Creditreform Corporate Issuer / Issue Rating

Nokia Oyj

Creditreform Rating

Rating object	Rating information	
Nokia Oyj Creditreform ID: 400987969 Incorporation: 1865 Based in: Espoo, Finland Main (Industry): Telecommunications Technology CEO: Pekka Lundmark	Corporate Issuer Rating: **BB+ / positive**	Type: Update Unsolicited Public rating
	LT LC Senior Unsecured Issues,: **BB+ / positive**	Other: **n.r.**
Rating objects: Long-term Corporate Issuer Rating: Nokia Oyj Long-term Local Currency (LT LC) Senior Unsecured Issues	Rating date: 12 May 2022 Monitoring until: withdrawal of the rating Rating methodology: CRA “Corporate Ratings“ CRA “Non-Financial Corporate Issue Ratings“ CRA “Rating Criteria and Definitions“ Rating history: www.creditreform-rating.de	

Content

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Summary

Company

Nokia Oyj - hereinafter also referred to as “Nokia”, or ”the Group” - is a multinational corporation based in Finland which is active in the telecommunications and information technology industry. 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 units 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. The Group provides its products and services in approximately 130 countries around the world, and had an average number of 87,900 employees during the business year 2021.

During the business year 2021 Nokia generated revenues of EUR 22,202 million (2020: EUR 21,852 million), EBITDA of EUR 3,184 million (2020: 2,006 million), EAT of EUR 1,645 million (2020: EUR -2,516 million).

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 its improved operating performance over recent years. This is mainly due to strong market dynamics in Fixed Networks and Nokia Technologies, but is also caused by improved margins due to a leaner cost structure as a result of the concluded cost savings program and the reduction in restructuring and associated charges during the 2021 business year. These factors are partially offset by the ongoing need for high research and development investments, as well as the fast-moving pace of development and high degree of competition in the market.

Outlook

The one-year outlook for the rating is positive. Despite the general uncertainties in the market, such as the war in Ukraine, the subsequent energy crisis in Europe, the widespread lockdowns in China, the generally high inflationary environment and the restructuring and associated charges that will be incurred due to its new cost savings program, as well as cash-outflows with regard to its current share-buy-back program we see that Nokia is developing itself positively. This is based on the continuous improved performance and cash-flow generation that the Group has shown over the past few years as a result of strong market dynamics, but also due to its leaner cost structure following the successfully concluded cost savings program. If Nokia manages to continue its strong operating performance with solid growth in all of its business on a constant currency basis, an upgrade will be likely.

Relevant rating factors

Reference:

The relevant rating factors (key drivers) mentioned in this section are predominantly based on internal analyses, evaluations of the rating process, the derived valuations of the analysts participating in the rating and, if applicable, of other rating committee members. The fundamental external sources used are specified in the sections "Regulatory requirements" and "Rules on the presentation of credit ratings and rating outlooks".

Table 1: Financials I Source: Nokia Oyj Annual Report 2021, standardized by CRA

Nokia Oyj Selected key figures of the financial statement analysis Basis: Annual accounts and report of 31.12. (IFRS, etc.)	CRA standardized figures[1]	
	2020	**2021**
Sales (million EUR)	21,852	22,202
EBITDA (million EUR)	2,006	3,184
EBIT (million EUR)	874	2,089
EAT (million EUR)	-2,516	1,645
EAT w/o non-controlling interests (million EUR)	-2,523	1,623
Total assets (million EUR)	31.862	36,085
Equity ratio (%)	20.51	26.43
Capital lock-up period (days)	53.02	60.48
Short-term capital lock-up (%)	34.94	33.07
Net total debt / EBITDA adj. (Factor)	7.23	5.65
Ratio of interest expenses to total debt (%)	1.27	0.84
Return on investment (%)	-7.41	5.06

Excerpts from the financial key figures analysis 2021:

+Improved operating margin
+Increased equity ratio
+Higher operating profit (EBITDA, EBIT) and EAT
+ Improved internal financing power

- Revenue still under level of 2019
- Capital lock-up period

General rating factors

General rating factors summarize the key issues that – according to the analysts as of the date of the rating – have a significant or long-term impact on the rating, whether positive (+) or negative (-).

+ Diversified geographical presence
+ Strong patent portfolio with a relatively long average time to maturity
+ Good access to capital markets

– Dependent on the cyclical IT and communications industry
– High ongoing research and development costs
– Highly competitive market with relatively short product life cycles

[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 considers all balance sheet liabilities. Therefore, the key financial figures shown often deviate from the original values of the company.

Current rating factors are the key factors that, in addition to the underlying rating factors, have an impact on the current rating.

Current rating factors

+ Strong market dynamics proven by well-filled order books across all businesses
+ Leaner cost structure and higher margins following successfully concluded cost savings program
+ No dividends issued over the business year 2020 and proposed dividend of EUR 0.08 dividends per share over the business year 2021
+ Reduction of debt position whilst maintaining strong liquidity

– Higher targeted R&D investments will put the leaner cost structure under pressure
– High inflationary environment and general uncertainties in global markets
– New cost savings program and stock repurchase program continue to somewhat dampen cash-flow generation over the next years
– Market share loss in Mobile Networks in 2021 in North America
– Supply-chain constraints in Mobile Networks

Prospective rating factors are factors and possible events which – according to the analysts as of the date of the rating – would most likely have a stabilizing or positive effect (+) or a weakening or negative effect (-) on future ratings if they occurred. This is not an exhaustive list of possible future events with potential relevance for future ratings. Circumstances can arise that are not included in the list of prospective factors whose effects are impossible to assess at the time of the rating, either because these effects are uncertain or because the underlying events are deemed unlikely to occur.

Prospective rating factors

+ Achieving targeted savings in the cost savings program resulting in higher margins
+ Improving market share across the Group's businesses
+ Improve financial profile

– Higher-than-expected restructuring costs causing decreased operating margins
– General economic downturn
– Unforeseen escalation in the war in Ukraine
– Further COVID-19 related lockdowns causing an economic downturn

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.

ESG-factors

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.

We have not identified any factors that have a material impact on the 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 on its business. In March 2021 Nokia updated their science-based targets, and now plans to reduce greenhouse gas emissions (Scope 1, 2, and 3) by 50% between 2019 and 2030. These goals are currently not on track as the emissions covered by Nokia's Science Based Target were 8% above their cumulative carbon budget for 2020-2021, assuming a linear reduction in Co2. Despite this Nokia still believes they will be able to achieve their targets by 2030.With regard to integrity, Nokia achieved a 97% completion rate for Ethical Business training in 2021, exceeding the targeted threshold of 95%. As of 2021, 16% of leadership positions were held by women, 27% for positions in the Group Leadership Team and 38% in the Nokia Board of Directors. Nokia continues to monitor pay equity annually and funds special remediation increases to ensure that the unexplained pay gap, which was closed in 2019, remains so.

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.

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.

Best-case scenario: BBB-

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.

In our best-case scenario for one year, we assume a rating of BBB-. This is based on the scenario that the Group will continue its strong operating performance. Despite the increase in R&D expenditure, as well as ongoing restructuring and associated charges and increased cash-outflows in relation to its share buyback program, it is able to retain its margins and cash-flow generation, leading to a more stable financial profile.

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 fall in demand in combination with increased R&D expenditure and ongoing cash outflows in relation to its restructuring and associated charges and share buyback program. This scenario would lead to a noticeable reduction in operating profit compared to 2021, and would fall significantly short of the Group's own outlook.

Business development and outlook

During the business year 2021 Nokia generated revenues of EUR 22,202 million (2020: EUR 21,852 million), EBITDA of EUR 3,184 million (2020: EUR 2,006 million), EBIT of EUR 2,089 million (2020: EUR 874 million) and EAT of EUR 1,645 million (2020: EUR -2,516 million). The Group's revenues increased slightly, mainly stemming from the Network Infrastructure business group and, to a lesser extent, Nokia Technologies. Within Network Infrastructure, all business groups, but particularly Fixed Networks and Submarine Networks, showed strong results, leading to a 14% increase in segment revenue. The revenue growth was, however, dampened by Mobile Networks due to market share loss and price erosion in North America, leading to a decrease of approximately 7%.

In 2021 Nokia improved its operating performance once again in comparison to the prior years, with a gross profit and operating margin of 71.53% (2020 72.74%) and 9.41% (2020: 4.00) respectively. The improved operating performance was driven by the aforementioned strong performance within Fixed Networks and Nokia Technologies. Additionally, the leaner cost base, as well as lower restructuring and associated charges, along with an impairment of EUR 200 million in goodwill in 2020 which negatively impacted the prior business year, led to significantly higher operating profit. The Group's net earnings improved due to Nokia's strong operating performance during the business year, but particularly due to the fact that 2020 was negatively impacted by a derecognition of deferred tax assets of EUR 2,961 million, which led to a negative result of -2,523 million. This derecognition is non-recurring, was required by accounting regulations and can be reversed in the future.

Table2: Segment revenue and operating profit I Source: Nokia Oyj Annual Report 2021

	Sales			EBIT		
In million EUR	**2019**	**2020**	**2021**	**2019**	**2020**	**2021**
Mobile Networks	11,327	10,398	9,717	384	819	765
Network Infrastructure	6,903	6,736	7,674	562	457	784
Cloud and network Services	3,327	3,087	3,089	-149	-67	136
Nokia Technologies	1,487	1,402	1,502	1,200	1,123	1,185
Group Common and Other	371	269	257	-279	-251	-125
Total segment revenue and operating profit	**23,415**	**21,892**	**22,239**	**638**	**2,081**	**2,745**
Eliminations and unallocated items	-100	-40	-37	-1,518	-1,196	-617
Total	**23,315**	**21,852**	**22,202**	**485**	**885**	**2,158**

Nokia completed its previous cost savings program initiated in 2018. The program improved the Group's cost structure and contributed to successively improving operating margins over the past years. At the end of 2020 Nokia achieved the targeted annual recurring cost savings of NON-IFRS EUR 500 million. On 16 march, 2021, in light of its strategic review and the resetting of its costs base, the Group introduced its next program to reduce operating costs, targeting annually recurring cost savings of approximately EUR 600 million by the end of 2023. The restructuring is expected to result in an 80 to 85 thousand employee organization, down from the current 90 thousand employees. The pace of restructuring in the past year has been slower than anticipated, but the overall size of the program remains unchanged. The Group expects this program to result in restructuring and associated charges of EUR 500-600 million by 2023 and total cash outflows of approximately EUR 1,050 and 1,150 million, of which approximately EUR 500 million are still related to the previous restructuring program. The announced recurring cost savings are needed to accommodate the increased future R&D expenditure that Nokia expects according to its updated operating model, in order to achieve the technology leadership in the areas where Nokia competes, but also to account for further future capabilities and salary inflation.

On 3 February 2022 Nokia announced that its Board of Directors had initiated a share buyback program, as authorized by the AGM of 8 April 2021. The program targets to repurchase up to EUR 600 million over a period of two years, and will be subject to continued authorization from the AGM.

The first quarter of the business year 2022 started with reported revenue of EUR 5,348 million (2021 Q1: EUR 5,076 million), reported operating profit of EUR 354 million (2021 Q1: EUR 431 million) and net earnings of EUR 219 million (2021 Q1: EUR 263 million). The revenue rose partially due to favorable currency movements, but the Group also reported slight growth on a constant currency basis. This was mainly driven by strong market dynamics in Network Infrastructure and Cloud and Network services, but was in part offset by supply chain constraints within Mobile Networks, which reported a decline on a constant currency basis, as well as Nokia Technologies, where two licensing agreements ended during 2021 and have not yet been renewed. Despite the lower revenues in Nokia Technologies, the Group increased its gross margin to 40.6%, indicating that its cost competitiveness has improved. Reported EBIT declined to EUR 354 million, largely due to increased R&D investments, increasing restructuring charges and related costs to the Russian market. Nokia announced in early April that it would exit the Russian market and reserved a provision of EUR 104 million for this exit. For the current business year, Nokia expects to incur restructuring and associated charges and outflows of EUR 100 million and EUR 300 million respectively.

In our view, Nokia has shown that it has made improvements in its cost competitiveness following its cost reduction programs and the new corporate organization, which creates financial headroom to step up its expected increase in research and development expenditure, as the Group aims to achieve technology leadership. All business groups display strong results and have well-filled order books. For the 2022 business year, Nokia expects to generate revenues between EUR 22.9 and EUR 24.1 billion on a constant currency basis with a comparable operating margin of 11 to 13.5%, which we believe to be plausible if the demand in the markets remains high and Nokia will be able to react in an appropriate manner to the high inflationary environment. It is important to point out that despite the Group's positive trajectory, the share buy-back program, as well as the current cost savings program, will most likely somewhat dampen its operating result and cash-flow generation over the next years. Additionally, the development of Nokia is largely dependent on the further development of the general COVID-19 pandemic, the large-scale COVID-19 related lockdowns in China, as well as on the war in Ukraine and the general inflationary economic environment.

Structural risk

Nokia Oyj is a public limited liability company and is the parent Company of the Nokia Group. It is listed on the Nasdaq Helsinki, Euronext Paris, and the New York Stock exchange. Nokia is active in communications and information technology and is headquartered in Espoo, Finland. The Group employed an average number of 87,900 employees during the 2021 business year and is active in approximately 130 countries.

Before the 2021 business year, Nokia's structure was organized into three different divisions; Network Business, Nokia Software and Nokia Technologies. Network Business was organized into four different business groups (Mobile Networks, Fixed Networks, Global Services, IP/Optical Networks) and provided the market with products and services that encompass mobile and fixed-network access infrastructure equipment, Internet protocol routing and optical networks. Nokia Software provided software solutions to the telecoms software market. Within Nokia Technologies the Company tries to drive growth and renewal for its existing patent licensing business and attempts to create new business based on innovations.

On 29 October 2020, Nokia announced its new strategic outlining and changed its Group structure in order to better align with customer needs. As of 2021 Nokia began reporting from four business units: Mobile Networks, Network Infrastructure (previously IP Routing, Optical Networks and Fixed Networks as well as Alcatel Submarine networks), Cloud and Network Services (Previously Nokia Software and Global services[2]) and Nokia Technologies. Additionally, the Group created a Customer Experience organization that is meant to deepen customer relationships and shorten the distance between customers and product development. The business units deliver the same products and services, but the new corporate organization is more decentralized than before, as they will be fully accountable for their own performance and are in charge of developing and executing their respective businesses, resulting in a leaner corporate center with corporate jobs having moved into the business groups. Support functions such as finance, legal and compliance, HR and others will continue to be led as corporate functions.

The corporate governance structures of Nokia are sufficiently developed for a Company of its size. The Group is governed by the Annual General Meeting ("AGM"), the Board of Directors and

[2] Global services was split between the business units Cloud and Network Services and Mobile Networks

the Group Leadership Team. The activities of the AGM mainly concern the election and remuneration of the Board of Directors and distribution of retained earnings, among other responsibilities. Pursuant to the Articles of Association of Nokia, the Board of Directors is obligated to be composed of a minimum of seven and a maximum of 12 members, who are elected annually with a majority vote of the shareholders votes at every AGM. The Board is responsible for monitoring Nokia's strategic direction, management policies and the effectiveness of the implementation by senior management, as well as the financial reporting process and the related control and audit functions. The Group Leadership Team is responsible for the day-to-day operative management of the Group and is chaired by the Group's CEO Pekka Lundmark

Overall, we assess the structural risk of Nokia as moderate. We do not see any increased structural risk with the implementation of the new strategy and the increased decentralization in its business groups.

Business risk

Nokia provides its customer base with products and services mainly within the telecommunications network equipment market. An important characteristic of this market is a high degree of competition and ongoing high investments in research and development due to relatively short product cycles. In particular, due to the fact that Nokia has made technology leadership a priority, which most likely will lead to higher R&D expenditure in the future. During the business year of 2021 Nokia invested EUR 4,214 million (2020: EUR 4,087 million) in R&D, approximately 19.0% (2020: 18.7%) of its revenues. These ongoing high investments are necessary to retain the Group's strong market position. At the end of 2021 the Group had a portfolio of approximately 20,000 patent families, with the majority of them still in force after 10 years, making the Group one of the largest investors in R&D in the field of information communication technology.

Nokia's customer base is divided into several categories: communication service providers (CSP), enterprise verticals and hyperscalers. In addition, Nokia targets licensees in different industries where it monetizes its intellectual property. CSP's with 81% of revenues are by far the largest customer category, followed by Enterprise with 7% and licensees (Nokia Technologies) with 7%.

The three business segments Mobile Networks, Network Infrastructure and Cloud and Network Services form the core business of the Group, which delivers hardware and software solutions for its customers in the form of products and services. During 2021 the three business groups generated approximately 92% of the Group's revenues, but are only responsible for 61% of its operating profit. This is explained by the relatively low margins that these business groups have due to the tough competition in their markets, as well as the ongoing high research and development investments which the Group needs to commit to. Nokia Technologies is the operating profit driver of the Group; in 2021 this business unit was responsible for approximately 43% of Nokia's operating profit, but generated only approximately 7% of the Group's revenues due to its very high operating margins. This is explained by the fact that the Group has very low operating costs and strong synergies with the other business groups, as its core task is managing and monetizing Nokia's intellectual property, which is predominantly built up by the other business units. Nokia Technologies continues to expand its patent licensing and monetizes the intellectual property of Nokia.

The Company is geographically well-diversified, being active in approximately 130 countries. The Group's strong product portfolio, market position and increased geographical footprint mitigate Nokia's exposure to general market risks and regional downturns in the economy. The market, however, remains highly competitive and cyclical in nature. In particular, the spending of network operators due to the relatively short life cycle of products in this industry results in volatile demand. This is, however, partly mitigated by increasing recurring revenues and the high margins of Nokia Technologies, which continues to increase its share of recurring revenues in the licensing business.

Due to the global nature of Nokia's operations, the Company is exposed to currency fluctuations. To mitigate the effect of exchange rate fluctuations, the Company hedges operative forecasted net foreign exchange exposure.

We see the Company's business risk profile as moderately high. The reason for this is the fact that the Company operates in a highly competitive and fast-moving market, characterized by high research and development investments, which do not guarantee that the Company will be able to provide the market with new innovative technology in a timely manner. The Company's strong market position, in combination with its geographical footprint and growing Nokia Technologies segment, partly mitigates the Company's aforementioned exposure to market risks.

Financial risk

For analytical purposes, CRA adjusted the original values in the financial statements in the context of its financial ratio analysis. Contrary to our common practice, we deducted goodwill shown on the balance sheet from equity only by 50%, suggesting a certain recoverability of goodwill. The following descriptions and indicators are based primarily on these adjustments.

The Group's adjusted equity stood at EUR 9,538 million (2020: EUR 6,536 million) at the end of 2021 and increased quite significantly during the year, predominantly due to an increase in total comprehensive income of EUR 4,843 million (2020: EUR -2,908 million) resulting from improved operating performance, as well as a positive remeasurement of defined benefit plans and a positive translation difference of currency developments. The 2020 negative total comprehensive income was largely caused by the derecognition of deferred tax assets; it is worth noting that this did not have a negative effect on equity, as we subtract deferred tax assets from the balance sheet in the context of our financial ratio analysis. The equity ratio of the Group stands at 26.43% (2020: 20.51%), which we believe is sufficient for its current rating level. Nokia did not issue any dividend over the 2020 business year and proposes to pay a dividend of approximately EUR 456 million, leaving room for equity growth.

The improved operating performance of the Group led to a significant improvement in credit metrics related to profitability. In particular, net total debt / EBITDA adj. improved to 5.65 (2020: 7.23), as well as EBIT interest coverage of 9.33 (2020: 2.72) and return on investment of 5.06 (2020: -7.41). This is the result of strong market dynamics, but also a leaner cost structure and the absence of high restructuring and associated charges in 2021.

Following the Group's strong operating performance, its cash-flow from operating activities of EUR 2,625 million (2020: EUR 1,759 million) was mainly due to higher net earnings for the year and lower working capital investments. The cash-flow after investments and dividends stood at EUR 821 million (2020: EUR 173 million), following capital expenditures of EUR 560 million. However, as EUR 1,845 million (2020: EUR 1,154 million) was invested in current financial investments, which could be regarded as liquidity, we conclude that Nokia has some additional headroom to accommodate the additional pressure on its cash-flows. Nevertheless, the expected increase in cash-outflows related to the cost-savings program, as well as the stock-repurchase program of up to EUR 600 million in total over a period of 2 years and expected dividend distributions, continue to put negative pressure on the Group's cash-flows.

The liquidity of the Group as of the end of 2021 was strong, with Nokia having cash and cash equivalents and current financial investments of EUR 9,268 million (2020: EUR 8,061 million) at its disposal, which clearly exceeds the Group's short- and long-term interest-bearing liabilities of EUR 4,654 million (2020: EUR 5,576 million). The decision not to issue a dividend over the 2020 business year offered more room to reduce financial indebtedness, while at the same time retaining liquidity at a healthy level.

Overall, we consider the Group's financial risk profile to be moderate. Its financial position has continued to improve over recent years. Nokia has a reasonable equity ratio, a well-distributed debt profile and strong cash-flow generation, with some additional headroom to accommodate the planned restructuring and associated charges. However, Nokia initiated a share buyback program and targets the repurchase of up to EUR 600 million in shares. Additionally, we expect continued dividend pay-outs, which will also cause additional pressure on cash flows and will reduce financing headroom.

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 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 3: Summary of CRA Ratings I Source: CRA

Rating object	Details information	
	Date	Rating
Nokia Oyj (Issuer)	12.05.2022	BB+ / positive
Long Term Local Currency Senior Unsecured Issues	12.05.2022	BB+ / positive

Table 4: Overview of Nokia's EMTN 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.

Financial ratio analysis

Table 5: Financial key ratios |Source: Nokia Oyj annual report 2021, structured by CRA

Asset Structure	2018	2019	2020	2021
Fixed asset intensity (%)	41.63	45.15	42.06	44.92
Asset turnover	0.69	0.74	0.69	0.65
Asset coverage ratio (%)	98.17	106.87	117.43	120.89
Liquid funds to total assets (%)	21.51	19.18	25.30	25.68
Capital Structure				
Equity ratio (%)	21.97	20.83	20.51	26.43
Short-term-debt ratio (%)	46.55	40.46	38.36	34.38
Long-term-debt ratio (%)	18.89	27.43	28.87	27.87
Capital lock-up period (in days)	77.21	59.27	53.02	60.48
Trade-accounts-payable ratio (%)	14.94	12.09	9.96	10.20
Short-term capital lock-up (%)	36.88	32.00	34.94	33.07
Gearing	2.57	2.88	2.64	1.81
Leverage	4.27	4.67	4.84	4.23
Financial Stability				
Cash flow margin (%)	2.89	8.67	-3.57	18.90
Cash flow ROI (%)	2.04	6.45	-2.45	11.63
Total debt / EBITDA adj.	16.33	11.90	10.61	8.68
Net total debt / EBITDA adj.	11.83	9.01	7.23	5.65
ROCE (%)	1.81	8.85	30.98	39.86
Total debt repayment period	67.94	11.94	25.20	6.93
Profitability				
Gross profit margin (%)	66.56	65.05	72.47	71.53
EBIT interest coverage	-0.08	0.93	2.72	9.33
EBITDA interest coverage	1.78	5.20	7.00	14.39
Ratio of personnel costs to total costs (%)	34.72	31.57	33.45	33.97
Ratio of material costs to total costs (%)	33.44	34.95	27.53	28.47
Cost income ratio (%)	100.26	98.42	96.02	90.80
Ratio of interest expenses to total debt (%)	3.15	1.61	1.27	0.84
Return on investment (%)	-0.07	0.79	-7.41	5.06
Return on equity (%)	-7.28	0.16	-38.54	20.47
Net profit margin (%)	-2.48	0.05	-11.51	7.41
Operating margin (%)	-0.26	1.60	4.00	9.41
Liquidity				
Cash ratio (%)	42.09	46.65	56.79	53.93
Quick ratio (%)	102.04	110.08	130.95	138.87
Current ratio (%)	125.41	135.56	151.07	160.20

Appendix

Rating history

The rating history is available under https://www.creditreform-rating.de/en/ratings/published-ratings.html.

Table 5: Corporate Issuer Rating of Nokia Oyj

Event	Rating created	Publication date	Monitoring until	Result
Initial Rating	11.12.2018	www.creditreform-rating.de	Withdrawal of the rating	BB+ / stable

Table 8: LT LC Senior Unsecured Issues, issued by Nokia Oyj

Event	Rating created	Publication date	Monitoring until	Result
Initial rating	11.12.2018	www.creditreform-rating.de	Withdrawal of the rating	BB+ / stable

Regulatory requirements

The rating[3] 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:

Unsolicited Corporate Issuer / Issue Rating	
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.

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:

[3] 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.

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

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On 12 May 2022, the analysts presented the rating to the rating committee and the rating was determined. The rating result was communicated to the company on 13 May 2022. 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.

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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".

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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

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