

Japan Credit Rating Agency, Ltd. (JCR) announces the following credit rating.

JFE Holdings, Inc. (security code: 5411)

<Assignment>

Subordinated Loan: A

Rationale

<Issuer's Profile>

As one of Japan's two largest steelmaker groups, the JFE Group has strong technological capabilities and handles many high value-added products, centering on steel sheets. It has excellent customer bases in and outside Japan, and its strength lies in strong competitiveness underpinned by the efficient production system that is consolidated into two large-scale steelworks in eastern and western Japan.

Business profit (IFRS) for the fiscal year ending March 2023 (FY2022) is expected to drop 43.6% over the year to 235 billion yen, which however is largely attributable to the deterioration of inventory valuation differences. As regards cost increases due to a rise in the prices of raw materials and fuels and the yen's depreciation, a decline in profitability will likely be curbed by the revision of selling prices. Profits are expected to remain at a certain level in FY2023 and beyond. Demand for steel products is expected to turn around, especially for those for automotive applications, which, together with the effective revision of the production system, will probably help boost overall performance.

D/E ratio (after the equity content evaluation of hybrid instruments) as of December 31, 2022 was 0.9x, somewhat deteriorating from 0.8x at March 31, 2022. As a factor behind this, working capital requirements increased due to higher raw material and fuel prices and a weaker yen, adding to interest-bearing debt.

<Rationale for Rating on Loans>

The Subordinated Loan will be executed to refinance 200 billion yen out of the 300 billion yen subordinated loan taken out on March 19, 2018, for which early repayment will become possible in March 2023. JCR rated the Subordinated Loan at a level two notches below the long-term issuer rating for JFE Holdings, Inc. (the "Company").

In rating hybrid securities including subordinated loans, JCR looks at the following points: (i) the probability of deferral of interest or dividend payments in accordance with the deferral clause is usually higher than the probability of the Company's falling into default (probability of default); and (ii) the ranking of claims at the time of bankruptcy is subordinated to the ranking of ordinary debts, and as a result, the probability of recovery is lowered (subordination property).

Ranking of claims to the Subordinated Loan at the time of the Company's bankruptcy ranks *pari passu* with the first preferred stock and is subordinated to all debts (excluding the Subordinated Loan and the subordinated debts substantively ranking *pari passu* with the Subordinated Loan). Furthermore, an optional interest suspension clause is stipulated for the interest payments. JCR views that the probability of the actual suspension of the interest payments is low at the moment, taking into account, among others, the Company's financial conditions. JCR decided the notching from the long-term issuer rating in light of such subordination property and the deferral clause.

<Assessment of Equity Content of Loans and Rationale>

JCR determined the equity content of the Subordinated Loan to be at "medium" or "50" (against 100 of a stock).

JCR takes into account that "there is no obligation to redeem principal or no maturity," "there is no obligation to pay dividends" and "the ranking of claims at the time of bankruptcy is subordinated" when assessing the equity content of hybrid securities.

While the period to the repayment date is extremely long 60 years, early repayment is possible after a lapse of 7 years from the loan execution. In addition, early repayment, etc. as a result of occurrence of Tax Events or Rating Events owing to changes in the assessment of equity content by a credit rating agency are also possible. As for the interest rate, it is set to step up by 30 bps and 70 bps (100 bps in

total) after a lapse of 10 years and 27 years, respectively. While the Company has expressed its intention to issue replacement securities at the time of early repayment, given the financial requirements, etc. set forth in special exemptions that enable the Company to forgo the replacement, the replacement language is hardly effective. However, based on the interest rate step-up structure, the Company's discretion on early repayment will probably be materially constrained in effect when the interest rate steps up by 100 bps in total. JCR incorporates this into the assessment of the permanence of the principal.

In light of the above factors, JCR considers it unlikely that the Company will make an early repayment without replacement when its creditworthiness declines, which is incorporated into the assessment of the effective repayment obligation and maturity for the Subordinated Loan. This judgment reflects, along with other factors, that: (i) JCR, based on hearings from the Company, was able to ascertain the Company's future financial management policy including the position of the Subordinated Loan; (ii) the Company has been winning the confidence of investors and creditors by maintaining good relations with them in the financial market; and (iii) the Subordinated Loan itself is the replacement of the existing hybrid securities, and its equity content is higher than that of the subordinated loan to be replaced ("low" or "25" (against 100 of a stock)), which JCR thinks shows the Company's stance to focus on maintaining and strengthening the financial base with the replacement.

As for the interest, the fact that there is no clause for mandatory interest suspension weakens the similarity of the Subordinated Loan to common stock. However, the optional interest suspension clause provides a mechanism whereby the interest payments can be suspended in a stressful situation. JCR takes into consideration the mechanisms for maturity and interest suspension discussed above, as well as other factors including the ranking of claims to the Subordinated Loan at the time of bankruptcy being subordinated to the senior obligations of the Company.

After a lapse of 7 years from the loan execution, JCR will consider lowering the assessment of the equity content to "low" or "25" (against 100 of a stock) as the remaining period to the date when the interest rate steps up by 100 bps in total will be less than 20 years.

Masayoshi Mizukawa, Akihiro Kondo for Issuer
Kiichi Sugiura, Akira Minamisawa for Hybrid Securities

Rating

Issuer: JFE Holdings, Inc.

<Assignment>

Issue	Amount (bn)	Execution Date	Repayment Date	Interest Rate	Rating
Subordinated Loan	JPY 205	Mar. 20, 2023	Mar. 20, 2083	(Note)	A

Note: 3M JPY TIBOR + initial spread for the interest calculation periods from the Execution Date to March 2033. 3M JPY TIBOR + initial spread + 0.30% step-up interest rate for the interest calculation periods from March 2033 to March 2050. 3M JPY TIBOR + initial spread + 1.00% step-up interest rate for the interest calculation periods beginning in or after March 2050.

Early Repayment:	Repayment after a lapse of 7 years from the loan execution Repayment upon occurrence of Tax Events or Rating Events
Replacement:	There has been the representation of intention for replacement.
Optional Interest Suspension:	The Company may suspend interest payments at its discretion.
Mandatory Interest Suspension:	No provisions
Accumulation/Non-Accumulation:	Accumulation
Ranking of Claims:	The Subordinated Loan is subordinated to all debts (excluding the Subordinated Loan and the subordinated debts ranking pari passu with the Subordinated Loan) and ranks pari passu with the first preferred stock.

<Reference>

Long-term Issuer Rating: AA- Outlook: Stable

Rating Assignment Date: February 17, 2023

The assumptions for the credit ratings and the definitions of the rating symbols are published as "Types of Credit Ratings and Definitions of Rating Symbols" (January 6, 2014) in Information about JCR Ratings on JCR's website (<https://www.jcr.co.jp/en/>).

Outline of the rating methodology is shown as "JCR's Rating Methodology" (November 7, 2014), "Iron & Steel" (June 15, 2022), "Rating Viewpoints on Pure Holding Companies (Domestic Industrial Corporations)" (July 1, 2003), "Rating Methodology for a Holding Company" (January 26, 2015), "Ratings of Hybrid Securities" (September 10, 2012) and "Rating Methodology for Assessment of Hybrid Securities' Equity Content" (December 1, 2022) in Information about JCR Ratings on JCR's website (<https://www.jcr.co.jp/en/>).

The rating stakeholder participated in the rating process of the aforementioned credit ratings.



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JCR publishes its press releases regarding the rating actions both in Japanese and in English on the same day. In case that it takes time to translate rating rationale, JCR may publicize the summary version, which will be replaced by the full translated version within three business days. (Regarding Structured Finance products, JCR only publicize the summary version in English.)



INFORMATION DISCLOSURE FORM

Japan Credit Rating Agency, Ltd.

Disclosure Required by Paragraph (a)(1)(ii) of Rule 17g-7

Issuer:	JFE Holdings Inc.
Rating Publication Date:	February 17, 2023

1 The Symbol, Number, or Score in the Rating Scale used to Denote Credit Rating Categories and Notches and, the Identity of the Obligor or the Identity and a Description of the Security or Money Market Instrument as Required by Paragraph (a)(1)(ii)(A) of Rule 17g-7

- Please see the news release. If the credit rating is a private rating, please see the report for private rating.

2 The version of the procedure or methodology used to determine the credit rating; as Required by Paragraph (a)(1)(ii)(B) of Rule 17g-7

- Please see the news release. If the credit rating is a private rating, please see the report for private rating.

3 The Main Assumptions and Principles used in Constructing the Procedures and Methodologies used to Determine the Credit Rating as Required by Paragraph (a)(1)(ii)(C) of Rule 17g-7

- The credit rating methodology assumes, in principle, to be applied to assess the likelihood of a given debt payment in light of its issuer's condition and business environment, etc. in the relevant future. There is certain limitation, however, in the time horizon that the rating foresees.
- The credit rating methodology assumes, in principle, that the factors posted in the below are particularly important for such likelihood to be determined, and that the rating determination is made by evaluating each of them not only quantitatively but also employing qualitative analyses.

A) Business Bases

The likelihood of a given debt payment is highly conditional to its issuer's business bases - how they can be maintained/ expanded into the future and thereby secure earnings and cash flows in adequacy and in a sustainable way.

B) Financial Grounds and Asset Quality

The likelihood of debt payment is highly dependent on the degree of the issuer's indebtedness and loss absorption capacity in terms of equity capital. Also notable is that a financial institution might see a significant loss of financial grounds as a result of changes in value of the assets under its possession.

C) Liquidity Positions

The likelihood of debt payment is highly dependent on the adequacy of the issuer's cash and other sources of repayment (liquidity positions).

D) Related Parties' Status and Stance of Support/ Assistance for the Issuer

The likelihood of debt payment is affected one way or the other by the issuer's related parties such as parent company, subsidiary, guarantor, and the government of the issuer's business domicile, etc. - by their own conditions and/ or position of support/ assistance for the issuer.

E) Order of Seniority in Debt Payment

The likelihood of debt payment can be different between given debts of the same issuer. The likelihood of debt payment for an individual debt is dependent on the issuer's discretion, and/ or its rank relative to other debts of the same issuer in the order of seniority in principal/ interest payment which is determined by design as financial product or by laws, etc.

4 The Potential Limitations of the Credit Rating as Required by Paragraph (a)(1)(ii)(D) of Rule 17g-7

- The credit rating herewith presented by JCR is its summary opinion with regard to the likelihood of given debt payment and hence not necessarily a perfect representation of such likelihood. The credit rating is not intended to estimate the probability of default or the loss on given default, either.
- The objective of the credit rating herewith presented does not include any concerns other than the likelihood of debt payment, such as risks of price changes, market liquidity, etc.
- The credit rating herewith presented is necessary to be reviewed along with possible changes of the issuer of rated objects in its business performance and/ or circumstances which include regulatory environment, and hence subject to possible alteration.

5 Information on the Uncertainty of the Credit Rating as Required by Paragraph (a)(1)(ii)(E) of Rule 17g-7

- The information used for the determination of credit rating as herewith presented is obtained by JCR from the issuer of rated objects and other sources that JCR trusts in terms of accuracy and reliability but possibly contains errors due to human, non-human or other causes. Consequently, the credit rating determined on the grounds of such information does not constitute, explicitly or implicitly, any representation or warrant of JCR on the information itself or any consequences of its use in terms of accuracy, relevance, timeliness, wholeness, market value, or usefulness for any specific purposes.

6 Use of Due Diligence Services of a Third Party in Taking the Rating Action as Required by Paragraph (a)(1)(ii)(F) of Rule 17g-7

- There is no use of any third-party due diligence service in the determination of the credit rating herewith presented.

7 Use of Servicer or Remittance Reports to Conduct Surveillance of the Credit Rating Required by Paragraph (a)(1)(ii)(G) of Rule 17g-7

- There is no use of any servicer or remittance report to conduct surveillance of the credit rating herewith presented.

8 The Types of Data Relied Upon for the Purpose of Determining the Credit Rating as Required by Paragraph (a)(1)(ii)(H) of Rule 17g-7

- The information posted in the below, which includes data, is used for the determination of the credit rating herewith presented.

- A) Audited financial statements presented by the rating stakeholders
- B) Explanations of business performance, management plans, etc. presented by the rating stakeholders
- C) Documentation of the rated financial product presented by the rating stakeholders

9 Overall assessment of the Quality of Information Available and Considered in Determining the Credit Rating as Required by Paragraph (a)(1)(ii)(I) of Rule 17g-7

- JCR holds its basic policies for securing the quality of information as a base of due diligence for the determination of credit ratings. The information used as a base for the determination of credit rating herewith presented satisfies such policies, which include the audit by an independent auditor, the warranty made by the issuer, the publication by the issuer, some independent media or, otherwise, JCR analyst's scrutiny, etc.
- JCR sees no particular weakness in the quality of information used for the determination of the credit rating herewith presented as compared to the information used in other cases of the credit rating for comparable issuers or ratable objects.
- If the credit rating is an Indication, please see the report for Indication.

10 Information Relating to Conflicts of Interest as Required by Paragraph (a)(1)(ii)(J) of Rule 17g-7

- JCR receives payment of compensation for the determination of the credit rating herewith presented from either one of those parties who are issuer, underwriter, depositor or sponsor.
- JCR received in the last fiscal year in the past payment of compensation from the same party for any kind of JCR's service other than the determination of public or private credit rating, such as one in the ancillary business.

11 Explanation or Measure of the Potential Volatility of the Credit Rating as Required by Paragraph (a)(1)(ii)(K) of Rule 17g-7

A) Business Bases

The credit rating is subject to alteration if there is improvement or deterioration of the issuer's business bases, since its revenue, etc. may improve or deteriorate by the change in its business management policies, clients' preferences, competitive situation, or a technological innovation. The resultant alteration of the credit rating is usually by a notch, with possibility of a few notches if and when the change in the business bases is large.

B) Financial Grounds and Asset Quality

The credit rating is subject to alteration if the issuer increases/ decreases its debt/ capital or vice versa and thereby makes its individual debt payment liability less or more bearable and its loss absorption capacity into the future decreased or increased. Also, the changes in the quality of asset under the issuer's holding may affect the credit rating, since such changes could raise or lower the likelihood of future loss of the issuer's financial grounds. The resultant alteration of the credit rating is usually by a notch, with possibility of a few notches if and when the change in the financial grounds and/ or asset quality is large.

C) Liquidity Positions

The credit rating is subject to alteration if there is a change in the issuer's financial management policy or in the relations with fund procurement sources and the change thereby makes its liquidity

positions improve or deteriorate. The resultant alteration of the credit rating is usually by a notch, with possibility of a few notches if and when the change is large.

D) Related Parties' Status and Stance of Support/ Assistance for the Issuer

The credit rating is subject to alteration if there is a change in the issuer's parent company or subsidiary, guarantor or other provider of credit enhancement, or the government of the issuer's business domicile, or other related parties' own conditions and/ or position of support/ assistance for the issuer, and the change thereby makes its business bases, financial grounds and/ or liquidity positions improve or deteriorate, and/ or making the effectiveness of guarantee and other credit enhancement improve or deteriorate. The resultant alteration of the credit rating is usually a notch, with possibility of a few notches if and when the change is large.

E) Order of Seniority in Debt Payment and Non-Payment Forgiven by Contract

The credit rating is subject to alteration if there is a change in the rated debt's status in the order of seniority relative to other debts caused by the improvement/ deterioration of the issuer's financial condition. The resultant alteration of the credit rating is usually a notch, with possibility of a few notches if and when the change is large. Also, in case of the financial products for which non-payment of interest/ principal is contractually permissible, the credit rating is subject to alteration if and when the likelihood of such non-payment is projected to increase or decrease. The resultant alteration of the credit rating could be by a notch but often as much as a few notches.

F) Rise and Fall in General Economy and Markets

The credit rating is subject to alteration if there is a rise/ fall in the general economy and/ or the markets inducing the issuer's revenues/ expenses to increase/ decrease and vice versa, etc. The resultant alteration of the credit rating is usually by a notch, with possibility of a few notches if and when the change is exceptionally large.

G) Various Events

The credit rating is subject to alteration on occurrence of various events, such as change in the issuer's major shareholders, M&A and other organizational change, accident, violation of the law, litigation, legal/ regulatory change, natural disaster, etc., which are unforeseeable at the time when the credit rating is determined, causing a significant change on the issuer's business bases, financial grounds, etc. The resultant alteration of the credit rating could be by a notch but more often than not as much as a few notches.

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Information on the Content of the Credit Rating, Including the Historical Performance of the Credit Rating and the Expected Probability of Default and the Expected Loss in the Event of Default as Required by Paragraph (a)(1)(ii)(L) of Rule 17g-7

- The credit rating herewith presented by JCR is its summary opinion with regard to the likelihood of given debt payment and hence not necessarily a perfect representation of such likelihood. The credit rating is not intended to estimate the probability of default or the loss on given default, either.
- Facts of the probability of default are posted as Form NRSRO Exhibit 1 on the JCR website under the URL:

<https://www.jcr.co.jp/en/service/company/regu/nrsro/>

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Information on the Sensitivity of the Credit Rating to Assumptions Made as Required by Paragraph (a)(1)(ii)(M) of Rule 17g-7

A) Business Bases

The credit rating herewith presented could be changed if and when the assumptions made at the time of its determination turn out to be inaccurate with regard to the issuer's business bases and powers of earning or cash flow generation, etc. The resultant change of the credit rating is most likely by a notch, as JCR speculates, but possibly as much as a few notches if the development is rapid in improvement or deterioration of the issuer's business bases on some drastic change in the operational environments, etc.

B) Financial Grounds and Asset Quality

The credit rating herewith presented could be changed if and when the assumptions made at the time of its determination turn out to be inaccurate with regard to the issuer's financial grounds and asset quality. The resultant change of the credit rating is most likely by a notch, as JCR speculates, but possibly as much as a few notches if the development is rapid in improvement or deterioration of the issuer's financial grounds and/ or asset quality on some drastic change in its business bases.

C) Liquidity Risks

The credit rating herewith presented could be changed if and when the assumptions made at the time of its determination turn out to be inaccurate with regard to the issuer's liquidity positions. The resultant change of the credit rating is most likely by a notch, as JCR speculates, but possibly as much as a few notches if the development is rapid in improvement or deterioration of the issuer's liquidity positions on some drastic change in its financial management policy or relations with fund procurement sources, etc.

D) Order of Seniority in Debt Payment and Non-Payment Forgiven by Contract

The credit rating herewith presented could be changed if and when the assumptions made at the time of its determination turn out to be inaccurate with regard to the order of seniority in repayment of interests and principal. JCR assumes the resultant change of the credit rating is most likely by a notch. The change could be as much as a few notches if the issuer's financial structure differs so much and thereby the balance between debts shifted so greatly. Rating change is also possible in case of the financial products for which non-payment of interest/ principal is contractually permissible, if and when the assumptions made at the time of its determination turns out to be inaccurate. The change of the credit rating is assumed to be by a notch but often as much as a few notches.

E) Rise and Fall in General Economy and Markets

The credit rating herewith presented could be changed if and when the assumptions made at the time of its determination turn out to be inaccurate with regard to the prospects of general economy and markets. JCR expects the change should be most likely by a notch but could be as much as a few notches, should the economy or the markets change so greatly.

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Information on the Representations, Warranties, and Enforcement Mechanisms of an Asset-backed Security as Required by Paragraph (a)(1)(ii)(N) of rule 17g-7

- The credit rating herewith presented is not for an ABS product, and hence no relevant issue.

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Attestation Required by Paragraph (a)(1)(iii) of Rule 17g-7

I, Shigenobu Tonomura, have responsibility to this Rating Action and to the best of my knowledge:

- A) No part of the credit rating was influenced by any other business activities.
- B) The credit rating was based solely upon the merits of the obligor, security, or money market instrument being rated.
- C) The credit rating was an independent evaluation of the credit risk of the obligor, security, or money market instrument.

殿村 成信

Shigenobu Tonomura

General Manager of Corporate Rating Department II

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