Creditreform Corporate Issuer / Issue Rating
Nokia Oyj

Creditreform Rating

07 October 2021 – Neuss, Germany

Rating Action / Update:

Creditreform Rating confirmed the unsolicited corporate issuer rating of Nokia Oyj at BB+ / Stable

Creditreform Rating (CRA) has confirmed the ratings of the unsolicited, public corporate issuer rating of Nokia Oyj – together referred to 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+ with stable outlook.

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ESG factors are factors related to environment, social issues and, governance. For more information, please see the Regulatory requirements section. 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, thus leading to a change in the rating result or the outlook.

Current factors relevant for the rating

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

- New strategic alignment and operating model which targets technology leadership
- Improved operating results in 2020 and H1 2021
- New cost reduction program introduced; leading to additional costs and cash-outflows
- Derecognition of deferred tax assets leads to significant negative result in 2020
- No dividend payments over the 2020 business year

ESG-criteria:

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.

In this regard, we have not identified any factors that have a material impact on the Company's rating result. During 2020, Nokia launched their new sustainability strategic approach, which focuses on the areas that Nokia believes will have the greatest impact on sustainable development and its business. In March 2021 Nokia updated their science based targets. Nokia now plans to reduce greenhouse gas emissions (Scope 1, 2, and 3) by 50% between 2019 and 2030. These new goals are more ambitious than the previous targets and are currently on track. With regard to integrity, Nokia achieved a 96.2% completion rate for Ethical Business training in 2020, exceeding the targeted threshold of 95%, and aimed to increase the share of women in leadership by 25% between 2016 and 2020. As of 2020, 15.3% of leadership positions were held by women, indicating that they were unable to achieve this goal. Nokia continues to monitor annually pay equity on an annual basis, as well as fund special remediation increases to ensure that the unexplained pay gap, which was closed in 2019, remains closed.

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 a satisfactory level of creditworthiness. The main positive factors contributing to the rating are the Group's strong market position, its geographical diversification, and the improved operating results in 2020 and H1 2021. The improved operating results were, among other factors, partially caused by the successfully concluded cost reduction program, which yielded the targeted annually recurring NON-IFRS cost savings of EUR 500 million in 2020 and thus significantly improved the Company's cost structure. However, despite the fact that the cost savings played a significant part in the improved operat-

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.

ing results, they were in 2020 still largely offset by restructuring and associated charges in relation to the above mentioned program and will continue to lead to approximately EUR 500 million of cash-outflows in total in 2021 and beyond. Additionally, in light of the Group's new strategic aim to achieve technology leadership, we expect the Group's R&D expenditure to increase, which will also increase pressure on its earnings and cash-flows.

Further constraining factors for the unsolicited corporate issuer rating are the fast-moving pace and cyclical nature of the industry, the dependence of communication services providers on the spending cycle, and the commitment needed for ongoing high R&D expenditure in order to retain technology leadership.

Outlook

The one-year outlook for the rating is stable. This assessment is based on the fact that Nokia has changed its strategic alignment with a strong commitment to technology leadership. We therefore expect an increase in R&D expenditure, which will put some extra pressure on the Group's earnings and cash-flows. Additionally in order to offset the increased R&D expenditure and expected salary inflation Nokia announced a new cost reduction program, which will also cause an additional EUR 600 – 700 million restructuring and associated charges by 2023. The aforementioned factors continue to have a dampening effect on the Group's operating results and we therefore expect a stable development of the Company despite improved results over the last years.

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 the Company will continue to improve its operating margin, and that the expected headwinds in North America will be milder than assumed. Despite the increase in R&D expenditure, as well as restructuring and associated charges, the Group is able to significantly improve its EBIT and cash-flow generation against 2020 and H1 2021, leading to a significant improvement of the financial key ratios.

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 significant fall in revenues in combination with increased R&D expenditure, as well as restructuring and associated charges. This scenario would lead to a reduction in operating profit as compared to H1 2021, and would fall significantly short of the Group's own outlook.

Business development and outlook

During the business year 2020, Nokia generated sales of EUR 21,852 million (2019: EUR 23,315 million), EBITDA of EUR 2,006 million (2019: EUR 2,032 million), EBIT of EUR 874 million (2019: EUR 372 million), and EAT of -2,523 million (2019: EUR 7 million). Nokia's fall in revenue as compared to the prior business year was mainly caused by lower sales in the Networks business segment, and to a lesser extent in Nokia Software and Nokia Technologies. The decline in the Networks business was predominantly caused by lower sales in Mobile Access due to lower network deployment, planning services, and legacy radio technologies. The sales decline was also, but to a lesser extent, caused by IP Routing, Fixed Access and Optical Networks, which were partially caused by a comparably strong 2019, and COVID-19 related supply chain constraints. The direct impact of the COVID-19 pandemic has remained limited and was estimated to be approximately EUR 200 million on the Group's net sales for the business year 2020.

Table 1: Results of business segments of Nokia Oyj (before unallocated items) I Source: Annual Report 2020

in Mio. EUR	Networks	Nokia Software	Nokia Technologies	Group Common and Other
Revenue	16,847	2,656	1,388	963
EBITDA	1,492	588	1,196	-470
EBIT	935	507	1,164	-525

Table 2: Revenues of business groups within Nokia Networks Source: Annual Report 2020

In Mio. EUR	Mobile Access	Fixed Access	IP Routing	Optical Networks
Revenues	10,630	1,759	2,768	1,695

The operating performance of the Group improved against prior years despite a significant fall in revenues. The Group managed to keep its EBITDA stable and significantly increase its EBIT, which showed improvements in gross profit and operating margin of 72.47% (2019: 65.05%) and 4.00% (2019: 1.60%) respectively. The improved cost structure is, among other things, the result of temporary cost savings resulting from COVID-19 of EUR 250 million, the absence of portfolio strategy costs in 2020, and lower amortization on acquired intangible assets. The Group's EAT was negatively impacted by the derecognition of deferred tax assets of EUR 2.961 million, which led to a negative result of -2,523 million. The derecognition is non-recurring, and was required by accounting regulations; this can be reversed in the future.

Nokia's cost savings program, which the Group successfully completed at the end of 2020, also significantly improved the cost structure of the Group, and therefore also contributed to the improved operating margins. However, these cost savings in 2020 were again largely offset by increased restructuring and associated charges of EUR 651 million. At the end of 2020, the Group achieved the targeted annual recurring cost savings of Non-IFRS EUR 500 million. It is worth noting that this program will continue to put pressure on cash flows, as the Group expects to incur EUR 250 million in 2021 and EUR 250 after 2021 related to this program.

The improved operating performance improved cash generation slightly, but remained limited due to lower revenues. The significant increase in cash flow from operating activities to EUR 1,759 million (2019: EUR 390 million) was mainly caused by net working capital changes in comparison to the prior year. Cash flow after investments came in at EUR 242 million (2019: EUR 223 million), but was strongly affected by investments in highly liquid interest bearing investments, which the Group also uses as liquidity. Adjusted by these instruments, cash flow after investments came in at EUR 1,396 million, a significant improvement over the previous year. Additionally, the board of directors proposed not issuing a dividend over the business year 2020, which we view as positive. Subsequently, the annual general meeting held in April 2021, also resolved not to pay any dividends.

Table 3: Financials of Nokia Oyj I Source: Nokia Oyj Annual report 2020, standardized by CRA

Nokia Oyj Selected key figures of the financial statement analysis Basis: Annual accounts and report of 31.12. (IAS, Group)	CRA standardized figures[1]	
	2019	**2020**
Sales (million EUR)	23,315	21,852
EBITDA (million EUR)	2,032	2,006
EBIT (million EUR)	372	874
EAT (million EUR)	11	-2,516
EAT after transfer (million EUR)	7	-2,523
Total assets (million EUR)	31,315	31,862
Equity ratio (%)	20.83	20.51
Capital lock-up period (days)	59.27	53.02
Short-term capital lock-up (%)	32.00	34.94
Net total debt / EBITDA adj. (factor)	9.01	7.18
Ratio of interest expenses to total debt (%)	1.61	1.23
Return on Investment (%)	0.79	-7.41

The negative annual result had a negative impact on profitability ratios such as return on investment, which fell to -7.41% (2019: 0.79%). It is, however worth pointing out, that aside from the negative annual result, the derecognition of active deferred tax assets did not have a further negative impact on our rating assessment. For the purpose of its financial ratio analysis, Creditreform Rating AG ("CRA") adjusted the original values in the financial statements. In the context of this structured financial ratio analysis the deferred tax assets were subtracted from the balance sheet. As a result, the 2020 adjusted balance sheet has remained relatively stable at EUR 31,862 million (2019: 31,315 million), as well as the equity ratio of 20.51% (2019: 20.83%).The Group's financial debt increased to EUR 5,576 (2019: EUR 4,277 million) during the 2020 business year. However, we did not view this as very critical as the Group's total cash and total current investments stood at EUR 8,061 million, which clearly exceeded Nokia's financial debt position. Our adjusted key financial ratio net total debt / EBITDA adj. improved to 7.18 (2019: 9.01) due to the improved liquidity position.

At the start of the business year 2021, Nokia entered the first phase of its new strategy, which meant a change in Nokia's high-level strategic principles, as well as a new operating model. Effective from 1 January 2021, Nokia began operating with 4 business Groups to better align with customer demands, reduce complexity, and further improve cost efficiency. The new business units are Mobile Networks, Network infrastructure, Cloud and Network services, and Nokia Technologies. During the first 6 months of 2021 Nokia generated revenues of EUR 10,389 million (H1 2020: 10,005 million), EBIT of EUR 916 million (H1 2020: EUR 94 million) and a net profit of EUR 614 million (H1 2020: EUR -17 million). On a constant currency basis its sales increased by

[1] 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.

9% against the same period in the prior year. The reported growth in revenues was mainly due to strong growth of 18% in Network Infrastructure, and to a lesser extent by Nokia Technologies. These were partially offset by decreases in Mobile Networks and Cloud and Network services. However, all segments except Cloud and Network Services showed growth on a constant currency basis in terms of revenues. The decrease in Cloud and Network Services was primarily driven by the continued exit from poorly-performing projects. The Group reported improved gross margins and a much stronger operating profit compared to the prior year. This was mainly driven by Mobile Networks due to strong 5G growth, a favorable product mix and a one-time software deal of approximately EUR 80 million, but also due to Nokia Technologies. Other factors that influenced operating profit were a net positive fluctuation in other income and expenses - mainly related to Nokia's venture funds investments - foreign exchange hedging, and the reversal of loss allowances on trade receivables. The EAT for the period was EUR 614 million (2019: EUR -17 million), mainly due to the higher operating profit for the period.

The Group had strong cash flow generation during the first half of 2021. Higher profit and positive changes in net working capital significantly improved net cash from operating activities to EUR 1,410 million (H1 2020: EUR 467 million). The cash flow after investments of EUR 880 million and FCF as reported by Nokia of EUR 1,277 showed both significant improvement against the prior year. This results in a strong liquidity position for the Group, as evidenced by the total cash and current financial investments position of EUR 8,751 million. Additionally to the total cash and current financial investments, Nokia disposes over a committed revolving credit facility of EUR 1,500 million, and uncommitted commercial paper programs of EUR 2,250 million in total. The revolving credit facility and the uncommitted commercial paper programs have not been in use as of 30 June 2021. Nokia also had a positive working capital of EUR 6,670 million and its total cash and current financial investment position continues to widely exceed the gross financial debt position of EUR 5,603 million.

On March 16, 2021 Nokia introduced the next cost reduction program in order to reset their cost base to further optimize the Group's cost structure. Nokia targets annually recurring cost savings of approximately EUR 600 million by the end of 2023. These savings are predominantly needed to accommodate the increased future R&D expenditure that Nokia expects according to its updated operating model in order to achieve technology leadership in the areas where Nokia competes, but also to account for future capabilities and salary inflation. The program is expected to cause EUR 600 – 700 million in restructuring and associated charges up to 2023, which will continue to put additional pressure on cash flow generation.

Due to its recent strong operating and financial performance, Nokia has revised its short-term (for 2021) outlook upwards. However, the Group is still expecting some headwinds, particularly in North America in terms of market share loss and price erosion. The expected increase in R&D expenditure in combination with the announced cost reduction program and expected cash-outflows of approximately EUR 500 million in total in relation to the previous cost reduction program continue to dampen the rating result despite noticeable improvements in operating profit and cash-flow generation.

Issue rating

Issue rating

This issue rating is exclusively valid for the long-term senior unsecured issues denominated in euros, issued by Nokia Oyj, and which are included in the list of ECB-eligible marketable assets. The ECB list of eligible marketable assets can be found on the website of the ECB.

The Notes have been issued within the framework of Nokia Oyj's EMTN Program, most recently renewed in 6 July 2021. The total nominal value of the bonds issued must not exceed EUR 5 billion. According to the prospectus as of 6 July 2021, the notes benefit from a negative pledge provision and a cross acceleration mechanism. We have assigned the long-term senior unsecured issues issued by Nokia Oyj a rating of BB+. This decision is mainly based on the corporate rating of Nokia. Other types of debt instruments or issues denominated in other currencies have not been rated by CRA. For a list of all currently valid ratings and additional information, please consult the website of Creditreform Rating AG.

Overview

Table 4: Summary of CRA Ratings I Source: CRA

Rating object	Details information	
	Date	Rating
Nokia Oyj (Issuer)	07.10.2021	BB+ / stable
Long Term Local Currency Senior Unsecured Issues	07.10.2021	BB+ / stable

Table 5: Overview of Nokia's Debt Issuance Program I Source: Nokia Oyj

Issue details			
Volume	EUR 5,000,000,000	Maturity	Depending on the respective bond
Issuer	Nokia Oyj	Coupon	Depending on the respective bond
Arrangers	Deutsche Bank	Currency	Depending on the respective bond
Credit Enhancement	-	ISIN	Depending on the respective bond

All future LT LC senior unsecured Notes that will be issued by Nokia under the current EMTN program, denominated in Euro and included in the list of ECB-eligible marketable assets will, until further notice, receive the same ratings as the current LT LC senior unsecured Notes issued under the EMTN program. Notes issued under the program 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.

Appendix

Rating history

The rating history is available under:

https://www.creditreform-rating.de/en/ratings/published-ratings.html

Table 6: Corporate issuer rating of Nokia Oyj | Source: CRA

Event	Rating date	Publication date	Monitoring period	Result
Initial Rating	11.12.2018	17.12.2018	16.09.2020	BB+ / stable

Table 7: Corporate Issuer Company Nokia Oyj | Source: CRA

Event	Rating date	Publication date	Monitoring period	Result
Initial rating	11.12.2018	17.12.2018	16.09.2020	BB+ / stable

Regulatory requirements

The rating[2] 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

[2] 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 information.

List of documents
Accounting and controlling
▪ Consolidated annual report of Nokia Oyj 2020 ▪ Consolidated report of Nokia Q1 2020 ▪ Consolidated report of Nokia Q2 2020 ▪ Nokia investor presentation Q4 2020 ▪ Nokia investor presentation Q1 2021 ▪ Nokia investor presentation Q2 2021
Finance
▪ EMTN Base Prospectus ▪ Final terms of outstanding notes
Additional documents
▪ Nokia people & planet report 2020 ▪ Press releases

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.

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

Rating methodology	Version number	Date
Corporate Ratings	2.3	29.05.2019
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
Rudger van Mook	Lead-analyst	R.vanMook@creditreform-rating.de
Artur Kapica	Analyst	A.Kapica@creditreform-rating.de

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

Name	Function	Mail-Address
Philipp Beckmann	PAC	P.Beckmann@creditreform-rating.de

On 7 October 2021, the analysts presented the rating to the rating committee and the rating was determined. The rating result was communicated to the company on 7 October 2021. 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.

In the event of providing ancillary services to the rated entity, Creditreform Rating AG will disclose all ancillary services in the credit rating report.

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

Any rating performed by Creditreform Rating AG is subject to the Creditreform Rating AG Code of Conduct, which has been published on the web pages of Creditreform Rating AG. In this Code of Conduct, Creditreform Rating AG commits itself – systematically and with due diligence – to establish its independent and objective opinion as to the sustainability, risks and opportunities concerning the enterprise or the issue under review.

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