

Rating object	Rating information	
<b>Fortum Oyj</b>  Creditreform ID: 14636114 Incorporation: 07.02.1998 Based in: Espoo, Finland Main (Industry): Power generation CEO: Markus Rauramo	Corporate Issuer Rating: <b>BBB / stable</b>	Type: Update Unsolicited Public rating
	LT LC Senior Unsecured Issues: <b>BBB / stable</b>	Other: <b>n.r.</b>
	Rating date: 17 March 2023 Monitoring until: withdrawal of the rating Rating methodology: CRA "Corporate Ratings" CRA "Non-Financial Corporate Issue Ratings" CRA "Government Related Companies" CRA "Rating Criteria and Definitions" Rating history: <a href="http://www.creditreform-rating.de">www.creditreform-rating.de</a>	
<u>Rating objects:</u> Long-term Corporate Issuer Rating: Fortum Oyj Long-term Local Currency (LT LC) Senior Unsecured Issues		

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## Summary

### Company

Fortum Oyj is the parent Company of the Fortum Group (hereinafter also referred to as "Fortum" or "the Group"). The Fortum Group is a Finnish integrated energy Group, which focusses on the generation and sale of clean energy and heat and is one of the leading energy Groups in the Nordic countries, generating 44.2 TWh during the business year 2022, of which approximately 96% was CO<sub>2</sub> free electricity generation (excluding Russia). Following the invasion of Ukraine and the subsequent Russian gas curtailments, Fortum divested its participation in Uniper SE and made a decision to exit the Russian market. As a consequence the Group announced its new strategy in March 2023, in which it will place greater emphasis on the generation and retail of clean energy in the Nordics.

During the 2022 business year Fortum generated revenues of EUR 8,804 million (2021: EUR 6,422 million), EBITDA of EUR 2,485 million (2021: EUR 4,913 million), EBIT of EUR 1,277 million (2021: EUR 4,326 million) and EAT based on continued operations of EUR 1,011 million (2021: EUR 4,008 million). Based on both continued and discontinued operations the net loss amounted to EUR -10,290 million (2021: EUR -114 million) due to the Uniper segment.

### Rating result

The current unsolicited corporate issuer rating of **BBB** attests Fortum Oyj a highly satisfactory level of creditworthiness, representing a low- to medium default risk. The divestment of Uniper SE led to significant changes to Fortum's financial- and strategic alignment. The rating reflects the Group's strong position in the Nordic markets and high degree of CO<sub>2</sub> free power generation, as well as its strong financial profile, which has seen a significant improvement following the Uniper deconsolidation. Additionally, the high degree of systemic relevance for Finland and the close relationship between Fortum and the Finnish government also lead to a one notch uplift in comparison to the stand-alone rating.

The divesture of Uniper SE and the prospective exit out of the Russian market increase future exposure to Nordic power price fluctuations. During the business year, based on continuing operations (excluding Russia) the Group generated approximately 90% of its EBITDA through Nordic power generation. We expect that Nordic power markets will remain volatile over the coming years as a result of the current geo-political landscape, and therefore believe that the Group's earnings generation will also be subject to these volatilities.

The Group's current financial profile and its financial guidance with respect to several financial key ratios are in line with the current rating result. Plans to scale up growth capex over the coming years will, however, most likely lead to an increase in leverage, but we expect Fortum's financial profile to remain below its financial target of Net financial debt / comparable EBITDA of 2.0 – 2.5 for the next year. However, the increased exposure to Nordic power price volatilities might lead to increased volatilities in EBITDA and cash-flow generation, which in turn might cause higher fluctuations in financial key ratios related to internal financing power. In anticipation of the higher earning volatilities Fortum's new dividend strategy targets distributions of 60 – 90% of comparable EPS. We believe that this offers some flexibility in cash management but think that this dividend is rather aggressive and is a limiting factor for the rating.

The new strategy includes a controlled exit from the Russian market with planned divestments as the preferred path. Because any Russian divestments will be subject to regulatory approvals by the Russian authorities it remains unclear exactly how this will develop. We do however note that with the recognised impairments on its Russian assets over the year that Fortum already reduced the risk of further potential losses.

#### Outlook

The one-year outlook for the unsolicited corporate issuer rating of Fortum Oyj is **stable**. The outlook reflects Fortum's position, having hedged approximately 75% of its anticipated Nordic power sales volumes in 2023 at a price of EUR 58/MWh, which is slightly lower than the realized average power price of 2022 of EUR 59.9/MWh. Additionally the long-term Nordic future system price continues to be above the long-term average. As a result we expect earnings for the business year 2023 to be in line with 2022.

**Reference:**

The relevant rating factors (key drivers) mentioned in this section are predominantly based on internal analyses, evaluations from the rating process, the derived valuations of the analysts participating in the rating and, if applicable, 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".

**Excerpts from the financial key figures analysis 2022:**

+ Revenues, EBITDA, EBIT, EAT

+ Net total debt / EBITDA adj.

+ Equity ratio

+ Total Assets

- EBITDA / EBIT interest coverage

**General rating factors** summarize the key issues which – 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 (-).

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

**Relevant rating factors**

Table 1: Financials I Source: Fortum Oyj Annual Report 2022, standardized by CRA

Fortum Oyj Selected key figures of the financial statement analysis Basis: Annual accounts and report of 31.12. (IFRS, etc.)	CRA standardized figures <sup>1</sup>	
	2021	2022
Sales (million EUR)	6,422	8,804
EBITDA (million EUR)	4,913	1,843
EBIT (million EUR)	4,326	1,277
EAT based on continuing operations (million EUR)	4,008	1,011
EAT after transfer based on continuing operations (million EUR)	3,985	1,011
Total assets (million EUR)	147,541	24,376
Equity ratio (%)	8.39	35.37
Capital lock-up period (days)	690.67	29.85
Short-term capital lock-up (%)	1,315	102.18
Net total debt / EBITDA adj. (Factor)	63.07	4.67
Ratio of interest expenses to total debt (%)	0.11	1.14
Return on investment (%)	2.83	4.94

**General rating factors**

- + Systemic importance for Finland
- + Majority participation of the Finnish government; close relationship between Fortum and the Finnish government
- + Strong market position in the Nordic countries
- + High degree of CO<sub>2</sub> free electricity generation in Europe
- + Generally increasing energy demand
- + Sound financial profile
  
- Increased exposure to Nordic power prices
- Expected ongoing increased market volatility in European power markets
- Changes in environmental and fiscal legislation (i.e. windfall taxes in Finland)
- Dependency on fuel suppliers (i.e. coal, uranium)

**Current rating factors**

- + New strategic alignment
- + Divestment of the participation in Uniper SE
- + Significant increase in achieved average power price
- + Current financial figures better than targeted financial targets
- + Realization of significant tax exempt capital gains due to divestments of several participations
- + Nordic system electricity forward price higher than long-term average

<sup>1</sup> 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.

- Significant impairments recognized in Russian segment
- Significant increase in margining requirements due to market price volatilities
- Potential divestment of Russian assets dependent on approval of Russian authorities
- Relatively high amount of debt will reach maturity during the 2023 business year; Fortum is looking to rebalance its maturity profile during the business year

#### Prospective rating factors

- + Reducing exposure to Nordic power prices
- + Reduced volatility on European energy market; reduction in geo-political risks
- + Prospective sale of Russian assets without a loss
- + Further improvement of financial key figures
- Lower ongoing generated achieved power price (Decreasing operating margins)
- Unanticipated (regulatory) difficulties with regard to the prospective sale of Russian assets
- Deterioration of financial key figures

#### ESG-factors

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

At the start of March 2023 the Group announced significantly stricter sustainability targets that have been made possible by the divestment of its participation in Uniper SE and its planned exit from the Russian market. Fortum's electricity generation fleet (excluding Russia) is already predominantly based on CO<sub>2</sub> free electricity and is among the lowest in terms of CO<sub>2</sub> emissions in Europe with total emissions of 25g/KWh for power generation and 97% of CO<sub>2</sub> free power generation.

With the newly published targets Fortum aims for climate neutrality for Scope 1, 2 and 3 by 2030 in comparison with the previously targeted 2050 and now plans to exit coal by 2027 instead of the previously targeted 2035 – 2038. The Group is committed and set its emission reduction targets in line with the science-based targets of a 1.5 degree Celsius scenario. For its power generation it now developed a specific emission target of 10g/KWh by 2028 for power generation and 20g/KWh for total energy production. Additionally the Group is committing to no further net loss of biodiversity (excluding aquatic impacts) from existing and new operations (Scope 1, 2) from 2023 onwards and aims to also reduce its dynamic terrestrial impacts by 2030 by 50% against 2021.

To accomplish the targets the Group has planned to allocate EUR 2.4 billion to capital expenditure between 2023 and 2025, of which EUR 1.5 billion to growth capital expenditure in clean energy. EUR 800 of this has already been allocated to the Pjelax wind farm, and the lifetime extension of the Loviisa nuclear power plant and waste heat usage from Microsoft data centres. The residual EUR 700 million still remains uncommitted.

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](#).

**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.

**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.

**Best-case scenario: BBB+**

In our best-case scenario for one year, we assume an unsolicited corporate issuer rating of BBB+. This scenario reflects an achieved average power price for the Generation segment higher than the realized power prices of the 2022 business year resulting in an improved operating in comparison to the prior year. Additionally, this scenario also assumes a divestment of the Russian assets without a significant loss, and that financial indebtedness remains relatively stable.

**Worst-case scenario: BBB-**

In our worst-case scenario for one year, we assume an unsolicited corporate issuer rating of BBB-. In this scenario we continue to assume increased volatility on Nordic electricity markets, but we assume a substantially lower average Nordic power price. This leads to a significant reduction in earnings and operating cash-flow in comparison to the prior year due to a fall in the achieved power price on Nordic power generation despite its hedged position in the power markets. Also, the forward hedged Nordic power price position for 2024 will also be significantly lower. As a result the Group has to increase leverage in order to finance its planned capital expenditure. Additionally, Fortum is unable to sell its Russian assets, whilst the geo-political situation remains unchanged, which keeps weighing on its risk profile.

**Business development and outlook**

The Russian invasion in Ukraine changed Fortum's operating environment completely. At the end of 2022 its participation in Uniper was sold to the German government. This solution was necessary as the Uniper segment incurred substantial losses following the Russian gas curtailments. At the end of the year Uniper was, in accordance with IFRS 5, reclassified to discontinued operations, which significantly affected Fortum's consolidated earnings and cost structure. Furthermore, because of the Russian invasion and the current geo-political landscape Fortum decided to exit the Russian market and will be seeking to divest its Russian assets.

Increased market volatility in the European energy markets led to significantly higher average power prices, increasing Fortum's revenues to EUR 8,804 million (2021: EUR 6,422 million) based on continuing operations. The growth in revenues was predominantly driven by the Consumer Solutions's retail activities, and to a lesser extent due to the Generation segment. The Consumer Solutions segment's revenues increased to EUR 4,578 million (2021: EUR 2,622 million) driven by higher electricity and gas prices in the Nordics. The Generation segment also benefited from the higher sales prices and increased revenues to EUR 3,655 million (2021: EUR 2,869 million) despite lower power generation caused by reduced hydropower due to lower inflow in the segment's power generation areas and lower hydro reservoir levels. The increase in the Generation segment revenues was caused by a higher achieved average power price of EUR 59.0/MWh (2021: EUR 42.8/MWh) due to the higher Nordic system power prices during the year.

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.

Table 2: Overview of revenues and operating profit per segment | Source: Fortum Oyj Annual Report 2022

In EUR million	Revenues		EBIT	
	2021	2022	2021	2022
December 31				
Generation	2,869	3,655	1,066	1,403
City Solutions	1,302	1,282	2,671	719
Consumer Solutions	2,622	4,578	495	-149
Other operations	138	136	-134	-6
Netting of Nord Pool transactions and internal eliminations	-1,413	-1,877		
<b>Continued operations (Excl. Russia)</b>	<b>5,118</b>	<b>7,878</b>	<b>4,098</b>	<b>1,967</b>
Russia	761	856	227	-690
<b>Continued operations</b>	<b>6,422</b>	<b>8,804</b>	<b>4,325</b>	<b>1,277</b>
Discontinued operations (Uniper SE)	106,127	128,102	-4,913	-16,402

Operating profit during the year was substantially affected by non-recurring and non-operating effects. Impairments were recognized in the Russian segment of EUR -905 million due to significant uncertainties surrounding the future of its Russian assets. Further events affecting comparability were negative fair value changes of EUR -393 million in non-hedge accounted derivatives. These factors significantly reduced operating profit, but the decrease was partially offset by tax-exempt capital gains of EUR 785 million in relation to the divestment of its participations in Fortum Oslo varme AS, Recharge and Plugsurfing. When adjusted by these effects in this year and the prior year, operating profit would have increased, driven by the significantly higher achieved power prices in the Generation segment.

Table 3: Reconciliation of comparable operating profit to reported operating profit | Source: Fortum Oyj Annual Report 2022

Reconciliation from comparable operating profit to reported operating profit		
in Mio. EUR	2021	2022
<b>Comparable operating profit</b>	<b>1,429</b>	<b>1,871</b>
Impairment charges and reversals	-35	-905
Capital gains and other related items	2,673	785
Changes in fair value of derivatives hedging future cash flow	264	-393
Other	-6	-80
<b>Reported operating profit</b>	<b>4,325</b>	<b>1,277</b>

Earnings before taxes decreased to EUR 455 million (2021: EUR 4,332 million), and was mainly affected by non-recurring items related to Russia. For instance, Fortum recorded an impairment in its share of profits of associates and joint ventures of EUR -414 million related to its participation in TGC-1, as well as EUR -62 million in renewables joint ventures in Russia. Additionally the finance costs also included expected credit losses of EUR -117 million on Russian deposits and receivables, as well as EUR -171 million write down of other shares in relation to Russia. For continuing operations EAT stood at EUR 1,011 million (2021: EUR 4,008 million) due to a positive result of EUR 556 million of income taxes following, mainly related to a one-time tax impact in Ireland due to the Uniper divestment.

EAT including discontinued operations stood at EUR -10,290 million due to the effect of the Uniper segment of EUR -11,302 million (2021: EUR -4,121 million) during the business year. Based on continuing operations, and adjusted by non-recurring events, both operating profit as well as net profit were considerably better than the prior year. The Group is currently pursuing a controlled exit out of Russia and its extraordinary write-offs of in total EUR 1.7 billion have reduced the risk of future losses when divesting the assets.

For the business year 2023, we expect a more stable performance now that the Group has divested its participation in Uniper SE. It remains to be seen whether the planned exit from Russia will be successful, as a potential divestiture will require regulatory approvals from the Russian authorities. After the planned exit from Russian operations, Fortum will have a stronger focus on Nordic electricity generation, which will increase its exposure to Nordic power prices. Due to the current geo-political situation, we believe that electricity prices in the European continent will remain volatile for the coming years. With respect to Nordic electricity generation, we believe that it is plausible to expect earnings in line with 2022 for the current business as the Group has already hedged 75% at EUR 58/MWh for the business year 2023 and the Nordic forward price on Nasdaq commodities for the remainder of 2023 stood around EUR 86/MWh and for 2024 at EUR 79/MWh. For the business year 2024 the Group has hedged 45% at EUR 42/MWh.

### Structural risk

Fortum Oyj is the parent Company of the Fortum Group and is headquartered in Espoo, Finland. The Fortum Group is an international energy Group that predominantly focusses on Nordic CO<sub>2</sub> free electricity generation. The Group was significantly affected by the war in Ukraine during the last year. Russia decided to curtail gas deliveries to Uniper SE, which was forced to source replacement volumes on the market against significantly higher prices. As a consequence, the situation became untenable and Fortum divested its participation in Uniper to the German government. Additionally, the Group decided in May to plan the disposal of all its activities in Russia. As a result of these changes, Fortum developed a new strategic alignment and reorganised its operating model, updated its business and reporting structure and appointed new members to the Leadership Team active from March 2023.

According to the new strategy Fortum has four different externally reported segments; Generation, Consumer Solutions, Other and Russia. The Russian segment is separated from the rest of the Group in terms of management and steering of its operations. This is mainly the result of the Group's intention to divest its Russian asset and exit the market and because of the existing sanctions that significantly restrict foreign exchange transfers, limiting the ability to transfer funds. The Group therefore currently does not have access to cash flows or dividend payments from its assets in Russia. The divestment process for its Russian activities is currently ongoing and will be subject to approval by the Russian Government Commission and the President.

The Generation segment will be divided into the business units Hydro Generation, Nuclear Generation, Renewables and Decarbonisation and Corporate Customers and Markets. The Hydro generation business unit will be responsible for operating, maintaining and developing Fortum's 159 hydropower plants in Finland and Sweden, which represent a capacity of 4,653. The Nuclear generation business unit will be operating, maintaining and developing its fully owned Loviisa power plant and also manages its participations in the co-owned nuclear assets in Finland and Sweden. All of the Group's participations, including the fully owned Loviisa power plant have a total generation capacity of 2,823 MW. The Renewables and Decarbonisation business unit will be responsible for execution and project development of wind and solar projects and also carries responsibility for the district heating and cooling business and the decarbonisation of heat

production assets. Furthermore, it will develop Fortum's capabilities and projects in clean hydrogen in the Nordics. The Corporate Customers and Markets business unit will carry responsibility for hedging and value creation activities in both the physical and financial power markets. The business unit will lock in revenues for Fortum's power generation and manage supply for the Consumer Solutions business unit. Furthermore, it will be the customer interface for large industrial customers and pursue long-term value through power demand creation in the Nordic market.

The Consumers solutions business unit will be offering energy solutions to consumers and SME's in the Nordics and Poland, including customer service and invoicing services. The Circular Solutions, which will be reported for under the segment "Other" will operate, maintain and develop Fortum's recycling and waste assets and will develop and be reported separately from the core business. The corporate functions, such as enabling functions and corporate management will support all of the business units.

Due to a share issue of 8.97 million additional new ordinary registered shares during the business year 2022 the Finnish state increased its share from 50.76% to 51.26%. The other participations are scattered among many other different shareholders, with LLmarinen Mutual Pension Insurance Company being the second largest shareholder with a participation of 1.97% as of the end of 2022. As a result of its ownership, the systemic relevance for Finland and the provided bridge financing by the government owned Solidium we derive a meaningful relationship between Finland and Fortum, leading to an uplift of one notch.

We believe the structural risk profile of the Group is slightly increased. With the divestment of Uniper, Fortum de-risked its structural risk profile. However, the remaining Russian activities increase the Group's structural risk, as any divestiture of the Russian assets will be subject to regulatory approvals. During the business year, the Group recognised significant impairments on its Russian assets. The net assets of its Russian operations are EUR 1.7 billion and this value is based on Fortum's assumption that a controlled exit can be realised. We believe that this is plausible, but see increased geo-political risks. Additionally, the Group's nuclear power plant Loviisa still sources its nuclear fuel from Russia as it is not able to change suppliers quickly due to the required certification and permitting processes, which also could be subject to future sanctions. For the other operations, we have not identified any core risks in connection with the Group's structural risks.

### Business risk

The Russian invasion in Ukraine and geo-political instability have led to increasingly volatile energy markets in Europe. The current situation, with approximately 25% of European gas supply lost during the year, led to significantly higher energy prices. The average system spot price in Nord Pool more than doubled and stood at EUR 136/MWh (2021: EUR 62/MWh) during the business year of 2022. At the end of February 2023, the Nordic system electricity forward price on Nasdaq Commodities for the remainder of 2023 and 2024 were around EUR 86/MWh and EUR 79/MWh respectively, still significantly above the long-term average. We expect that due to the current geo-political landscape and the shift in the supply of raw materials that volatility will persist the coming years.

The Group's new strategic direction, which puts a stronger emphasis on Nordic power generation, will therefore be more exposed to these volatilities. Approximately 90% of the Group's comparable EBITDA, excluding Uniper and the Russian activities, was generated with Nordic power generation during the business year 2022. The relatively high share of EBITDA in the Nordics will increase exposure to Nordic electricity prices. The increased exposure to Nordic energy price volatility is mitigated by financial instruments that hedge the future sale of energy. For the



business year 2023, as of the end of 2022, the Group hedged 75% of its estimated Nordic power sales against EUR 58/MWh and approximately 45% for the 2024 business year with a price of EUR 42/MWh, which significantly reduces the price risk for the short- to middle-term. However, it should be noted that long-term price exposure and market development cannot be mitigated by hedging instruments.

At the end of the year the Group possessed over Nordic generation capacity of 8,576 MW, of which 54% hydro-capacity (4,653 MW), 33% nuclear energy (2,823 MW), 7% condensing (565 MW) and combined heat and power 6% (535 MW). However, due to relatively low hydropower volumes during the year caused by lower inflow in the segment's power generation areas and lower hydro reservoir levels the production of hydro power was relatively seen lower, as 43% was generated by hydropower, 53% by nuclear power and the residual by coal, waste and bioenergy. Excluding the Russian activities the Group has a large portfolio of Co<sub>2</sub> free electricity generation and emits approximately 25g/kWh, which is significantly below most of the European competition, signifying the Group's strong market position in terms of Co<sub>2</sub> free electricity generation.

The Group's business risk profile is intermediate. We believe that the increased volatility in the European energy markets following the curtailments in gas deliveries will continue to persist for the coming years, which will lead to ongoing volatility in the Nordic energy markets. This will increase Fortum's risk profile as it will become significantly more exposed to Nordic energy market, as the vast majority of its EBITDA will be generated by electricity generation in the Nordics. Its hedging strategies are effective but cannot mitigate exposure to long-term market developments. The Group's electricity generation portfolio has low emissions in comparison with its European peers. This reduces pressure to decarbonize emissions and the accompanied investment 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 normal practice, we deducted the 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.

Fortum's new strategy incorporates an updated financial guidance with several new target financial key ratios. It should be noted that the new target financial key ratios do not include the Russian operations as Fortum plans to divest these assets. Under the new financial guidance the Group strives for a long-term financial net debt / comparable EBITDA ratio between 2.0 and 2.5 times and updated its dividend policy with a planned pay-out ratio of 60 – 90% of comparable EPS. For the 2022 business year the board of Directors will propose a dividend of EUR 0.91 per share, corresponding to approximately 75% of the Group's comparable EPS.

The total assets of Fortum decreased significantly to EUR 23,642 million (2021: EUR 149,661 million) following the deconsolidation of Uniper. The negative impact of the Uniper segment remained limited, as its deconsolidation led to a one-time positive effect of EUR 27,966 million, which was mainly related to the deconsolidation of Uniper's segment negative net assets. This net effect limited the net loss to EUR -11,302 million. In addition, the negative net income of the Uniper segment was for EUR -3,337 million attributable to Fortum's consolidated equity. The residual amount of the negative net income and other comprehensive income was allocated to non-controlling interest. The decrease in equity was therefore limited, and Fortum's consolidated adjusted equity amounted to EUR 8,623 million (2021: EUR 12,372 million). The deconsolidation of Uniper therefore led to a significant increase in the equity ratio of Fortum to 35.37% (2021: 8.39%).

The deconsolidation of Uniper significantly reduced the indebtedness to EUR 7,785 million (2021: EUR 17,220 million). The maturity profile with regard to the indebtedness is not well distributed, as EUR 5,909 million will reach maturity within one year. Fortum intends to refinance a significant part of its maturing debt on the bond markets and will try to restructure its maturity profile. Additionally, the Group has the option to extend the maturity of EUR 1.6 billion of financial debt to the end of 2024, and will most likely make use of this option. Due to the good capital market access of the Group we believe that restructuring its maturity profile by refinancing on the bond market will be manageable.

The Group's liquidity has been under pressure during the business year. The increased volatility and higher electricity prices led to significant increases in the net margining requirements. Fortum had to increase its collateral tied up on the Nordic commodities exchange Nasdaq, which increased to EUR 5 billion throughout the year and came down to approximately EUR 2.3 billion at the end of the year. In anticipation of any further potential collateral requirements the Finnish government and Fortum agreed on a EUR 2.35 billion bridge financing loan. Under the terms of the loan the Group drew EUR 350 million for the loan to remain effective. The Nordic power prices decreased in the last months of 2022 and Fortum did not have a need for further withdrawals of the bridge loan, but was prepared for further possible increases in collateral requirements. At the end of the year liquidity stood at EUR 3,919 million (2021: EUR 7,592 million) of liquid funds and committed credit lines of EUR 8,750 million, of which EUR 7,300 million still available at the end of the year. The liquidity position of the Group was sufficient, but it should be noted that this is under the assumption that Fortum will manage to restructure its maturity profile of financial debt and that the Group has to maintain high liquidity due to potential increased margining requirement needs.

We believe that the financial risk profile of Fortum is moderate. With its new strategy and its higher exposure to Nordic power prices its EBITDA might underlie higher fluctuations, which is factored into the Group's new financial guidance. Adjusted by margin receivables, net financial debt stood at EUR 1,084 million (2021: EUR 789 million), which amounted to a net financial debt / comparable EBITDA of 0.4 for continuing operations and 0.6 for continuing operations excluding Russian activities. The current financials offer significant headroom as this is well below the target under the new financial guidance. This headroom is also required because when the achieved power price in the Nordics will decline the Group's EBITDA generation will be negatively affected, which in turn will also have a detrimental affect on key financial ratios. For the year we expect earnings to be in line 2022 results as a significant part of it was hedged at EUR 58/MWh and the Nordic future system price continues to be above the long term average. We however believe that leverage will slightly increase over the coming year. Fortum plans significant investments in growth. Over the period of 2023 – 2025 Fortum plans to allocate approximately EUR 2.4 billion in capital expenditure, of which EUR 1.5 billion allocated to growth projects. The newly implemented dividend policy is in our opinion rather aggressive but at the same time offers some flexibility to counter stronger volatility in earnings.

## Issue rating

### Issue Rating Details

The rating objects of this issue rating are exclusively the long-term issues, denominated in euros, issued by Fortum 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 under the EMTN program with their latest prospectus from 22 June 2022. This EMTN program amounts to EUR 8 billion. The notes under the EMTN program have been issued on an unsubordinated basis, and rank at least pari passu among themselves and with all other present and future unsecured obligations of the issuer. Additionally, the notes benefit from a negative pledge provision and a cross default mechanism.

### Corporate Issue Rating Result

We have provided the debt securities issued by Fortum Oyj with a rating of BBB. The rating is based on the corporate rating of Fortum Oyj. Other types of debt instruments or issues denominated in other currencies by the issuer 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: Overview of CRA Ratings | Source: CRA

Rating Category	Details	
	Date	Rating
Fortum Oyj (Issuer)	17.03.2023	BBB / stable
Long-Term Local-Currency Senior-Unsecured Issues	17.03.2023	BBB / stable

Table 5: Overview of Euro Medium Note program | Source: Fortum Oyj, Base Prospectus dated 21 November 2018

Overview 2023 EMTN Program			
Volume	EUR 8,000,000,000	Maturity	Depending on the respective bond
Issuer	Fortum Oyj	Coupon	Depending on the respective bond
Arranger	City Group	Currency	Depending on the respective bond
Credit Enhancement	None	ISIN	Depending on the respective bond

All future LT LC senior unsecured Notes issued by Fortum Oyj which have similar conditions to the current EMTN program, are 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 6: Financial key ratios | Source: Fortum Oyj annual report 2019 - 2022, structured by CRA

Asset Structure	2019	2020	2021	2022
Fixed asset intensity (%)	79.04	48.82	17.99	42.79
Asset turnover	0.24	1.25	0.06	0.10
Asset coverage ratio (%)	89.68	91.76	84.44	102.86
Liquid funds to total assets (%)	7.20	4.26	5.52	18.24
Capital Structure				
Equity ratio (%)	59.27	26.03	8.39	35.37
Short-term-debt ratio (%)	7.99	37.01	67.93	41.52
Long-term-debt ratio (%)	11.61	18.76	6.80	8.64
Capital lock-up period (in days)	21.17	53.07	690.67	29.85
Trade-accounts-payable ratio (%)	1.39	12.77	8.24	2.95
Short-term capital lock-up (%)	24.23	24.93	1,315.06	102.18
Gearing	0.57	2.68	10.27	1.31
Leverage	1.72	2.80	7.56	8.19
Financial Stability				
Cash flow margin (%)	36.92	20.38	31.87	-74.17
Cash flow ROI (%)	8.84	17.90	1.39	-26.79
Total debt / EBITDA adj.	5.46	21.50	67.11	6.51
Net total debt / EBITDA adj.	4.50	20.26	63.07	4.67
ROCE (%)	6.81	4.31	9.36	21.07
Total debt repayment period	3.69	4.97	20.54	-2.07
Profitability				
Gross profit margin (%)	50.05	9.62	46.76	39.23
EBIT interest coverage	6.69	9.41	28.09	7.13
EBITDA interest coverage	10.14	15.82	31.90	10.30
Ratio of personnel costs to total costs (%)	8.81	2.44	7.72	5.72
Ratio of material costs to total costs (%)	49.95	90.38	53.24	60.77
Cost income ratio (%)	79.91	97.09	54.03	85.66
Ratio of interest expenses to total debt (%)	1.80	0.41	0.11	1.14
Return on investment (%)	7.21	3.42	2.83	4.94
Return on equity (%)	11.48	13.25	29.80	9.63
Net profit margin (%)	27.67	3.78	62.41	11.48
Operating margin (%)	20.53	3.26	67.36	14.50
Liquidity				
Cash ratio (%)	74.68	9.19	7.53	37.27
Quick ratio (%)	199.83	103.50	99.13	123.61
Current ratio (%)	262.41	138.29	120.73	137.77

## Appendix

### Rating history

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

Table 7: Corporate Issuer Rating of Fortum Oyj

Event	Rating created	Publication date	Monitoring until	Result
Initial rating	11.04.2019	25.04.2019	15.10.2019	BBB / stable

Table 8: LT LC Senior Unsecured Issues issued by Fortum Oyj

Event	Rating created	Publication date	Monitoring until	Result
Initial rating	11.04.2019	25.04.2019	15.10.2019	BBB / stable

### Regulatory requirements

The rating<sup>2</sup> 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
<a href="#">Corporate Ratings</a>	2.4	July 2022
<a href="#">Government-related Companies</a>	1.0	April 2017
<a href="#">Non-financial Corporate Issue Ratings</a>	1.0	October 2016
<a href="#">Rating Criteria and Definitions</a>	1.3	January 2018

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

<sup>2</sup> 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 carried out by the following analysts:

Name	Function	Mail-Address
Rudger van Mook	Lead-analyst	R.vanMook@creditreform-rating.de
Sabrina Mascher de Lima	Analyst	S.Mascher@creditreform-rating.de

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

Name	Function	Mail-Address
Tobias Stroetges	PAC	T.Stroetges@creditreform-rating.de

On 17 March 2023, the analysts presented the rating to the rating committee and the rating was determined. The rating result was communicated to the company on 17 March 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.

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

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

#### 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](#).

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