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Revision of JCR’s Rating Methodology

Japan Credit Rating Agency, Ltd. (JCR) hereby announces that it has revised "JCR’s Rating Methodology."

JCR revised the Rating Methodology as a result of considerations that were announced in its press release "JCR Solicits Public Comments on JCR’s Rating Methodology” dated November 28, 2023, and JCR has revised mainly "II. Perspectives on Creditworthiness Assessment" in the Rating Methodology as proposed at the time of requesting the public comments on it. There are no individual ratings that need to be reviewed as a result of this revision.

The revised Rating Methodology will be posted on the "Information about JCR Ratings" page (https://www.jcr.co.jp/en/rrinfo/) of JCR's website.

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JCR's Rating Methodology

I. Rating Framework

1. Creditworthiness

(1) Creditworthiness and Likelihood of Recovery

A credit rating is an assessment of one's financial strength, specifically as it relates to one's ability to meet debt obligations (corporate bonds, CP, loans, and other obligations), and pay principal and interest in accordance with financial agreements. Each individual obligation has its own contract, so the likelihood of recovery for each individual obligation, should the issuer go bankrupt, varies according to each contract. A rating is therefore required to determine the likelihood (credit strength) that the obligor will go bankrupt and default on its obligation (be unable to pay) and the likelihood of recovery of the obligation should the obligor go bankrupt.

As such, a rating represents a comprehensive decision on an assessment of an obligor's credit strength and the likelihood of recovery should the obligor bankrupt. But it is ultimately at base only an assessment of an obligor's credit strength as a going concern. The likelihood of the principal and interest being paid on time as specified in the contract is largely dependent on the obligor remaining financially stable and able to generate the required cash flow regularly. In contrast, if the obligor goes into bankruptcy there would be a significant delay in the recovery of the principal and interest. In most cases, even when the probability of recovery seems high, it is extremely difficult to recover 100 percent of the principal and interest, so it is not considered appropriate to use the likelihood of recovery as the core consideration in the assessment of how certain the obligation is likely to be performed.

At JCR, we refer to a rating that provides insight into an obligors' ability as a going concern to perform its obligations as a Long-term Issuer Rating. In determining a Long-term Issuer Rating, specific contractual details, preferred status among obligations, and the degree of recoverability are not taken into consideration, because the purpose of this rating is to get a comprehensive grasp of all of the obligor's obligations. Those individual factors are reflected in the assessment of individual obligations. Therefore, individual obligation ratings of an obligor may diverge upwards or downwards relative to the Long-term Issuer Rating of the same obligor.

(2) Assessment of Creditworthiness

Payments of obligations are taken from the cash flow generated from the obligor's daily operating activities. When assessing credit strength, it is therefore important to determine whether the volume (profitability) and stability of this cash flow matches that of the obligation to be repaid. It is extremely important to analyze the relative relationships between cash flow and obligations, because no matter how large the cash flow is, if the obligation is heavy, the obligation to repay it will be a heavy burden. The obligor must be able to support this obligation. At the same time, however, if the cash flow and the

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obligation are small, the repayment burden will be light.

When assessing credit strength, focus is placed on two main issues. The first is the business foundation—whether the obligor will be able to maintain and eventually expand its business foundations over time and generate the required cash flow. The second is the financial foundation—whether the obligor's financial situation will adversely affect the ability to repay obligations.

Payment of obligations is made by refinancing of obligations for financial institutions in many cases, and cash flows are not usually expected to be used as funds for repayment. In rating analysis on financial institutions, therefore, cash flow analysis is not conducted usually. Decisions on whether or not a financial institution can refinance its debt smoothly are made in light of business foundation, financial foundation (earnings power, capital adequacy degree, liquidity, asset quality, risk management, etc.) conditions, etc.

There are cases, however, when the obligor's credit strength is not dependent only on specific factors, such as business and financial foundations, but is sustained by credit support from external parties. JCR recognizes financial support given by parent companies to subsidiaries—the government's financial support to banks based on safety nets such as the Deposit Insurance System—and will consider them when assessing an obligor's credit strength.

(3) Corporate Default Rate Estimation Model (for large enterprises)

JCR has developed a model referred to as Individual Corporate Default Rate Estimation Model for domestic industrial corporations, which is used to estimate default probability of a corporation from financial information on the corporation in order to determine a rating for it that corresponds to such default probability. In the rating process, while the quantitative and qualitative analysis of industries and individual obligors is the core of the research, other results, such as those from the above estimation model, are used as reference data in the process of assessing credit strength as a means to enhance the objectivity of the rating.

(4) Guarantees and Keep-Well Agreements

With obligations supported by a guarantee or keep-well agreement, both the principal obligor and the guarantor (or the provider of the keep-well agreement) are rated individually on their ability to pay principal and interest on the obligation. The higher rating of the two is assigned as the official credit rating for the obligation, but in cases where the rating of the keep-well agreement provider is not significantly higher than that of the principal obligor, a downward rating adjustment by one or more notches may be made on the keep-well agreement provider's rating.

2. Likelihood of Recovery

(1) How Likelihood of Recovery Is Determined

As mentioned above, the core foundation for a rating is the obligor's credit strength (its likelihood of default). The JCR rating codes indicate the degree of likelihood of this kind of default occurring. For the creditor, the likelihood of recovery, should the obligor go into bankruptcy, is also a matter of significant

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interest. When there is a discrepancy in the likelihood of recovery among individual obligations, to the point of soliciting caution among the investors, there may be cases where JCR assigns a notch differential (either above or below one or two notches, sometimes more) from the Long-term Issuer Rating.

(2) Assessment of Likelihood of Recovery

(a) Creditworthiness of Obligor (Long-term Issuer Rating)

When an obligor’s creditworthiness is high, the likelihood of default is low; therefore, assessing the chances of default in such a case may seem somewhat low. If the Long-term Issuer Rating falls to BB or lower, JCR may reflect the likelihood of recovery as a notch differential. In the case of subordinated bonds, however, where the likelihood of recovery is clearly below that of other obligations, JCR reflects it as a notch differential even if the Long-term Issuer Rating is BBB or above.

(b) Financial Structure of Obligor

In general, the larger the debt is (in relation to readily convertible assets such as cash, deposits, and securities), the lower the chances are of recovery. In turn, the more secured liabilities the obligor owns, the lower the chances are of recovery on unsecured bonds. Thus, the financial structure of the obligor has a material impact on the likelihood of recovery. JCR uses the ratio of cash and deposits, securities and tangible fixed assets as reference data in assigning notch differentials. In the case of a holding company that relies on external funding to finance its shares, when ranking the recovery of claims, creditors of the parent holding company will rank subordinate to the creditors of the subsidiaries. As structural subordination occurs—taking the ratio of shares held to equity (double leverage rate) into consideration—a notch differential may be assigned between a holding company and a core subsidiary.

(c) Relative Contractual Position of Obligations Being Rated

When assessing the contractual position of the obligation being rated, it’s extremely important to examine (a) the contract details of the obligation and (b) the obligor’s financial structure. Subordination provisions, financial covenants and security are among the contractual items that relate to the obligation.

Subordination Provision

When an obligation is subject to a subordination provision, the agreement expressly states that the priority of repayment is subordinate to the unsecured senior obligations and, in the case of bankruptcy; the likelihood of recovery becomes extremely low. Therefore, regardless of the rating assigned to the Long-term Issuer Rating, it will be subject to a notch differentiation. Subordinated bonds (loans) with defined maturity and perpetual subordinated bonds (loans) with deferral of interest clause are assigned one or more notches and two or more notches downward, respectively, relative to the Long-term Issuer Rating.

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Financial Covenants

Financial covenants can be divided roughly into negative pledge covenants and other provisions (security switching provisions, profit maintenance provisions, net worth maintenance provisions, dividend restriction provisions), but when comparing the degree of impact of the financial covenants with the rating, negative pledge provisions are the most basic and the most important covenants. When security is provided for other obligations that are included within the scope of the negative pledge, the negative pledge requires that the obligor provide the equivalent ranked security to the unsecured obligation. The scope provided for is extremely variable, ranging from a broad definition of "other obligations," which includes bank borrowings and foreign bonds, to narrow definitions such as "other domestic unsecured corporate bonds (excluding bonds with security-switching provisions)." In terms of the recovery of claims, the narrower the scope is, the higher the likelihood is that the creditor will be placed in a subordinate position. Therefore, when the Long-term Issuer Rating is low and there is no negative pledge or a severely limited scope on a negative pledge, the rating may be affected. The effects of financial covenants other than negative pledges on ratings are somewhat indirect, as acceleration only comes into play when the provision has been breached.

Secured Obligations

Secured obligations are repaid ahead of unsecured obligations at the time of collateral disposal and have a higher level of safety compared with unsecured obligations. For obligors whose creditworthiness is quite low, it is quite possible they will have to repay obligations by disposing of their assets, and the existence or lack of security affects the degree of safety represented by such obligors. In such cases, unsecured obligations may be rated lower than secured obligations. On one hand, when the obligor's creditworthiness is relatively high, there may be cases where unsecured obligations are rated lower than secured credits. On the other hand, when the creditworthiness of the obligor is relatively high, the impact on the degree of safety due to the existence or lack of a security is minimal. Thus, no distinction is given to the rating.

(3) Thinking Behind Notching-up

In assigning a rating on individual obligations that is higher than the Long-term Issuer Rating (a notching-up), taking into account the likelihood of recovery, JCR considers three points of importance: (a) that there is not only a partial coverage of the principal and interest paid on the obligation, but also an ability to cover larger amounts than that of the total; (b) that obligations can be performed before too long before repayments are made after defaulting; and (c) that the likelihood of recovery is not influenced by the post-default credit conditions of the obligor. Collateral on securities that have both creditworthiness and liquidity (such as government bonds) and collateral on deposits (the risk of loss of value due to an offset needs to be low) may be considered as satisfying such conditions. However, in a case where, although secured, there are other obligors with higher seniority and the likelihood of recovery is low, they would not be eligible for notching-up. In addition, under corporate rehabilitation

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proceedings, special care must be taken when dealing with the possibility of limitations being imposed on exercising security rights. At any rate, the above factors are taken into account for each individual case to determine the eligibility for notching-up.

3. About Outlook on the Future

A credit rating assesses an obligor's ability to perform its obligations over time. Thus, estimating the ability to generate income in the future and predicting future financial conditions is important. In analyzing the obligor, therefore, JCR makes assessments after taking into account the obligor's future plans for capital investments and financing. In other words, based on today's financial statements and management plans, and taking into consideration the examination of industry trends and business foundations, a view is formed based on estimations of future balance sheets and profits and losses, the future trend of management indicators are forecast. In such cases, JCR also analyzes the obligation's sensitivity to changes in economic conditions and considers all "worse case scenarios." The indicators used in analysis differ depending on countries or regions in which a corporation is located, laws and regulations, accounting system, industrial line, business category, etc.

In assessing ratings, JCR makes its determination based on an outlook of the conditions and business environment of obligors over a span of three years. However, if it can be foreseen that the obligor will face a large redemption of bonds five years from now, for example, such risks that are substantially longer than a span of three years will be taken into account when assigning ratings.

4. Short-term Rating

(1) Relationship Between Long-term and Short-term Ratings

JCR divides the ratings into long-term ratings used for obligations over one year and short-term ratings used for obligations within one year, and uses different rating symbols for each rating.

While the long-term ratings indicate the certainty of performance of medium- to long-term obligations, short-term ratings indicate the certainty of short-term obligations, normally within one year. At the same time, however, short-term credit strength is inseparable from medium- and long-term credit strength. For example, an outlook that predicts the degree of certainty of the obligor performing under medium- and long-term obligations will also have a significant impact on the short-term funding through the obligor's relationship with customers and banks. Furthermore, among the short-term ratings, CP ratings are assigned in respect to CP issuing limits that are maintained over a medium- to long-term period. Therefore, as with the long-term rating, JCR determines the short-term rating based on the outlook for the obligor's conditions and business environment over the next three years or so. The assessment of medium- and long-term credit strength thus forms the basis of JCR's determination of short-term ratings. As a result, there is some correspondence relationship between short-term ratings and long-term ratings as shown in the table below.

However, the correspondence indicated in the table is simply an indication. Assigned ratings may differ on individual issues. This is because, as noted below, in short-term ratings, liquidity analysis is added to the assessment of medium- and long-term credit strengths, but the liquidity conditions (the ratio

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of liquid assets and liquidity at hand to assets and liabilities, fund flow patterns, and the like), which are the subject of the analysis, differ widely across industries, business and individual companies.

(Cover) Correspondence Relationship between Long-term Rating and Short-term Rating

Long-term Rating	Short-term Rating						
AAA	J-1+						
AA+	J-1+						
AA	J-1+						
AA-	J-1+						
A+	J-1+	J-1					
A		J-1					
A-		J-1	J-2				
BBB+			J-2				
BBB			J-2				
BBB-			J-2	J-3			
BB+				J-3			
BB				J-3	NJ		
BB-					NJ		
B+					NJ		
B					NJ		
B-					NJ		
CCC					NJ		
CC					NJ		
C					NJ		
LD						LD	
D							D

(Note) The above correspondence relationship is only a guide and may result in different ratings in individual cases.

(2) Focus on Liquidity Analysis in Short-term Rating

The basic thinking behind the analysis of short-term ratings does not differ significantly from that of long-term ratings, but in a short-term rating, the weight is placed in the relatively near future and liquidity analysis is added. In a liquidity analysis, the following components are examined: (a) contents and the level of liquidity; (b) funds flow conditions; (c) ability to raise funds; (d) CP issuance limits and uses of funds.

(a) Content and Level of Liquidity

Liquidity is the primary source for short-term fund settlements and consists of cash and deposits, to which securities are added. An assessment is made, however, by calculating the real liquidity level by deducting from it the funds that are already earmarked for such uses as temporary employment of funds for capital investments, and discounting the value of securities and other similar instruments according to the degree of liquidity.

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(b) Funds Flow Conditions

In order to assess the certainty of the funds settlement, the stability of funds flow on a monthly and weekly basis is assessed. Using a funds flow table, timing and quantitative and qualitative matching are confirmed. Attention is placed on the following funds flow patterns: funds flow pattern of adjusting imbalances in ordinary revenues and expenditures using short-term funds; financing capital investments using fixed liabilities and retained earnings; and financing closings and seasonal needs with short-term funds.

(c) Ability to Raise Funds

From the perspective of examining the capacity to raise funds, JCR assesses unrealized gains in the obligor's assets and the capacity to provide collateral. A judgment is made on the obligor's potential ability to finance at a crunch time by examining its long-term relationships with financial institutions, including its main bank, through analysis of the amount of borrowings, directors originated or seconded from the financial institution, and the cross-holding of shares.

(d) CP Issuance Limits and Use of Funds

In rating CPs, JCR also analyzes the issuance limit and the use of funds. For example, in refinancing, the following factors are considered: the existing outstanding balances (Is the proportion of CPs among all obligations excessive?); the funds flow pattern if they are used as working capital (Is the issuing limit appropriate in relation to the amounts needed). Comparisons will then be made with respect to the investment size and overall strength of the company. Through these types of analyses, JCR makes a judgment on whether, after issuing CPs, an impact on the obligor's financial conditions would cause a material change in its balance sheet or funds flow.

(3) Backup Line

While the uses of funds raised through issuing CPs are diverse, CP is generally issued to help finance working capital and settlement funds that are commonly refinanced through issuing CPs. There is a risk, however, that due to some unforeseen factors and the market's experiencing turbulence, refinancing using CPs may become impossible. These events may occur due to factors not related to changes in the credit risks of the issuer and can be considered market risks. A backup line is a credit facility negotiated with a bank in advance to provide a backup source of funding should such a market risk occur. This is separate from a normal bank guarantee. A backup line is a tool to supplement the availability of CP settlement funds and is not a credit enhancement like a bank guarantee. (If, for example, an issuer is faced with a credit risk deterioration, a loan for CP settlement funds may not be executed). Therefore, the level of the backup line is not related to the CP credit risk (rating). However, JCR takes the view that ensuring sufficient liquidity against market risks is necessary. If the liquidity in hand is cash—deposits or bank credit lines that have been adequately secured—then establishment of a backup line is not needed. But if liquidity is lacking, a backup line is required. Methods to assess the backup line are as follows.

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(a) A healthy level of liquidity sufficient to cover the CP issuance line is estimated considering the corporate performance outlook, changes in funds demand, use of funds and other similar factors.
(b) Real liquidity in hand is calculated. The liquidity is composed of cash and deposits and liquid securities. However, a downward adjustment needs to be made by deducting those assets that are being used as security against obligations, or discounting those whose liquidity is low, while liquidity supplements such as commitment line and overdraft facilities from financial institutions are added.
(c) JCR considers that the shortfall in liquidity on hand calculated from (a) and (b) above should be covered by the backup line, and the backup line is determined.

II. Perspectives on Creditworthiness Assessment

The evaluation of a company's creditworthiness is based on an analysis of its business and financial foundations, as well as a comprehensive assessment of these factors. The credit rating of a company derived from the evaluation of creditworthiness is subject to the sovereign rating of the country in which the company is located, but in exceptional cases, it may exceed the sovereign rating. Exceptions to the above criteria include: (i) strong support from a parent company or other entity located outside of the country; (ii) a strong and stable earnings base outside of the country; ability to raise funds from international financial markets; and in addition to this, it has financial soundness. However, in the case of (ii), the upper limit of the rating is the country ceiling, which is based on an evaluation of the probability of foreign currency transaction restrictions by the authorities.

Below is an overview of the credit evaluation process for ordinary industrial corporations and financial corporations.

1. Business Foundation

(1) Basic Approach

Business foundation can be viewed as a source of cash flow. JCR evaluates a company's business foundation and then projects future cash flows. The future is always accompanied by uncertainty (risk), which may have a negative or positive effect on the subject company. In evaluating the business foundation, JCR basically divides risks into two categories: risks that are difficult for the subject company to control and risks that are easy for the subject company to control. The former are external environmental risks and risks of the industry to which the company belongs, while the latter are company-specific risks. After recognizing external environmental risks and industry risks, JCR combine them with company-specific risks to predict changes in the subject company's business foundation and assumes the cash flows to be generated in the future.

(2) Identification of External Environmental Risks

External environment risk is positioned as a precondition for making future projections in assessing the creditworthiness of the subject company. The external environment includes political factors such as laws and regulations, economic factors such as business fluctuations, and social factors such as demographic trends. Technological innovation is also an important factor. Since these factors are constantly changing, JCR believes

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it is important to assume the current situation and future changes in each of them.

(3) Understanding Industry Risk

Generally, a company engaged in a certain business forms an industry with many other companies engaged in the same type of business. Since these industries have similar structures and characteristics, JCR believes that they will be affected in a common way to some extent by changes in external environmental risks, although there may be some differences in the degree to which each company is exposed to the risks. For the purpose of creditworthiness evaluation, JCR considers this industry-specific risk (industry risk) is basically a risk that is difficult for the subject company to control. In cases where a company has a large presence in an industry, such as securing an overwhelmingly high market share, or where the number of companies in an industry is small, JCR believes that such companies may have an impact on the industry structure and, in some cases, on the external environment. Understanding industry risk plays a very important role in assessing the creditworthiness of an individual company, and JCR uses angles such as demand and supply, transaction stability and volatility, investment and cost structure, and protection and regulation when assessing industry risk. The presence or absence and degree of impact of these industry risks vary from industry to industry. The timing of the expected impact may not be the same for all industries. It is possible that the degree and timing of the impact may change with changes in the external environment, or that the impact of industry risks that was previously considered to have little impact may become stronger. Based on these judgments, the level of impact of industry risks and whether or not the risks are expected to change in the future will be determined for each of the industries classified by JCR. Then, for each of the subject company's main businesses, JCR will comprehensively assess the size of the impact of the risks and changes in the risks expected in the future, and reflect them in the assessment of the business foundation.

(4) Approach to Business Foundation Evaluation When a Subject Company Operates Multiple Businesses

If the company is engaged in multiple businesses, industry risk is assessed for each business. However, if the company has a wide range of businesses, JCR selects businesses that are considered necessary based on their contribution to profit and cash flow, as well as their importance within the corporate group, and recognizes the industry risk associated with each of these businesses.

(5) Identification of Company-Specific Risks

Each company in the same industry has different internal factors such as management resources and management style, and therefore, JCR considers that each company has company-specific risks. JCR considers mainly consider the following items.

(i) Market Position and Competitiveness

JCR determines the position and characteristics of the subject company within its industry. In other words, JCR confirms the static status of the subject company's position in the industry (ranking, market share, etc.), and also confirms the fluctuation of the subject company's market share, as well as its characteristics, strengths, weaknesses, etc. in the industry.

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(ii) History

History is the history of a company's formation, and it plays a major role in shaping the company's basic character and corporate culture. It is meaningful to evaluate the history by linking it to judgments about the current and future business foundation, rather than simply following the history.

(iii) Corporate Group

For the core companies that form the corporate group, JCR checks the major shareholders, the number of shares they hold, and their shareholding ratios. First, for corporate shareholders, stable shareholders, capital relationships, etc. are considered. Then, for changes in major shareholders, JCR also considers their history and impact on management policy. In order to determine the group's overall ability to repay its debts, JCR collects and analyze a wide range of data on individual group companies based on consolidated financial statements. JCR also considers the structure of the group, such as the holding company structure, and reflects this in the rating. On the other hand, if a company can be judged to belong to a corporate group from various perspectives, including capital, personnel, and business relationships, as well as subsidiaries, affiliates, etc., the company is considered a group company of the corporate group. In such cases, JCR not only evaluates the business and financial foundations of the group company itself, but also makes a comprehensive judgment based on an evaluation of the probability of support from the perspectives of the degree of control and involvement of the core company of the corporate group or the corporate group as a whole, and the degree of the group company’s managerial importance.

(iv) Employees

JCR compares with other companies in the same industry in terms of the number of employees, age structure, average years of service, salary level, and relationship with labor unions to understand the characteristics of the company. In addition, JCR considers that efforts to improve the employment environment for employees, develop and promote human resources, and recruit employees not only shape the corporate culture in terms of employee morale and corporate atmosphere, but also affect the sustainability of the organization in terms of securing excellent human resources and revitalizing the corporate organization.

(v) Development

JCR believes that technological and R&D capabilities are a source of competitive advantage and one of the factors that ensure stable cash flow and profitability that exceeds that of competitors. In an industry where the speed of technological innovation is rapid, understanding the status of R&D is extremely important for forecasting future cash flows.

(vi) Procurement, Manufacturing, and Logistics

In procurement, understanding the status of raw material procurement for manufacturing industries, merchandise purchasing for non-manufacturing industries, and financing for financial industries is important to confirm the stability of the cost structure. JCR believes that establishing long-term stable business relationships with raw material suppliers, merchandise suppliers, and financing sources is an important

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factor in maintaining stable cash flow.

In manufacturing, some products are more susceptible to changes in the external environment than others due to their characteristics. Particularly for the former, JCR believes that the flexibility of the production system in response to changes in the external environment has a greater impact on cash flow volatility. Not only the competitiveness of individual production sites, but also their locations and degree of diversification are factors that affect cash flow stability.

In the area of logistics, whether the logistics process from factory shipment to storage and transportation and delivery to customers in the manufacturing industry and from purchase to storage and shipment to stores and customers in the non-manufacturing industry is efficiently executed greatly affects profitability. Checking the status of inventory management is also important to determine the stability of cash flow.

(vii) Sales and After-sales service

In sales, JCR evaluates sales results by segment by linking them to changes in the external environment and associated changes in industry risk. JCR believes it is important to break down and analyze the results into quantity and unit cost factors as much as possible, regardless of whether the company is in the manufacturing, non-manufacturing, or financial industries. JCR highlights the characteristics of the subject company and evaluates them in relation to management policies and other factors. In order to confirm the stability of the customer base, it is also important to understand the status of the customers over time, etc.

After-sales service is an important factor in maintaining competitive advantage in manufacturing, non-manufacturing, and financial industries. This is because improving after-sales service is thought to increase customer satisfaction and contribute to strengthening the stability of business relationships.

(viii) Governance

Governance is a decision-making mechanism and process that enables an organization or a corporate group to appropriately recognize risks that exist both internally and externally and to enhance its own sustainability. JCR regards it as an important factor in assessing a debtor's comprehensive ability to fulfill its obligations based on the premise of a going concern.

<Status of Fulfillment of Elements Related to Outward Form>

JCR first looks elements related to outward form, such as shareholder composition, board of directors' structure, compliance system, information disclosure status, and quantitative targets for financial management. JCR also makes efforts to understand the top management's management capabilities and attitude. It is useful in understanding the direction of management to confirm what management policies have been formulated in response to changes in the environment, and how decisions are being made to achieve management targets.

<Management Plan and Results>

The management plan shows how the company intends to change its business foundation to ensure sustainability in response to the current business environment and expected changes, as well as the impact on its financial foundation.

Since it is directly related to the outlook for future cash flow and debt trends, evaluation of this plan

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is highly significant as it consolidates various perspectives, including evaluation of the company's financial foundation as well as its business foundation, and is therefore important in determining the rating. It is also important to confirm the company's management philosophy, its assumptions underlying its medium- to long-term plans, and its efforts to address immediate issues. JCR then analyzes the management plan of the company to be rated and makes a comprehensive judgment on its appropriateness and potential for achievement. In addition, JCR also confirms whether the company's organizational structure and personnel allocation are appropriate to meet the management plan.

Verification of management performance is an important perspective for ex-post evaluation of the effectiveness of governance fulfilling elements related to outward form. This is because without good governance, it will be difficult to formulate future visions and strategies through appropriate decision-making, and the feasibility of management plans and the effectiveness of investments such as capital investments and M&A will not be enhanced. Specifically, through analysis of the causes of cases in which the management plan is not progressing smoothly or negative risks such as scandals that are difficult to expect in advance from the outside are revealed, the degree of effectiveness of governance is determined and used as an element in estimating the feasibility of the next management plan.

(6) Relationship between Creditworthiness Assessment and ESG Factors

JCR positions ESG (E: Environment, S: Society, G: Governance) factors as a selection of factors from various external environmental factors that are necessary for a company to maintain and enhance its sustainability.

JCR believes that a company's skillful or poor response to ESG factors can either enhance or diminish its creditworthiness. However, not all ESG factors have an impact on the creditworthiness assessment of the subject company, but those that can have a direct and noticeable impact on its business and financial foundations are evaluated in relation to the creditworthiness assessment. Specifically, E factors include climate change, hazardous substance management and circular economy, natural environment and biodiversity, and natural disasters, while S factors include human resource management, customer relations, supply chain management, and social issues. In addition, there are some ESG factors that are not inside the time axis of the creditworthiness assessment, but may have a significant impact in the future and should be taken into account from the present time.

While taking into account the impact of ESG factors on the rating in the future, JCR basically evaluates mainly those factors that are currently having an impact on the rating. However, as the time axis shifts over time, JCR reevaluates whether ESG factors that were previously positioned as future factors should now be taken into account.

In addition, while most of the E and S factors of ESG factors are taken into account when assessing industry risks, some are taken into account when assessing company-specific risks. For G factors, JCR positions them as a factor to be considered exclusively when assessing company-specific risks. JCR assesses industrial and company-specific risks by checking the impact of each of these factors individually.

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2. Financial Foundation

(1) Basic Approach

For the financial foundation, JCR evaluates how the earnings and financial conditions of the company affect its ability to repay debt. In evaluating the financial foundation, JCR analyzes financial statements and financial indicators based on the financial management policy and other factors to understand the company's actual earnings and financial conditions.

Credit ratings evaluate a company's ability to repay debt in the future. It is important to go beyond the current situation and estimate how earnings and financial conditions will change in the future, based on the evaluation of business foundation. It should be noted that even if the current earnings and financial conditions are at the same level, the size of future financial burden may differ depending on the magnitude of industry risk and company-specific risk, as well as the timing of the risk materialization.

(2) Key Evaluation Items

In the case of business corporations, JCR focuses on cash flow generation capacity, earning power, safety, and liquidity. For financial corporations, the main focus is on earning power, capital adequacy, liquidity, and asset quality.

Analysis of financial statements and financial indicators is conducted with attention to the country and region where the company is located, laws and regulations, accounting systems, and characteristics of the industry and business type.

(i) Cash Flow Generation Capacity and Profitability

The ability to generate stable cash flow is necessary for a company to continue its business. The ability to generate sufficient cash flow as a result of investments such as capital investments and M&A is considered important in determining whether a company has the necessary funds to repay interest-bearing debt and reinvest, which is prerequisites for the continuation of its business.

In addition to the size of cash flow and profit and their stability, JCR analyzes the level of profitability relative to sales and assets.

Key financial indicators

(a) Scale

- EBITDA, Sales, Operating income

(b) Profitability

- EBITDA margin, Operating income margin, ROA

(ii) Safety and Capital Adequacy

Equity capital provides a risk buffer to absorb profit deterioration and impairment losses. Refinancing risk is more likely to materialize if equity capital is insufficient in relation to interest-bearing debt or risks held, or if interest-bearing debt is too large in relation to cash flow.

In the evaluation, JCR checks the size of equity capital and interest-bearing debt, capital structure, balance between interest-bearing debt/interest expense and cash flow/profit, and capital adequacy relative to risk.

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Hybrid securities that have the characteristics of both equity and debt are also considered in the analysis of financial statements and financial indicators.

Key financial indicators

(a) Scale

■ Equity capital, Interest-bearing debt

(b) Profitability

■ Equity ratio, (Net) debt-to-equity ratio

(c) Balance between interest-bearing debt/interest expense and cash flow/profit

■ (Net) debt to EBITDA ratio, interest coverage ratio

(d) Capital adequacy relative to risk

■ Regulatory capital ratio, adjusted capital ratio

(iii) Liquidity

Securing liquidity is important to provide for working capital and other needs. When cash flow from operations alone is not sufficient to repay debt, the company needs to secure repayment resources by decreasing liquidity on hand, selling assets, or raising funds from external sources such as financial institutions and capital markets. Refinancing risk is more likely to become apparent when the company is highly dependent on short-term financing or when large debt repayments are concentrated in a particular period of time. Since a lack of liquidity is a direct cause of default, the lower the rating, the more important it is to ensure liquidity.

In the evaluation, JCR also looks at the collateral margin and external financing capacity, such as commitment lines, in addition to the liquidity on hand, and confirms the size of the debt repayment source. Furthermore, JCR analyzes the stability of financing structure based on status of transactions with financial institutions, financing from the capital markets, balance between investments and financing, and dispersion of debt repayment dates.

Key financial indicators

(a) Scale

■ Liquidity on hand, Commitment lines

(b) Financing structure

■ Current ratio, Fixed ratio, Long-term/short-term financing ratio

(iv) Asset Quality

For a financial corporation that earns earnings primarily by taking credit risk and market risk (interest rate risk, price volatility risk, etc.), it is important to maintain sound asset quality while taking into account the balance between risk and return. Excessive risk-taking can result in large credit costs and losses on sales and valuation losses, which can decrease profit and eventually impair capital.

In the evaluation, JCR understands the characteristics of asset portfolio, such as composition and diversification of asset classes, regions, industries, and borrowers, and then checks the status of non-performing loans and forecast of credit costs for loans and other operating assets, as well as trends in realized

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and unrealized gains/losses on securities.

Key financial indicators

(a) Credit Risk

■ Non-performing loan ratio, credit cost ratio

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