

### **Method of managing unallocated funds**

Pending a decision on the allocation of the funds, the funds will be managed in the form of cash or cash equivalents.

Even after the full amount has been allocated, if the assets eligible for the use of funds are no longer eligible for use by the repayment deadline due to sale or damage, the funds will be used to acquire or refinance the acquisition funds of projects that meet the eligibility criteria.

### **JCR's Evaluation for the Framework**

The Facility Department and the Procurement Department record the budget amount and the estimated cost based on the funds raised through green finance, the Accounting Department monitors the allocation of the proceeds, using the internal accounting system, and the Financial Department compiles the data. The Chief Executive of the Finance and Accounting Division gives final approval to the process of managing the proceeds on an annual basis.

All the proceeds are held in cash or cash equivalents until the full amount is allocated. JCR has confirmed that the proceeds unallocated for the sale of an eligible project or other reasons before the redemption/repayment of green finance will be allocated as promptly as possible to the projects that meet eligible criteria.

The management of the proceeds undergoes internal audits and external audits by auditing firms. The ledger book for managing the proceeds are retained for ten years after the completion of redemption/repayment, following the retention period guidelines for such documents. On the other hand, contracts and similar documents are to be retained indefinitely.

Based on the above, JCR considers that UACJ's management of proceeds is highly transparent as the management system is well-established and how the proceeds are managed is disclosed in this evaluation report and on its website.

### III. Reporting

#### JCR's Key Consideration on This Factor

In this section, JCR evaluates whether the disclosure system for investors/lenders before and after financing based on the Framework, is planned in detail and in an effective manner.

#### ▶▶▶ Current Status of Evaluation Targets and JCR's Evaluation

JCR considers that UACJ plans to appropriately report the allocation and environmental benefits to investors.

#### Framework for Reporting

##### **Disclosure of the allocation status of funds**

Total planned amount to be raised, funded amount, refinancing amount, refinancing ratio, allocated funds, unallocated funds at the time of reporting

##### **Disclosure method and frequency of fund allocation reporting and impact reporting**

Information will be disclosed annually on the Company's website

##### **KPIs (Key Performance Indicators) in impact reporting**

1. Rate of increase in UBC usage (%)
2. Amount of Scope 3 Emissions Reductions

#### JCR's Evaluation for the Framework

##### Reporting on Allocation

UACJ plans to disclose on its website the allocation of the proceeds raised through green finance as set forth in the Framework on an annual basis. Any significant changes in the financial standing after the full amount of the proceeds are allocated will be disclosed on its website promptly.

##### Reporting on Environmental Benefits

UACJ plans to disclose on its website the environmental benefits from eligible green projects as set forth in the Framework on an annual basis. The disclosure includes quantitative indicators such as the growth rate of UBC usage and the amount of Scope 3 emissions reductions.

Based on the above, JCR considers that UACJ plans to appropriately disclose to investors and other stakeholders the above reporting on both the allocation and the environmental benefits.

## IV. Organization's Sustainability Initiatives

### JCR's Key Consideration on This Factor

In this section, JCR evaluates whether the management of the issuer/borrower positions sustainability issues as a high priority for management and whether the sustainability policy, process and selection criteria for green projects are clearly positioned through the establishment of a department specializing in environmental issues or in collaboration with external organizations.

#### ▶▶▶ Current Status of Evaluation Targets and JCR's Evaluation

JCR highly values UACJ's sustainability initiatives in that UACJ positions sustainability issues as the top management agenda, addresses those issues from practical and managerial perspectives through sustainability meeting bodies, and drives the initiatives, incorporating the expertise of internal departments engaging in practical operations and external specialists.

UACJ's corporate philosophy is to "contribute to a prosperous and sustainable society with technologies that bring out the innate power of materials," and its vision is "Aluminum is our passion. It inspires our work in building a better world and a healthier environment." Based on the above, UACJ announced its long-term roadmap, UACJ Vision 2030 in May 2021, which commits "Pursuing our passion, aluminum, to contribute to building a sustainable society." This is the evidence that UACJ takes sustainability activities as a core element challenging the raison d'être of business management. UACJ drives these sustainability activities based on the UACJ Sustainability Policy.

UACJ has identified "key issues (materiality)" that it must prioritize to grow sustainably in tandem with society and seeks to achieve the KPIs of each key issue over the mid-to-long term. UACJ perceives a need to address these issues, adapting to changes in both the external and internal environments, and thus, it reviewed the materiality in FY2023 in response to the transformation of the social system as the COVID19 pandemic wanes. The revised materiality is as follows:



Figure 6: UACJ Materiality<sup>21</sup>

<sup>21</sup>Source: UACJ REPORT 2024

There are five materiality issues. UACJ has assigned persons responsible (executive officers in charge) and departments responsible to each issue to monitor the progress of KPIs designated in advance. Meetings are regularly held to report the KPI progress in respective committees (Environmental Committee, Compliance Committee, and HR Committee), and the management team receives the reporting and discusses matters reported, which enhances the effectiveness of UACJ's initiatives. What reported and discussed is shared with domestic and overseas group companies at a group meeting. The purposes of discussions at committees are sometimes communicated directly through the Corporate Sustainability Division. This ensures that the goals that the management team sets its eyes on are passed down to its group companies.

**Materiality Promotion Structure (Organizations and Committees)**

Materiality Issues	Officers in Charge	Organization in Charge	KPI Monitoring (Reporting Body)	
			Committee	Frequency
Leading a Circular Economy in Aluminum	Executive Officer in charge of Climate Change Countermeasures	Climate Change Task Force Department Safety & Environment Department	Environmental Committee	Three times annually (June, October, February)
Measures to address Climate Change				
Supporting Environmental Health and Nature (Nature Positive)	Chief Executive of the Business Support Division	Corporate Legal Department	Compliance Committee	Once annually (March)
Respecting Human Rights				
Promoting Dei-ai (D&I)	Chief Executive of the Corporate Sustainability Division	Diversity Promotion Department	Human Resources Committee	Twice annually (July, November)
	Chief Executive of the Business Support Division	Human Resources Department		

**Figure 7: UACJ Materiality Promotion<sup>22</sup>**

UACJ sets out the following roadmap for the three environmental issues among these materiality issues to ensure the effectiveness of the initiatives. The roadmap for leading "a Circular Economy in Aluminum" indicates initiatives for each product staged according to the maturity level of the recycling system. The roadmap for taking measures to address climate change shows in chronological order measures tailored to the social implementation status of decarbonization technologies focusing on fuel conversion and the introduction of renewable energy for Scope 1 and 2 and on recycling for Scope 3. The roadmap for supporting environmental health and nature is a plan for comprehending the as-yet-unknown reality of natural capital within the supply chain, advancing the measures currently in action.

<sup>22</sup> Source: UACJ REPORT 2024

Item	Details	to fiscal 2027	to fiscal 2030
Overall strategy	Formulation of policies for company-wide strategies	Identification of issues and formulation of policies Consideration of investment in scrap pre-processing equipment	Strengthening of environmental response capabilities Promotion of recycling through to 2030
	Maximizing use of UBC	Increase the Can to Can usage rate (175% in 2027 compared to 2019) Vertical startup of UBC processing equipment, consideration of investment expansion	
	Recycled alloy development and production technology	Assessment of current material flow Alloy development (EcoEnd™, etc.) Selection of scrap that can be sustainably procured → Use ("Can to Can closed loop recycling," etc., starting in city-center offices)	
	NEDO project commercialization (interaction with government agencies)	Project for development of technology to upgrade aluminum resources (NEDO project)	
	Upgrade recycling, vertical continuous casting machines, etc. Pioneering research (low-temperature electrolysis)	Research and development (pioneering research) of processes for increasing the purity of aluminum using low-temperature electrolysis	
	Building relationships with other industries and companies	Building relationships with other industries and companies	
PIR	Stable procurement of materials for cans, automobiles, home appliances, etc.	Stable procurement of scrap and expansion thereof Increase in volume through the establishment of new scrap procurement schemes	UACJ recycling rate of 80%
	Consideration of recycling for high-strength 2000 series and 7000 series	Assessment of the scrap market Improvement of dissolution yields and exploration of the use of purification technology Expansion of aerospace and defense-related products and PIR collection	
PCR	Automobiles	Development of recycling processes that meet the quality standards for automotive components and evaluation of recycled materials	
	Home appliances	Establishment of loops by working with customers and recycling businesses Implement closed-loop recycling of PCR home appliances	
	Mixed metal	Search for partner companies Use of PCR in existing and recycled alloys	
	Others	Search for items Search for partner companies Consideration of measures to cope with increased target volume	

Figure 8: Road Map for Leading Circular Economy in Aluminum<sup>23</sup>

Item	Description	By FY2023			By FY2050
Scope1 and 2	Promotion of further energy saving	Improve energy consumption efficiency and reduce loss	30% CO <sub>2</sub> Reduction	Hydrogen, ammonia, methanation, etc.	Become carbon neutral
	Transition to low-carbon/green fuel	Switch from heavy oil and LPG to LNG and city gas			
	Transition to low-carbon/green electricity	Introduce and expand use of renewable energy-derived electricity			
	Introduction of carbon recovery technologies	Investigate and review technology			
	Carbon offsetting	Timberland investment, emissions trading, etc.			
Scope3	Promotion/maximization of recycling	Maximize use of all scrap (in-house scrap, customers' scrap, general consumers' scrap)	30% GHG Reduction	Practical application, promotion of widespread adoption Transition to green (carbon-free) virgin aluminum	Minimize GHG emissions
	Development and practical application of recycled alloys and associated technologies	Development and practical application (NEDO-subsidized project)			
	Transition to low-carbon/green virgin aluminum	Increase use of virgin aluminum produced with hydroelectricity			
	Development/supply of products using UACJ's unique, certified GHG emissions reduction method, "Mass Balance," and including them in regular lineup	Complete formation of framework Commence supply Promote usage, make part of regular lineup			
	Promotion of the switch to aluminum	Expand sales and establish ALmitas' SMART Develop new domains and expand sales in them			
		Utilize aluminum's environmentally friendly properties, set rules for reducing environmental impacts			
Participation and collaboration with external organizations		Participate in initiatives and collaborate with industry groups			

Figure 9: Road Map for Promoting Measures to Address Climate Change<sup>24</sup>

<sup>23</sup>Source: UACJ REPORT 2024

<sup>24</sup>Source: UACJ REPORT 2024

Item	Details	to fiscal 2027	to fiscal 2030
Minimization of negative impacts	Promotion of water circulation	Promotion of use of recycled water, reuse of wastewater Avoidance and reduction of ecosystem impacts	<div>Maximize reductions of water withdrawal per unit of production with a view to the 2030 target</div> <div>Implementation of measures (operational, equipment, anti-leak measures)</div> <div>25% reduction in water withdrawal per unit of production</div>
	Reduction of water loss	Identifying differences between manufacturing sites, water withdrawal levels, etc.	
	Effective use of unused water	Determining actual usage status Effective use of rainwater, etc.	
	Collaboration with the supply chain	Incorporating a biodiversity perspective Promoting effective use of water resources	
Maximization of positive impacts	Forest conservation and restoration	Ascertaining the amount of groundwater used Ascertaining the scale of water source conservation Forest conservation	<div>Measures to ensure zero biodiversity loss and clarification of timing</div> <div>Maximize efforts to make a positive impact on biodiversity</div>
	Rollout of Almitas® SMART (environmentally friendly products)	Expanding sales of Almitas® SMART Cultivating new fields and expanding sales Reducing environmental impact resulting from increased use	
	Promotion of recycling	Driving a circular economy Reduction of new ingot use	
	Implementation of measures based on scientific evidence (Certification is not mandatory, but will be determined based on the situation)	Set targets with reference to SBTs for Nature (SBTN) methodology Effective implementation of measures	
Information disclosure	Response to Taskforce on Nature-related Financial Disclosures (TNFD)	Competitive target setting	Enhancing corporate value through information disclosure and steady progress

**Figure 10: Road map for Supporting Environmental Health and Nature<sup>25</sup>**

UACJ refers to information and advice on global trends of sustainability initiatives from outside directors and external experts. In addition to that, UACJ improves the sustainability of its business and the materials it supplies through participation in various external initiatives and continue to strive to disclose such efforts to society with high transparency and objectivity. More specifically, those participating initiatives include signing the United Nations Global Compact<sup>26</sup>, obtaining evaluations from CDP<sup>27</sup> and EcoVadis<sup>28</sup>, and gaining ASI certification<sup>29</sup>.

Based on the above, JCR highly values UACJ's sustainability initiatives in that UACJ positions sustainability issues as the top management agenda, addresses those issues from practical and managerial perspectives through sustainability meeting bodies, and clearly shows the roadmaps for measures to be taken in the future.

<sup>25</sup>Source: UACJ REPORT 2024

<sup>26</sup>The largest global sustainability initiative where the United Nations and private entities (companies and organizations) unite to build a healthy global society.

<sup>27</sup>An international nonprofit organization that evaluates companies' initiatives to address environmental issues, using scores

<sup>28</sup>An international institution that evaluates companies and their supply chains across four sustainability themes

<sup>29</sup>Aluminum Stewardship Initiative is an international initiative aimed at improving sustainability efforts and maximizing contributions to society from an ESG perspective throughout the entire aluminum supply chain.

## Evaluation phase 3: Evaluation Result(Conclusion)

## Green 1(F)

Based on its JCR Green Finance Evaluation Methodology, JCR assigned "g1(F)" for the "Greenness Evaluation (Uses of Proceeds)" and "m1(F)" for the "Management, Operation and Transparency Evaluation." As a result, JCR assigned "Green 1(F)" for the "JCR Green Finance Framework Evaluation." The Framework meets the standards for the items required in the Green Bond Principles, the Green Loan Principles, the Green Bond Guidelines and the Green Loan Guidelines.

		Management, Operation, and Transparency Evaluation				
		m1(F)	m2(F)	m3(F)	m4(F)	m5(F)
Greenness Evaluation	g1(F)	Green 1(F)	Green 2(F)	Green 3(F)	Green 4(F)	Green 5(F)
	g2(F)	Green 2(F)	Green 2(F)	Green 3(F)	Green 4(F)	Green 5(F)
	g3(F)	Green 3(F)	Green 3(F)	Green 4(F)	Green 5(F)	Not qualified
	g4(F)	Green 4(F)	Green 4(F)	Green 5(F)	Not qualified	Not qualified
	g5(F)	Green 5(F)	Green 5(F)	Not qualified	Not qualified	Not qualified

(Responsible analysts for this evaluation) Rieko Kikuchi, Haruna Goto

## Important explanations of this Evaluation

### 1. Assumptions, Significance and Limitations of JCR Green Finance Framework Evaluation

JCR Green Finance Framework Evaluation, which is determined and provided by Japan Credit Rating Agency, Ltd. (JCR), covers the policies set out in the Green Finance Framework, and expresses JCR's comprehensive opinion at this time regarding the appropriateness of the Green Project as defined by JCR and the extent of management, operation and transparency initiatives related to the use of funds and other matters. Therefore, JCR Green Finance Framework Evaluation is not intended to evaluate the effects of specific environmental improvements and the management, operation and transparency of individual bonds and borrowings, etc. to be implemented based on these policies. In the event an individual bond or individual borrowing based on this Framework is subject to a green finance evaluation, a separate evaluation is needed. JCR Green Finance Framework Evaluation does not prove the environmental improvement effects of individual bonds or borrowings implemented under this Framework, and does not assume responsibility for their environmental improvement effects. JCR confirms the environmental improvement effects of funds procured under the Green Finance Framework measured quantitatively and qualitatively by the issuer/borrower or by a third party nominated by the issuer/borrower, but in principle it does not directly measure such effects.

### 2. Method used to conduct this evaluation

The methodologies used in this assessment are described in "JCR Green Finance Evaluation" on the "Sustainable Finance ESG" section of the JCR website (<https://www.jcr.co.jp/en>).

### 3. Relationship with Acts Concerning Credit Rating Business

JCR Green Finance Framework Evaluation is determined and provided by JCR as a related business, which is different from its activities related to the credit rating business.

### 4. Relationship with Credit Ratings

The Evaluation is different from the Credit Rating and does not assure to provide or browse a predetermined credit rating.

### 5. Third-Party Evaluation of JCR Green Finance Framework Evaluation

There are no capital and/or personnel relationships that may result in a conflict of interests between the subject of this evaluation and JCR.

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## ■ Glossary

JCR Green Finance Framework Evaluation: This evaluates the extent to which the funds procured through Green Finance are appropriated for green projects as defined by JCR and the degree to which the management, operation and transparency of the Green Finance are ensured. Evaluations based on a 5-point scale are given from top to bottom using the Green 1(F), Green 2(F), Green 3(F), Green 4(F), and Green 5(F) symbols.

## ■ Status of Registration as an External Evaluator of Sustainability Finance

- Registered as an External Reviewer of Green Bonds by the Ministry of the Environment
- ICMA (registered as an observer with the Institute of International Capital Markets)

## ■ Status of registration as a credit rating agency, etc.

- Credit Rating Agency: the Commissioner of the Financial Services Agency (Rating) No.1
- EU Certified Credit Rating Agency
- NRSRO: JCR has registered with the following four of the five credit rating classes of the U.S. Securities and Exchange Commission's Nationally Recognized Statistical Rating Organization (NRSRO): (1) financial institutions, broker-dealers, (2) insurance companies, (3) general business corporations and (4) governments and municipalities. If the disclosure is subject to Section 17g-7 (a) of the Securities and Exchange Commission Rule, such disclosures are attached to the news releases appearing on the JCR website (<https://www.jcr.co.jp/en/>).

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