

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

Federal Republic of Germany

<Affirmation>

Foreign Currency Long-term Issuer Rating:	AAA
Outlook:	Stable
Local Currency Long-term Issuer Rating:	AAA
Outlook:	Stable

Rationale

- (1) The ratings reflect the country's diversified and highly developed economic base, solid resilience to external shocks, the track record of prudent fiscal management and its leading position in the EU and the euro area. The economy is in the process of adapting to higher energy prices and a tighter financing conditions due to, among other things, Russian gas supply disruptions. Despite the downward pressure on the economy in this environment, German industry has shown resilience to rising production costs, both capital investment and exports are beginning to recover. Looking ahead, the tight labor market is expected to support real wage growth, and private consumption will also underpin economic growth. Public finances are improving as revenues grow amid lower-than-expected government support measures. The budget deficit is expected to be kept in control and the government debt/GDP ratio will continue gradually declining. Based on the above, JCR has affirmed the ratings and kept their outlook Stable.
- (2) Germany has a highly developed economic base, with the world's fourth largest nominal GDP. Its per capita GDP exceeds USD55,000 in PPP terms. Productivity and industrial competitiveness have been strengthened through constant structural reforms. The country has massive net external assets, backed by persistently large trade and current account surpluses, and stays solidly resilient to external shocks. Unemployment rate fell to a historically low level and labor force availability remains a challenge. Although supply-side constraints caused by the COVID-19 pandemic and the energy crisis have been easing, the real GDP growth rate is prospected to fall to near 0% in 2023 on the impact of monetary tightening by the European Central Bank (ECB) under persistent inflation. Looking ahead, however, JCR expects that GDP growth to recover to the mid-1% range in 2024, as solid employment conditions are expected to support higher real wages and growth in private consumption, while capital investment to improve energy efficiency will also advance. The banking sector has been stepping up restructuring and reinforced its capital base in the low-profit environment since the global financial crisis. The stability of the financial system is expected to be maintained even amid the continuation of the monetary tightening by the ECB.
- (3) Germany has historically pursued a prudent fiscal management. The fiscal deterioration caused by the pandemic was only temporary, with the budget deficit and government debt recovering to 2.6% and 66.3% of GDP, respectively, in 2022 from the peak 4.3% in 2020 and 69.3% in 2021. The government is currently working to avoid the constraints of the Debt Brake Rules by utilizing special funds to strengthen defense capabilities and mitigate the impact of rising energy prices. While revenues will continue to rise in 2023 amid persistent inflation, spending on government support measures such as capping energy prices will likely be lower than planned. JCR expects the budget deficit/GDP ratio to remain between 2-3% and the government debt/GDP ratio to trend gradually downward in the mid-60% range through 2024.

Atsushi Masuda, Sakura Yamamoto

Rating

Issuer: Federal Republic of Germany

<Affirmation>

Foreign Currency Long-term Issuer Rating:	AAA	Outlook:	Stable
Local Currency Long-term Issuer Rating :	AAA	Outlook:	Stable

Rating Assignment Date: August 1, 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 "Sovereign and Public Sector Entities" (October 1, 2021) in Information about JCR Ratings on JCR's website (<https://www.jcr.co.jp/en/>).

The aforementioned credit ratings are unsolicited. Except in cases of a credit rating for a sovereign, JCR indicates affix "p" after a rating symbol to distinguish it from a rating with solicitation. The undisclosed information, which has material influence on the credit rating, was not obtained from the rating stakeholder.

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:	Federal Republic of Germany
Rating Publication Date:	August 3, 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) Economic Base

The likelihood of a given debt payment is highly conditional to the issuing government's ability to maintain/expand the economic base into the future with maintaining soundness of financial systems.

B) Fiscal Base

The likelihood of a given debt payment is highly correlated to fiscal balance, public debt and other factors of the issuing government's fiscal condition.

C) External Positions

The likelihood of a given debt payment is highly correlated to the liquidity positions which change along with the international balance of payments and the international investment position.

D) Social and Political Bases and Economic Policy

The likelihood of a given debt payment is highly conditional to the social and political stability, effectiveness of economic and monetary policies as well as international economics.

E) Related Parties' Stance of Support/ Assistance for the Government

The likelihood of a given debt payment is affected by the stance of the credit enhancement provider and other related parties with regard to their stance of support/ assistance for the issuing government.

F) 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 issuing government's will, and/ or its rank relative to other debts of the same government in the order of seniority in principal/ interest payment which is determined by design as financial product or by international practice, 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) Informational and explanatory materials published by the rating stakeholders with regard to the economy and fiscal management policy, etc. of the issuing government
 - B) Statistics and reports published by an independent organization with regard to the economy and fiscal status, etc. of the issuing government

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 publication by the issuer, some independent media, 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 does not receive 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 did not receive 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) Economic Base

The credit rating is subject to alteration if there is an improvement or deterioration of the issuer's economy or financial systems, 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 large.

B) Fiscal Base

The credit rating is subject to alteration if the issuer increases/ decreases its fiscal deficit/ surplus and its public debt and thereby makes given debt payment liability less/ more bearable. 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.

C) External Positions

The credit rating is subject to alteration if there is a change in the issuer's international balance of payments and international investment position and thereby an improvement/ deterioration of its liquidity positions. 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) Social and Political Bases and Economic Policy

The credit rating is subject to alteration if there is a change in the issuer's social and political conditions or economic/ monetary policies, etc. and thereby an improvement/ deterioration of its economy and fiscal positions. 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.

E) Related Parties' Stance of Support/ Assistance for the Issuer

The credit rating is subject to alteration if there is a change in the credit enhancement provider or other related parties with regard to their stance of support/ assistance for the issuing government and thereby an improvement/ deterioration of its economy, fiscal positions and liquidity positions. The resultant alteration of the credit rating is usually a notch, with possibility of a few notches if and when the change is large.

F) Order of Seniority in Debt Payment

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, due to improvement/ deterioration of the issuer's fiscal condition and/or will. The resultant alteration of the credit rating is usually a notch, with possibility of a few notches if and when the change is large.

G) International Economies

The credit rating is subject to alteration if there is a change in the international economies, commodity or foreign exchange markets, etc. and thereby, through international balance of payments, an improvement/ deterioration in the issuer's fiscal balance or debt payment capacity. 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.

H) Various Events

The credit rating is subject to alteration on occurrence of various events, such as domestic unrest, war, natural disaster, etc. which are unforeseeable at the time when the credit rating is determined, causing a significant change on the issuer's economy, fiscal positions, 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

- Historical records of the credit rating herewith presented are posted in the end of this paper.
- 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) Economic Base

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 economy or financial systems, 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 economy or financial systems on some drastic change in environments, etc.

B) Fiscal Base

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 fiscal conditions in terms of annual balance or public debt. 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 fiscal condition on some drastic change in its economy.

C) External Positions

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 reflecting improvement or deterioration of the international balance of payments and the international investment position. 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 the country's economic/ fiscal conditions and financing activities, etc.

D) Social and Political Bases and Economic Policies

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 social and political bases and economic/ monetary policies. 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 country's situation changes drastically, making the issuer's social and political bases and economic/monetary policies significantly improved or deteriorated.

E) International Economics

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 the international economies or commodity/ foreign exchange markets, etc. 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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The Historical Performance of the Credit Rating

Issuer Name	Issue Name	Publication Date	Rating	Outlook/Direction
Federal Republic of Germany	Issuer(Long-term)(FC)	November 1, 2000	AAA	
Federal Republic of Germany	Issuer(Long-term)(FC)	April 15, 2002	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(FC)	June 13, 2002	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(FC)	July 16, 2003	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(FC)	May 20, 2004	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(FC)	June 17, 2005	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(FC)	August 28, 2006	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(FC)	August 13, 2007	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(FC)	September 18, 2008	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(FC)	October 14, 2009	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(FC)	December 20, 2010	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(FC)	January 18, 2012	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(FC)	February 28, 2013	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(FC)	April 21, 2014	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(FC)	May 20, 2015	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(FC)	October 19, 2016	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(FC)	March 19, 2018	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(FC)	August 23, 2019	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(FC)	December 8, 2020	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(FC)	May 16, 2022	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(LC)	November 1, 2000	AAA	
Federal Republic of Germany	Issuer(Long-term)(LC)	April 15, 2002	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(LC)	June 13, 2002	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(LC)	July 16, 2003	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(LC)	May 20, 2004	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(LC)	June 17, 2005	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(LC)	August 28, 2006	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(LC)	August 13, 2007	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(LC)	September 18, 2008	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(LC)	October 14, 2009	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(LC)	December 20, 2010	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(LC)	January 18, 2012	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(LC)	February 28, 2013	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(LC)	April 21, 2014	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(LC)	May 20, 2015	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(LC)	October 19, 2016	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(LC)	March 19, 2018	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(LC)	August 23, 2019	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(LC)	December 8, 2020	AAA	Stable
Federal Republic of Germany	Issuer(Long-term)(LC)	May 16, 2022	AAA	Stable

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

I, Kiichi Sugiura, 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.

杉浦 輝一

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