# Creditreform Corporate Issuer / Issue Rating

Nokia Oyj

Creditreform Rating

18 December 2023 – Neuss, Germany

## Rating Action / Update:

## Creditreform Rating has affirmed the unsolicited corporate issuer rating of Nokia Oyj at BB+ / positive

Creditreform Rating (CRA) has affirmed the unsolicited, public corporate issuer rating of Nokia Oyj – hereafter referred as Nokia, the Company or the Group –, as well as the unsolicited corporate issue rating of long-term local currency senior unsecured notes issued by Nokia Oyj at BB+ / positive. The initial unsolicited short-term rating was set to L3 (exceptional mapping). We also refer to our rating report of 12 May 2023, which contains further material information regarding the rating objects.


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## Current relevant factors for the rating

The following considerations were of specific relevance for the rating assessment:

+ Strong operating performance in 2022 as result of a leaner cost base and favorable product mix; growth supported by every business group
+ Despite significant declines in sales and results in 9M 2023, we still see sustainable improved credit profile as result of Nokia's strategic measures in recent years
+ Based on Nokia's outlook, we expect dampened—but still solid—business performance for 2023; Nokia assumes Network business and adverse Working Capital effects will begin to normalize in the fourth quarter of 2023
+ Strong liquidity position, despite strong cash outflows due to negative free cash flow, payout of dividends, and share buyback program
+ Launch of a new strategic program to achieve greater efficiency in its operating model and its cost structure, with the aim of securing profitability under challenging market conditions

- Net sales and profit declines in 9M 2023, particularly in Q3 2023 as a result of lower operator spending and inventory digestion
- Adverse working capital effects generated a negative free cash flow in 9M 2023
- Ongoing competitive pressure and general uncertainties in global markets, reinforced by geopolitical tensions

**ESG-criteria:**

**ESG factors** are factors related to en-

**ESG factors** are factors related to environment, social issues and, governance. For more information, please see the section "Regulatory requirements". CRA generally takes ESG relevant factors into account when assessing the rating object and discloses them when they have a significant influence on the creditworthiness of the rating object, leading to a change in the rating result or the outlook.

CRA generally considers ESG factors (environment, social and governance) within its rating decisions. In the case of Nokia Oyj we have not identified any ESG factor with significant influence.

During 2020, Nokia launched their new sustainability strategic approach, which focuses on areas that Nokia believes will have the greatest impact on sustainable development and on its business. In March 2021 Nokia updated its science-based targets, and now plans to reduce greenhouse gas emissions (scope 1, 2, and 3) by 50% between 2019 and 2030. In 2022, the Company launched a new ESG strategy to make ESG a driver of value creation, including more efficient and sustainable digital solutions, and by using 100% renewable electricity in its facilities by 2025. These goals are currently not on track, as the emissions covered by Nokia's Science Based Target were 13% above their cumulative carbon budget for 2020-2022, but assuming a linear reduction in $CO_2$ from 2019. Nevertheless, Nokia still believes they will be able to achieve their targets by 2030, as the Company expects a greater impact in the coming years as a result of greater efficiency, the use of renewable sources, and decarbonization of the electricity grid globally. In 2022, roughly 95% of Nokia's greenhouse gas emissions stemmed from the use of its products by customers and not from the Company itself.

Nokia promotes gender and age diversity. As of 2022, 17% of Nokia's leadership positions were held by women, with 40% in the Nokia Board of Directors. Nokia continues to monitor pay equity annually and funds special remediation increases to ensure that the previous unexplained pay gap, which was closed in 2019, remains closed.

Nokia has variable remuneration schemes for its executive directors which are linked to the strategic plan of the Group. Under the short- and long-term incentives in 2022, the incentive plans also depend partly on Nokia delivering on its promises to reduce carbon emissions and become a more diverse employer, displaying a well-anchoered and improving ESG culture.

A general valid description of Creditreform Rating AG, as well as a valid description of corporate ratings for understanding and assessing ESG factors in the context of the credit rating process, can be found here.

## Rating result

The unsolicited corporate issuer rating of BB+ attests Nokia Oyj with a satisfactory level of creditworthiness. The main positive factors contributing to the rating are the Group's strong market position, geographical diversification, and its improved operating performance and balance sheet over recent years, in particular for 2022. The improvement in the Group's operating performance was driven by positive dynamics in all its segments, in particular in its network business, but was also as a result of improved margins due to a leaner cost structure after the concluded cost savings program, as well as the reduction in restructuring and the associated charges. In addition, the Company has a strong liquidity position and good access to capital markets. These factors are partially offset by Nokia's current performance in 2023, showing a dependence on macroeconomic development, and an ongoing need for high research and development (R&D) investment, along with the fast pace of development and intense competition in the market.

## Outlook

The one-year outlook for the rating ramains positive. We see a sustainably improved credit profile, reflected in the positive outlook, despite Nokia's weaker operating performance during the first nine months of 2023. At the current stage, we contemplate the downturn in Nokia's performance as temporary and based on Nokia´s future-proofed business model, and its new cost saving program we assume the development will start to recover during 2024. The Company's current credit profile puts upgrade pressure on the unsolicited corporate issuer rating; nevertheless, we still see certain risks in regard of the market uncertainties in connection with economic development amid geopolitical tensions and the still remaining inflationary pressure, which dampens an upgrade at the current stage.

Please note:

The scenarios are based on information available at the time of the rating. Within the forecast horizon, circumstances may occur that could lead to a change of the rating out of the indicated range.

### Best-case scenario: BBB-

In our best-case scenario for one year, we assume a rating of BBB-. This is based on the scenario that Nokia's credit metrics of 2023, despite a certain decline in operating performance, show a solid credit profile. Despite ongoing challenging market conditions during 2024, operating performance and cash flow generation show a turnaround, largely in the form of recovering Network business and stabilized working capital. In this scenario, we do not expect significant effects from an economic slowdown or other adverse economic disruptions driven by geopolitical tensions in the near to medium term. At the current stage, we regard this scenario to be most likely.

### Worst-case scenario: BB+

In our worst-case scenario for one year, we assume a rating of BB+. This could be the case if the economic situation worsens, resulting in a further fall in demand, in combination with increased R&D expenditure and ongoing cash outflows in relation to its restructuring charges and increasing dividend payments. Worsening performance with ongoing adverse working capital changes also could havea negative impact on Nokia's capital structure and reduces its financial headroom without prospects of a recovery in near-term.

## Business development and outlook

In 2022 Nokia recorded revenue of EUR 24,911 million (2021: EUR 22,202 million), analytical EBIT[1] of EUR 2,387 million (2021: EUR 2,089 million) and EAT of EUR 4,259 million (2021: EUR 1,645 million).

[1] Structured by CRA. The reported EBIT in 2022 amounted to EUR 2,318 million (2021: EUR 2,158 million)

Table 1: Financials of Nokia Oyj I Source: Nokia Oyj Annual report 2022, standardized by CRA

| **Nokia Oyj**<br>**Selected key figures of the financial statement analysis**<br>**Basis: Annual accounts and report of 31.12. (IFRS, Group)** | **CRA standardized figures[2]** | |
|---|---|---|
| | **2021** | **2022** |
| Net sales (million EUR) | 22,202 | 24,911 |
| EBITDA (million EUR) | 3,184 | 3,527 |
| EBIT (million EUR) | 2,089 | 2,387 |
| EAT (million EUR) | 1,645 | 4,259 |
| EAT after transfer (million EUR) | 1,623 | 4,250 |
| Total assets (million EUR) | 36,085 | 35,341 |
| Equity ratio (%) | 26,43 | 29,04 |
| Capital lock-up period (days) | 60,48 | 69,30 |
| Short-term capital lock-up (%) | 20,42 | 19,22 |
| Net total debt / EBITDA adj. (factor) | 5,65 | 4,53 |
| Ratio of interest expenses to total debt (%) | 0,84 | 0,85 |
| Return on Investment (%) | 5,06 | 12,41 |

Nokia recorded strong growth on every result level (see Table 2). The Group's revenues increased by 12.2% compared to 2021, despite supply chain disruptions and supply constraints in the wake of further COVID-19 related lockdowns, in particular in China. Growth was driven by all of its operating business groups, but primarily by its Network Infrastructure and Mobile Networks business groups. Positive foreign exchange effects also contributed to growth, making up 6%. The strongest geographical revenue contributors were Europe and North America, together accounting for a revenue share of 60.4%. The strongest growth drivers in geographical terms were India and Latin America, both showing growth by 24% compared to 2021. Operating performance improved by 14.3% largely as a result of the Company's product mix, a renewed leaner cost base, as well as lower restructuring and associated charges, more than offsetting adverse one-offs, such as costs related to the Company's exit from the Russian market. Despite cost inflation, gross profit margin and analytical EBIT margin improved slightly, up to 41.0% (2021: 39.8%) and 9.6% (2021: 9.4%), respectively, attesting to the success of Nokia's cost optimization measures. Net earnings nearly doubled, benefiting from the recognition of Finnish deferred tax assets of EUR 2.5 billion[3]. Excluding deferred tax effects, net income would still display a strong gain, up by 19.8% compared to the previous year with an improved adjusted net profit margin of 7.2% (2021: 6.8%).[4]

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[2] For analytical purposes, CRA adjusted the original values in the financial statements in the context of its financial ratio analysis. For example, when calculating the analytical equity ratio, deferred tax assets, goodwill (entirely or partly), and internally-generated intangible assets are subtracted from the original equity, whilst deferred tax liabilities are added. Net total debt takes all balance sheet liabilities into account. Therefore, the key financial figures shown often deviate from the original values of the company.

[3] In 2020 Nokia's net income was negatively impacted by the derecognition of deferred tax assets of nearly EUR 3 billion. This derecognition was required by accounting regulations and could be reversed in the future as has now happened. In 2022, Nokia concluded, based on its assessment, as probable the possibility to utilize the unused tax losses and deductible temporary differences in Finland and re-recognized deferred tax assets in a amount of EUR 2.5 billion in the consolidated statement of financial position.

[4] The adjusted net income amounts EUR 1,807 million (2021: EUR 1,508 million).

Table 2: The development of business of Nokia Oyj in 2022 I Source: Annual Report 2022, by CRA structured information

| Nokia Oyj | | | | |
|---|---|---|---|---|
| In million EUR | 2022 | 2023 | Δ | Δ % |
| Net sales | 22,202 | 24,911 | 2,709 | 12.2% |
| EBIT | 2,089 | 2,387 | 298 | 14.3% |
| EAT | 1,645 | 4,259 | 2,614 | >100% |

Despite stronger operating performance, Nokia's cash flow from operating activities was significantly dampened as compared to 2021, amounting to EUR 1,474 million (2021: EUR 2,625 million), thus down by 43.8%. The decline was related to a negative working capital change of EUR 1.8 billion, largely as a result of higher inventories and receivables. The reported free cash flow (deducting net capex) remained positive, amounting EUR 906 million (2021: EUR 2,168 million). Deducting net cash flows from investing and financing activities, the Company recorded a negative cash outflow of EUR 1.2 million (2021: - EUR 249 million), largely in connection with net interest-bearing financial investment of EUR 1.2 billion. Current interest-bearing financial investments increased by EUR 503 million compared to 2021, which we consider as liquidity. In addition, cash flow was mitigated by Nokia's dividend payout (EUR 353 million) and a share buyback (EUR 300 million) in connection with its stock repurchase program of up to EUR 600 million in total over a period of 2 years, beginning in 2022 and completed at the end of 2023. However, we see the dividend payout as appropriate, as the payout ratio amounted to 21.5, considering net income of 2021 in relation to the dividend payout in 2022. Overall, in 2022 we saw a significant improvement in Nokia's operating performance, marked by growth and further strengthening its balance sheet.

Nevertheless, Nokia's growth trend did not continue in 2023, as in the first nine months of 2023 business development was impacted by the current macroeconomic conditions. The Company suffered a decline in revenue and results. Reported revenue dropped by 5.2%, amounting to EUR 16,551 million (9M 2021: EUR 17,462 million). The decline was the result of foreign currency effects (3%), as well as of lower operator spending and customer inventory digestion. The decline in demand was most pronounced in the third quarter. During Q3 2023 all business groups recorded double digit declines in net sales, except Cloud and Network Service, which only decreased on a reported base by 7.4% YOY. Mobile Networks was mostly affected, showing a decrease of 24.3% compared to Q3 2022. Geographically, North America, which is Nokia's second largest market after Europe, making up 25.2% of the total Group's sales in 9M 2023 (9M 2022: 36.2%), showed the strongest decline, down by 33.3% compared to 9M 2022, primarily affecting Nokia's Network business. India had strong momentum due to its 5G deployment; in 9M 2023, the Indian market made up 14.9% of the Group's total net sales (9M 2021: 4.1%) and showed an increase of 3.4 times compared to 9M 2022.

Although the operating result declined, it nevertheless remained at a solid level. Reported operating profit decreased to EUR 1,141 million in 9M 2023 (9M 2022: EUR 1,436 million), down by 20.5% compared to 9M 2022, largely as a result of lower demand and the impact of inflation. Excluding special items such as restructuring charges and impairments, the adjusted operating profit showed a decrease of 21.8% as reported profit benefited from lower restructuring charges than in 9M 2022. Despite the decline, Nokia's reported and adjusted operating margin (reported base: 9M 2023: 6.9% vs. 9M 2022: 8.22% and adj. base 9M 2023: 9.2 % vs. 9M 2022: 11.2%) still displays a sustainable improvement compared to 2019 (reported base 9M 2019: -1.9% and adj.

base: 5.3%). The present mid-term improvement is thanks to its streamlining measures on its operating model, including substantial cost savings in connection with sharp staff cuts and a more favorable product mix.

Table 3: The development of business of Nokia Oyj in 9M 2023 I Source: Interim Report for Q3 2023, reported information

| Nokia Oyj | | | | |
|---|---|---|---|---|
| In million EUR | 9M 2022 | 9M 2023 | Δ | Δ % |
| Net Sales | 17,462 | 16,551 | -911 | 5.2% |
| EBIT | 1,436 | 1,141 | -295 | 21.8% |
| EAT | 1,107 | 711 | -396 | 35.8% |

The Group's liquidity position was also dampened by current market circumstances, but still strong. Liquidity including short-term interest-bearing financial investments amounted to EUR 6.3 billion (31.12: EUR 8.5 billion), down by 25.9%, compared to year-end 2022, nevertheless allowing comfortable financial headroom covering current financial debt (including short-term lease liabilities) 7.6 times. The reduction in cash was largely due to adverse working capital effects increasing cash outflows. According to the Company, the negative working capital effects were primarily related to elevated inventories in the wake of supply shortages, as well as higher receivables due to the Company's India business and overdue issues. CRA's calculated free cash flow was negative, amounting to - EUR 913 million (9M 2022: EUR 534 million). In Nokia's Progress Update on 12 December 2023, the Company mentioned that these effects will begin to ease in the fourth quarter of 2023, and it targets will maintain normal working capital levels in future, with the aim of securing cash resources for R&D investments to reinforce its market position in telecommunications technology.

It remains to be seen whether operator spending will recover, as long as macroeconomic uncertainty persists. However, the Company expects a more normal seasonal improvement in its Network business for the fourth quarter of 2023. In addition, Nokia expects to resolve outstanding renewals, which have an impact on Nokia Technologies. Based on Nokia's guidance outlook, we assume revenues for 2023 will be above 2021 levels with relative stable adjusted operating margins. The Company maintains its outlook for the full year, with net sales of EUR 23.2 billion to EUR 24.6 billion (-4 to 2% growth in constant currency), but assumes it will reach the lower end of the range. In regard of comparable operating margin, the Group expects a range of 11.5 to 13.0%, targeting the mid-point, which would be only 25 basis points below that of 2022. For 2024, the Company also has announced preliminary assumptions for its business groups, expecting a return to mid-single-digit growth for Network Infrastructure, while Mobile Networks will probably continue to show a decline in net sales due to a normalization in India. With regard to its target for 2026, Nokia made a slight adjustment, targeting a comparable margin of 13% instead 14%—the 14% is to be achieved at a later date. This adjustment came after the mobile communications provider AT&T chose Nokia's competitor Ericsson as supplier for its telecommunications equipment, for financial reasons. However, the Company is confident with regard to its growth options in the medium to long term, especially with regard to the increasing network upgrade requirements by the market. During 2023, Nokia signed four long-term agreements (LTA), including an LT patent cross-license agreement with Apple, and an LTA with Deutsche Telekom to deploy a multi-vendor open RAN network in Germany.

To secure its targets, facing in particular the current adverse market circumstances, Nokia has announced a new strategic program, which includes streamlining its operating model and further improving its cost structure. The Company targets annual cost savings of at least EUR 400 million from 2024, and between EUR 800 million- EUR 1,200 million by 2026, the latter depending on market development. The restructuring is expected to result in a 72 to 77 thousand employee organization, down from the current 86 thousand employees, reducing personnel expenses between 10 and 15%. The one-time restructuring charges and cash outflows are expected to be at a similar level as the annually achieved cost savings.

Despite the setbacks during the first nine month of 2023, we still see a sustainable improvement in its operating model in recent years, significantly strengthening its balance sheet structure. The improvements were largely as a result of Nokia's restructuring programs and its boost in R&D investments, enabling competitive and innovative product launches and marketable patents, which led to significant long-term agreements with telecommunication operators and enterprises. The Company's current credit profile puts upgrade pressure on the unsolicited corporate issuer rating; nevertheless, we still see certain risks in regard of the market uncertainties, which dampens an upgrade at the current stage. In addition, there is still fierce competitive pressure in this rapidly changing market. The Company is currently taking further strategic measures to reinforce its cost competitiveness and to have enough financial headroom for its research and development expenditure, with the aim of achieving technology leadership. With regard to its financial strength and longtime expertise, we see the Company as well-positioned to cope with the current circumstances and benefit from the accelerating digital revolution.

## Further ratings

Based on the unsolicited long-term issuer rating and taking into account our liquidity analysis, the unsolicited short-term rating of Nokia Oyj was set at L3 (exceptional mapping), which corresponds to an adequate liquidity assessment for one year.

The rating object of the unsolicited issue rating are exclusively long-term senior unsecured issues, denominated in euro, issued by Nokia Oyj, which are included in the list of ECB-eligible marketable assets.

The notes have been issued under Nokia Oyj's EMTN program, with the last basis prospectus of 05.07.2023.

We have provided the long-term local currency senior unsecured notes issued by Nokia Oyj with an unsolicited rating of BB+ / positive. The rating is based on the corporate issuer rating.

Long-term local currency senior unsecured notes issued by Nokia Oyj, which have similar conditions to the current EMTN program, denominated in euro and included in the list of ECB-eligible marketable assets, generally receive the same ratings as the current LT LC senior unsecured notes issued under the EMTN program. Notes issued in any currency other than euro, or other types of debt instruments, have not yet been rated by CRA. For a list of all currently valid ratings and additional information, please consult the website of Creditreform Rating AG.

Table 4: Overview of CRA Ratings I Source: CRA

| Rating Category | Details | |
|---|---|---|
| | Date of rating committee | Rating |
| Nokia Oyj | 18.12.2023 | BB+ / positive/ L3 |
| Long Term Local Currency Senior Unsecured Issues Nokia Oyj | 18.12.2023 | BB+ / positive |
| Other | -- | n.r. |

## Appendix

### Rating history

The rating history is available under the following link.

Table 5: Corporate Issuer Rating of Nokia Oyj

| Event | Rating created | Publication date | Result |
|---|---|---|---|
| Initial rating | 11.12.2018 | www.creditreform-rating.de | BB+ / stable |

Table 6: LT LC Senior Unsecured Issues issued by Nokia Oyj

| Event | Rating created | Publication date | Result |
|---|---|---|---|
| Initial rating | 11.12.2018 | www.creditreform-rating.de | BB+ / stable |

Table 7: Short-term issuer rating of Nokia Oyj

| Event | Rating created | Publication date | Result |
|---|---|---|---|
| Initial rating | 18.12.2023 | www.creditreform-rating.de | L3 |

### Regulatory requirements

The rating[5] was not endorsed by Creditreform Rating AG (Article 4 (3) of the CRA-Regulation).

The present rating is, in the regulatory sense, an unsolicited rating that is public. The analysis was carried out on a voluntary basis by Creditreform Rating AG, which was not commissioned by the Issuer or any other third party to prepare the present rating.

The rating is based on the analysis of published information and on internal evaluation methods for the assessment of companies and issues. The rating object was informed of the intention of creating or updating an unsolicited rating before the rating was determined.

The rating object participated in the creation of the rating as follows:

| | |
|---|---|
| With Rated Entity or Related Third Party Participation | No |
| With access to Internal Documents | No |
| With Access to Management | No |

A management meeting did not take place within the framework of the rating process.

The documents and information gathered were sufficient to meet the requirements of Creditreform Rating AG's rating methodologies.

[5] In these regulatory requirements the term "rating" is used in relation to all ratings issued by Creditreform Rating AG in connection to this report. This may concern several companies and their various issues.

The rating was conducted based on the following rating methodologies and the basic document.

| Rating methodology | Version number | Date |
|---|---|---|
| Corporate Ratings | 2.4 | July 2022 |
| Corporate Short-Term Ratings | 1.0 | June 2023 |
| Non-financial Corporate Issue Ratings | 1.0 | October 2016 |
| Rating Criteria and Definitions | 1.3 | January 2018 |

The documents contain a description of the rating categories and a definition of default.

The rating was carried out by the following analysts:

| Name | Function | Mail-Address |
|---|---|---|
| Christina Sauerwein | Lead-analyst | C.Sauerwein@creditreform-rating.de |
| Holger Becker | Analyst | H.Becker@creditreform-rating.de |

The rating was approved by the following person (person approving credit ratings, PAC):

| Name | Function | Mail-Address |
|---|---|---|
| Philipp Beckmann | PAC | H.Becker@creditreform-rating.de |

On 18 December 2023, the analysts presented the rating to the rating committee and the rating was determined. The rating result was communicated to the company on 19 December 2023. There has not been a subsequent change to the rating.

The rating will be monitored until Creditreform Rating AG withdraws the rating. The rating can be adjusted as part of the monitoring, if crucial assessment parameters change.

In 2011, Creditreform Rating AG was registered within the European Union according to EU Regulation 1060/2009 (CRA-Regulation). Based on this registration, Creditreform Rating AG is allowed to issue credit ratings within the EU and is bound to comply with the provisions of the CRA-Regulation.

### ESG-factors

You can find out whether ESG factors were relevant to the rating in the upper section of this rating report "Relevant rating factors".

A general valid description for Creditreform Rating AG, as well as a valid description of corporate ratings for understanding and assessing ESG factors in the context of the credit rating process, can be found here.

### Conflict of interests

No conflicts of interest were identified during the rating process that might influence the analyses and judgements of the rating analysts involved or any other natural person whose services are placed at the disposal or under the control of Creditreform Rating AG and who are directly involved in credit rating activities or in approving credit ratings and rating outlooks.

Creditreform Rating AG ensures that the provision of ancillary services does not present conflicts of interest with its credit rating activities and discloses in the final rating reports any ancillary services provided for the rated entity or any related third party. The following ancillary services were provided for the rating entity or for third parties associated with the rated entity:

No ancillary services in the regulatory sense were carried out for this rating object.

For the complete list of provided rating and credit service ancillaries please refer to the Creditreform Rating AG's website.

### Rules on the presentation of credit ratings and rating outlooks

The approval of credit ratings and rating outlooks follows our internal policies and procedures. In line with our "Rating Committee Policy", all credit ratings and rating outlooks are approved by a rating committee based on the principle of unanimity.

To prepare this credit rating, Creditreform Rating AG has used following substantially material sources:

Corporate issuer rating:

1. Annual report

2. Website

3. Internet research

Corporate issue rating:

1. Corporate issuer rating incl. information used for the corporate issuer rating

2. Documents on issues / instruments

There are no other attributes and limitations of the credit rating or rating outlook other than those displayed on the Creditreform Rating AG website. Furthermore, Creditreform Rating AG considers as satisfactory the quality and extent of information available on the rated entity. With respect to the rated entity, Creditreform Rating AG regarded available historical data as sufficient.

Between the time of disclosure of the credit rating to the rated entity and the public disclosure, no amendments were made to the credit rating.

The Basic Data Information Card indicates the principal methodology or version of methodology that was used in determining the rating, with a reference to its comprehensive description.

In cases where the credit rating is based on more than one methodology or where reference only to the principal methodology might cause investors to overlook other important aspects of the credit rating, including any significant adjustments and deviations, Creditreform Rating AG explains this fact in the credit rating report and indicates how the different methodologies or other aspects are taken into account in the credit rating. This information is integrated in the credit rating report.

The meaning of each rating category, the definition of default or recovery and any appropriate risk warning, including a sensitivity analysis of the relevant key rating assumptions such as mathematical or correlation assumptions, accompanied by worst-case scenario credit ratings and best-case scenario credit ratings are explained.

The date at which the credit rating was initially released for distribution and the date when it was last updated, including any rating outlooks, is indicated clearly and prominently in the Basic Data Information Card as a “rating action”; initial release is indicated as “initial rating”, other updates are indicated as an “update”, “upgrade” or “downgrade”, “not rated”, “confirmed”, “selective default” or “default”.

In the case of a rating outlook, the time horizon is provided during which a change in the credit rating is expected. This information is available within the Basic Data Information Card.

In accordance with Article 11 (2) EU-Regulation (EC) No 1060/2009, a registered or certified credit rating agency shall make available, in a central repository established by ESMA, information on its historical performance data including the rating transition frequency and information about credit ratings issued in the past and on their changes. Requested data are available at the ESMA website.

An explanatory statement of the meaning of Creditreform Rating AG’s default rates are available in the credit rating methodologies disclosed on the website.

## Disclaimer

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Future events are uncertain, and forecasts are necessarily based on assessments and assumptions. This rating is therefore no statement of fact, but an opinion. For this reason, Creditreform Rating AG cannot be held liable for the consequences of decisions made on the basis of any of their ratings. Neither should these ratings be construed as recommendations for investors, buyers or sellers. They should only be used by market participants (entrepreneurs, bankers, investors etc.) as one factor among others when arriving at corporate or investment decisions. Ratings are not meant to be used as substitutes for one's own research, inquiries and assessments.

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Creditreform Rating AG

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