

Rating object	Rating Information	
Fortum Oyj Creditreform ID: 14636114 Incorporation: 07.02.1998 Based in: Espoo, Finland (Main) Industry: power generation industry CEO: Pekka Lundmark <u>Ratingobjekte:</u> Long-term Corporate Issuer Rating: Fortum Oyj Long-term Local Currency (LC) Senior Unsecured Issues	Corporate Issuer Rating: BBB+ / stable	Type: Initial Rating unsolicited
	LT Senior Unsecured Issues, LC: BBB+ / stable	Other: n.r.
	Rating Date: 11.04.2019 Monitoring until: Until rating is withdrawn Initial rating: www.creditreform-rating.de Rating Methodology: CRA „Corporate Issuer Ratings“ CRA „Non-Financial Corporate Issue Ratings“ CRA “Government-Related Companies” Rating history: www.creditreform-rating.de	

Content

Summary	1
Relevant rating factors	2
Business development and outlook ..	3
Structural Risks	5
Business Risks	6
Financial Risks	8
Issue Rating	8
Structured Financial Ratios of Fortum Oyj	10
Appendix	11

Summary

Company

Fortum Oyj/Fortum Corporation (hereafter “Fortum”, “the Company”, “the Group”), headquartered in Espoo, Finland, focuses on the generation and sale of electricity and heat, and provides services and solutions related to waste-to-energy, recycling, as well as resource and energy efficiency improvement for the power generation industry and consumers. The Company is the third largest power generator and the largest electricity retailer in the Nordic and Baltic countries, and one of the major global heat producers. The Company was founded in 1998 through the merger of the IVO Group and the Neste Group, both of them having different activities in the energy sector before the merger. The State of Finland, which holds 50.76% of Fortum’s shares, is its main shareholder. The Group has a leading position in the production of emission-free electricity among EU-providers. The Group is also active in Russia, Poland and India.

In 2018, Fortum generated revenues of EUR 5,242 million (2017: EUR 4,520 million) and an annual profit of EUR 858 million (2017: EUR 882 million).

Rating result

The current rating attests Fortum Oyj a highly satisfactory level of creditworthiness, which represents a low-to-medium default risk. Fortum is well-positioned in the Nordic countries as the third-largest power generation company and the largest electricity retailer. The Company is of strategic importance for Finland as one of its substantial power generation companies. Additionally, the Republic of Finland (CRA: AA+/stable) is the major shareholder of Fortum. Despite the fact that a substantial part of its operations is located outside of Finland, and that Company does not control the Finnish electricity networks, we assume that the Finnish government would be willing to support the Company to meet any possible financial shortfall. For this reason, our rating assessment includes an uplift of one notch compared with the stand-alone rating of Fortum. Despite the negative development of some financial key figures, the financial profile of Fortum still displays an adequate financial profile.

Analysts

Elena Alexeenco
Lead Analyst
E.Alexeenco@creditreform-rating.de

Rudger van Mook
Co-Analyst
R.vanMook@creditreform-rating.de

Neuss, Germany

The Company's new participation in the share capital of Uniper has an adverse impact on the rating. The participation increased the Company's indebtedness and significantly reduced liquidity, resulting in a negative development of some financial key figures. It is also not clear whether Fortum will have a significant influence on the activities of Uniper in the future. Until now, Uniper has striven to remain an independent entity, and Fortum admitted that the talks with Uniper had not proceeded satisfactorily. Our rating assessment will be reviewed if Fortum takes over further shares of Uniper and consequently has to fully consolidate the company.

Outlook

The one-year outlook of the rating is stable. We expect a stable development of the Company's core business. The credit risk position of the Group could worsen following a deterioration of revenues against the background of volatile power prices, a significant increase of indebtedness in the course of growth, or the possibility of Uniper's integration.

Relevant rating factors

Table 1: Financials of Fortum Group | Source: Fortum Oyj Annual report 2018, standardized by CRA

Excerpts from the financial ratios analysis 2018

- + Increased revenues
- + Solid EBITDA
- Increase of net debt
- Worsening of the equity ratio
- Deterioration of Net Total Liabilities / EBITDA adj.

Fortum Oyj Selected values of the financial statement analysis Basis: Annual accounts of 31.12. (IFRS, consolidated)	CRA Standardized figures ¹	
	2017	2018
Revenues (billion EUR)	4.5	5.2
EBITDA (billion EUR)	1.6	1.7
EBIT (billion EUR)	1.2	1.1
EAT (billion EUR)	0.88	0.86
Total assets (billion EUR)	21.1	22.4
Equity ratio (%)	63.77	57.07
Capital lock-up period (days)	25.68	23.26
Short term capital lock-up (%)	33.78	49.83
Net Total Liabilities / EBITDA adj. (Factor)	3.5	6.04
Ratio of interest expenses to debt (%)	2.14	1.54
Return on Investment (%)	5.10	4.45

Note:

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, positive (+) as well as negative (-).

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

General rating factors

- + Strategic importance of the Company for Finland
- + Strong market position in the Nordic region
- + Mix of different energy sources
- + Strong know-how in the production of CO₂-neutral energy
- + Generally increasing energy demand
- + Stable ownership of the Republic of Finland
- + High market-entry barriers

¹ The original consolidated annual accounts of Fortum Oyj have been adjusted to a standardized form for analytical purposes. For instance, with the calculation of the analytical equity ratio, we deducted the active deferred taxes and goodwill, and added the passive deferred taxes. The figures depicted here might therefore deviate from the original values.

- Volatile power prices
- Changes in environmental and fiscal legislation
- Dependency on changing and increasingly extreme climate conditions and other exogenous factors
- Greater political and economic risks in Russia and other merger countries
- Dependency on fuel suppliers

Current rating factors (Rating 2019)

- + The Uniper investment was financed by 50% own funds
- + Satisfactory cash generation capacity
- + Increase of power prices
- Increased net debt and deterioration of some financial ratios
- Weak operational hydro performance
- Strategy with regard to Uniper remains unclear

Prospective Rating factors

- + Development of renewable energy sources and of innovative business fields
- + New acquisitions
- + Diversification through growth in foreign countries
- + Resolving the ongoing difficulties with regard to the strategy of Uniper
- Structural, administrative and organisational changes in the course of integration of acquired companies (also concerning Uniper)
- Increase of leverage or deterioration of revenues with a view to volatile energy markets
- Significant dividend payments despite of increased leverage

Prospective rating factors are factors and possible events that – according to the analysts as per the date of the rating – would most likely have a stabilizing or positive effect (+) and a weakening or negative effect (-) on future ratings, if they occurred. This is not a full 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.

Best-case-Scenario	BBB+
Worst-case-Scenario:	BBB

Note:

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

Best-case-Scenario

In our best-case scenario for one year, we assume a rating of BBB+. We assume that the Company's key financials will remain stable despite the light increase of the net financial debt, announced dividend payments for 2018 and the share-buyout program.

Worst-case-Scenario

In our worst-case scenario for one year, we assume a rating of BBB. This could be the case if the financial debt increases significantly, combined with weak operative results, as well as following the consolidation of Uniper.

Business development and outlook

The financial performance of Fortum in 2018 was particularly influenced by increasing CO₂ emission allowance prices, volatile commodity and power prices, as well as dry hydrology in the Nordic countries. The decision of the EU to tighten its CO₂ emissions trading scheme caused the increase of CO₂ prices from EUR 8 per ton at the beginning of the year to EUR 25 per ton at the end of 2018. At the end of 2018, the Nordic water reservoirs were at 74 TWh, which was nine TWh lower than the long-term average and 12 TWh below the year-end level of 2017. In the third quarter of 2018, Fortum's hydropower production dropped to a historic low. The higher costs for coal condense, combined with the weak hydrological situation, were the main reasons for

the increase in power prices in the Nord Pool countries. The average system spot price for 2018 increased by nearly 50% to EUR 44 per MWh (2017: EUR 29.4 per MWh).

Table 2: The development of Business of Fortum Oyj. Source: Consolidated annual report 2018

Fortum Oyj		
In EUR million	2017	2018
Sales	4,520.0	5,242.0
EBIT	1,157.0	1,140.0
Comparable operating profit	811	987
EAT	882	858

In the 2018 financial year, Fortum's sales increased by EUR 722 million (+16%) to EUR 5,242 million (2017: EUR 4,520 million), mainly driven by higher prices and the consolidation of Hafslund². The comparable (adjusted) operating profit increased by 21.7% to EUR 987 million (2017: EUR 811 million), mainly as a result of the higher power prices, positive impact from the consolidation of the Hafslund business, and profit from the sale of a 54% share of Fortum's Indian solar power plants. The adjustments include impairment charges, capital gains, changes of fair value of derivatives, as well as nuclear fund adjustments. The total effect of the comparability adjustments made in 2018 amounted to EUR 151 million, significantly below the previous year's adjustments (EUR 347 million), which included a one-off capital gain of EUR 324 million from the divestment of Hafslund ASA. The overall positive performance of the Group was partially offset by low hydropower production volumes, especially in the third quarter, and by a weakened Russian rouble.

The profit from associates and joint ventures decreased from EUR 148 million to EUR 38 million, mainly due to nuclear-related adjustments of EUR -37 million and other items related to nuclear decommissioning in the amount of EUR -33 million. The comparison period included the share of profit from Hafslund ASA of EUR 39 million, which was divested in August 2017.

The profit for the year amounted to EUR 858 million (2017: EUR 882 million).

Table 3: The development of individual corporate divisions in 2018 | Source: Consolidated annual accounts of Fortum Oyj

Fortum Oyj according to individual corporate divisions in 2018								
in EUR million	Generation		City Solutions		Consumer Solutions		Russia	
	2017	2018	2017	2018	2017	2018	2017	2018
Sales	1,677	1,837	1,015	1,094	1,097	1,759	1,101	1,069
Comparable operating profit	478	631	98	113	41	53	296	271

With regard to Generation, the decline in power generation due to lower hydropower volumes in the third and fourth quarters was more than compensated by the power prices obtained in 2018 due to higher spot prices. The development of the City Solutions and Consumer Solutions

² Norwegian power company that was taken over by Oslo Municipality and Fortum in August 2017 and subsequently reorganized.

divisions was mainly driven by the consolidation of the Fortum Oslo Varme. Sales in Russia decreased despite higher generation and heat production volumes, mainly due to the weaker rouble and due to some transfers in the heat business in Tyumen.

In September 2017, the Company announced its decision to take on shares of Uniper, an energy company based in Düsseldorf, which was formed by a spin-off of EON's fossil assets. Uniper has been active since 2016 and employs about 12,000 employees in over 40 countries. Around one third of its staff are based in Germany. After an approval process by various authorities and having closed the deal, Fortum's share in Uniper currently stands at 49.99%. Uniper has been recognized on the balance sheet as an associated company since 30. June 2018. In 2018, Fortum's financial statements only include its share in Uniper's third quarter results (EUR -2 million). It is not clear, whether Uniper will remain an associated company consolidated at equity or whether Fortum will increase its share in Uniper. The regulatory framework in Russia does not allow Fortum to hold more than 50% of Uniper's shares. To date, neither of the companies have published any clear statement regarding their common strategy.

In 2018, Uniper generated sales of EUR 78,176 million (2017: EUR 72,238 million) and a loss of EUR -492 million (2017: EUR -538 million). The annual result was negatively impacted by impairments on the coal-fired power plants Datteln and Provence, on German gas storage assets totaling EUR 681 million, as well as by negative effects of commodity derivatives evaluation. The adjusted EBIT amounted to EUR 615 million. Uniper suggested dividend payments totaling EUR 329 million. For the current year, Uniper plans an EBIT of EUR 550 million based on the ceasing of some one-off effects in the future.

The global energy market development is currently dominated by the overall trend of decarbonization in order to reduce greenhouse gas emissions. The market is also simultaneously influenced by the increasing role of gas as an energy source in the current transition to CO₂-free power generation. Fortum is generally well-positioned with its low CO₂ emissions in the Nordic countries. In Russia, the Company uses gas as a fuel source and is, to a lesser extent, active in wind power generation. The German Coal Commission suggests a completely exit of coal from the German energy mix by 2038. It is particularly important for Fortum's investment in Uniper. Currently, Uniper is building a new coal-fired power plant in Datteln, Germany, which should be operative by 2020. Its construction began in 2006. Uniper reported to have invested more than EUR 1.5 billion in Datteln. The Coal Commission suggested compensations for coal-fired plant operators in the event that they have to stop operations, or if construction of the new plants is not commenced. It remains to be seen whether construction of Datteln will be commenced in view of the political situation in Germany, and which financial consequences this situation might have.

Structural Risks

Fortum's shares have been listed on Nasdaq Helsinki since 18 December 1998. Fortum has one class of shares. By the end of 2018, a total of 888,294,465 shares had been issued. Each share entitles the holder to one vote at the Annual General Meeting and to an equal dividend. At the end of 2018, Fortum's share capital was EUR 3,046 million. The State of Finland is the majority owner of Fortum with 50.76% of the shares as of 31 December 2018. The Finnish Parliament has authorized the Government to reduce the state share to no less than 50.1% of the share capital and voting rights. The remaining shareholders structure comprises corporations, state organisations, pension funds and households, of which no one holds a considerable share. The Group

has some degree of systemic relevance for Finland because it produces a notable amount of the Finnish electricity.

The Company prepares its financial statements and interim reports in accordance with IFRS as adopted by the EU, and operated with an average headcount of 8,286 employees by the end of the business year 2018.

Fortum operates 124 hydro power plants, 27 combined heat and power, condensing, and nuclear power plants, as well as three wind and three solar power plants with a total power generation capacity of 13,700 MW and total heat production capacity of 15,000 MW. The Company supplies heat in 23 cities and towns and operates five waste treatment facilities. Its core markets are the Nordic and Baltic countries, Russia, Poland, and India.

Fortum's main business divisions are Generation, City Solutions, Consumer Solutions, and Russia. The division Generation comprises power production including nuclear, hydro, wind and thermal power production in the Nordics, as well as global services of power portfolio optimization, industrial intelligence and nuclear power. City Solutions focuses on developing sustainable solutions for urban areas including heating, cooling, waste-to-energy, biomass, and other circular economy solutions, as well as solar power production in the Nordics, the Baltic region and Poland. Consumer Solutions is responsible for the electricity and gas retail business in Finland, Sweden; Norway, and Poland, and is with nearly 2.5 million customers the largest electricity retailer in the Nordics region. The Russia division covers power and heat generation and sales in Russia.

The governing bodies of Fortum are the general meeting of shareholders, the Board of Directors, and the President and CEO supported by the Executive Management. The Board of Directors comprises five to ten members. Its activities are related to the Group's strategy, growth options, supervision and steering of management, and ensuring of the proper control of the Company's accounting and financials. The President and CEO, together with executive Management, are responsible for the implementation of the company's strategic targets according to the framework approved by the Board of Directors. Furthermore, Fortum has an informal Advisory Council which consists of 13 representatives of Fortum's stakeholders and three employee representatives, and which should facilitate the dialogue between the Company and its stakeholders.

Based on publicly available information, we assume sufficiently developed structures with regard to risk management, accounting, and controlling as well as other administrative and operational functional areas, and do not see any core risks in connection with the Company's structure. It remains to be seen whether Fortum will increase its share in Uniper, which could imply possible structural changes and integration processes, or if Uniper will remain a financial investment of Fortum and an entirely independent entity.

Business Risks

The Company has a strong market position in the Nordic countries as the third largest power generator and the largest electricity retailer in the region. As two-thirds of the Group's generation come from hydro, nuclear and renewable energy sources, the Company is among the lowest-emitting generators in Europe.

The Company's operations are exposed to risks related to climate change, e.g. changes in weather patterns, hydrological and wind conditions, flooding, and extreme temperatures, both physically as possible disruptive factors for continuous operation and as factors for short-term fluctuations on the relevant markets. The trend of wholesale prices of electricity, CO₂ allowances and fuel prices, especially of natural gas, uranium, coal, and prices for biomass-based fuels as well as their availability and volumes, have a significant impact on Fortum's performance. These

prices are subject to changes in a range of exogenous factors such as temperature, and industry demand as a result of the overall economic activity, regulatory environment, as well as prices on the spot markets, on which the Company does not have any influence. The Company uses a range of measures to mitigate price and volume risks, such as hedging by entering into commodity derivative contracts, active portfolio management, and client contracts with conditions that correlate with external factors as price levels on commodity markets or availability of resources and weather conditions. To a certain extent, the Company can also mitigate its exposure to fuel prices by switching between different fuels using its flexible generation capacities or by transferring it to customers.

The overall impact of relevant environmental regulations is rather intensive and complex. Additional uncertainties are linked with different energy policies as well as regulation and fiscal particularities in the countries in which Fortum operates, despite the overall harmonization trends and the increase of interconnections between the EU countries. The trend to an integrated market will probably intensify competition and could create additional downward pressure on electricity and heat prices on the regional markets.

According to the regulation environment in Finland and Sweden, where Fortum operates its nuclear and hydropower plants, third-party liabilities relating to nuclear accidents and dam failures are strictly the plant operator's responsibility and must be covered by insurance. Nuclear plant operators both in Finland and Sweden have to make annual contributions to the state fund which should cover the costs of the final disposal of the spent fuel, the management of the radioactive waste, and of the nuclear power plant decommissioning. Nevertheless, the actual costs could exceed the part covered by the state provisions, which would also be the responsibility of the nuclear plant operator.

Fortum's activities in Russia are subject to greater political, economic and social risks associated with this region as well as to risks of further reciprocal sanctions between Russia and EU.

Having strong competencies in clean energy and as one of the lowest CO₂-emitters among the European energy generators, the Company sees significant opportunities in the global trends of the transition towards CO₂-free energy. On the other hand, the future market environment is increasingly uncertain. Bearing that in mind, the Company's strategy includes the improvement of its operational excellence and an increase of flexibility to ensure benchmark performance whilst focusing on cash flow and efficient use of its balance sheet. The current business portfolio is subject to continuous reviews in line with the aim of increasing shareholder value as well as with the changing business environment. The Company aims to grow in the power value chain through further development of CO₂-free power generation as well as to create new businesses that would be independent of power prices. For solar and wind investments, Fortum plans further growth, mainly through partnerships and co-operations, to maintain an asset-light structure. By implementing its strategy, the Company strives to maintain a long-term ratio of net debt to EBITDA at the level of approx. 2.5.

Generally, in view of rising demand for both low-carbon energy and resource- and energy-efficient technologies against the background of the overall growing concern about climate change, the Company has chosen a promising market concept and is well positioned with its know-how in CO₂-free power generation and circular economy. The Group holds the view that the investment in Uniper with 50% of its generation capacity based on gas, 30% based on coal, and 20% based on hydro and nuclear power will create a sound mixture of clean and secure assets as a basis for a transition to a low carbon energy system. Nevertheless, Fortum has admitted that during 2018 the discussions with Uniper did not proceed as anticipated. It remains to be seen,

to what extent Fortum will be able to influence the strategy of Uniper, as well as whether Uniper will remain an associated company of Fortum or whether Fortum will increase its share in Uniper.

Financial Risks

For the purposes of its financial ratio analysis, Creditreform Rating AG (CRA) adjusted the original values in the financial statements.

As of 31 December 2018, the analytical total assets amounted to EUR 22,389 million (2017: EUR 21,107 million). The main changes in the assets and liabilities structure reflect the completed acquisition of Uniper in 2018. The balance sheet item 'participating interests' increased from EUR 1,900 million to EUR 5,978 million, cash and cash equivalents decreased from EUR 3,182 million to EUR 557 million. The total consideration of EUR 3.7 billion was financed with own cash reserves of EUR 1.95 billion and a bridge loan of EUR 1.75 billion. Hence, the net debt increased significantly from EUR 988 million to EUR 5,509 million, as did the ratio of net financial debt to comparable EBITDA, which increased from 0.8x to 3.6x as of 31 December 2018. Fortum expects to reduce the net financial debt to EBITDA ratio to 2.5x using its cash generation capacity and dividend payments from Uniper, which are expected to amount to nearly EUR 160 million for 2018 and to be at least on the same level for the 2019 financial year.

The analytical equity decreased from EUR 13,460 million to EUR 12,777 million. The decrease was mainly due to dividend payments of EUR 977 million for the 2017 financial year, as well as due to the impact of fair value changes of cash flow hedges (EUR -599 million) and translation differences (EUR -518 million). The equity ratio decreased from 63.77% to 57.07% and is, in our view, still solid.

Liquid funds totaled EUR 584 million (2017: EUR 3,897 million). Additionally, Fortum had undrawn committed credit facilities of EUR 1.8 billion. The Company initiated an EMTN program of up to EUR 8 billion, which was used to 30% as of 31. December 2018. In the current year, Fortum issued another EUR 2.5 billion in the framework of its EMTN programme. The issue proceeds are to be used for general corporate purposes including refinancing of debt. For 2018, the Company has announced a dividend payment of EUR 977 million and a share buyout program for the repurchasing of up to 20 million of shares, which will cause additional cash outflows. That is why we expect an initial further deterioration of financial ratios.

Taking into consideration the Company's liquid funds, its unused credit lines, the additional inflows from the Uniper investment, and the annual EBITDA of up to EUR 1.5 billion, we hold the view that the Company will be able to finance its current operations and its planned yearly capex of EUR 600-700 million (2018: EUR 579 million, without Uniper-deal) in the short and medium term. It remains to be seen, whether the Company will be able to achieve its envisaged net debt to EBITDA ratio of 2.5x in the medium term perspective.

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 21 November 2018. 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 2: Overview of CRA Ratings | Source: CRA

Rating Category	Details	
	Date	Rating
Fortum Oyj (Issuer)	11.04.2019	BBB+ / stable
Long-term Local Currency (LC) Senior Unsecured Issues	11.04.2019	BBB+ / stable
Other	--	n.r.

Table 3: Overview of Euro Medium Note program | Source: Fortum Oyj, Base Prospectus dated 21 November 2018

Overview 2018 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.

Structured Financial Ratios of Fortum Oyj

Table 6: Financial ratios of Fortum Oyj (Group) | Source: Fortum Oyj annual report 2018, standardized by CRA

Asset Structure	2015	2016	2017	2018
Fixed asset intensity (%)	51.61	60.22	65.31	77.74
Asset turnover	--	0.16	0.21	0.24
Asset coverage ratio (%)	129.37	123.06	106.04	80.21
Liquid funds to total assets (%)	14.64	7.75	15.08	2.49
Capital Structure				
Equity ratio (%)	62.51	63.96	63.77	57.07
Short-term-debt ratio (%)	14.47	10.59	9.31	13.71
Long-term-debt ratio (%)	4.26	10.15	5.48	5.29
Capital lock-up period (in days)	26.27	32.46	25.68	23.26
Trade-accounts-payable ratio (%)	1.11	1.49	1.51	1.49
Short-term capital lock-up (%)	86.27	53.74	33.78	49.83
Gearing	0.37	0.44	0.33	0.71
Leverage	--	1.58	1.57	1.66
Financial Stability				
Cash flow margin (%)	--	24.17	22.94	22.85
Cash flow ROI (%)	--	4.05	4.91	5.35
Debt / EBITDA adj.	7.30	7.68	6.00	6.41
Net Debt / EBITDA adj.	4.45	6.02	3.50	6.04
ROCE (%)	5.27	4.05	6.00	5.85
Debt repayment period	--	4.08	1.64	4.90
Profitability				
Gross profit margin (%)	56.20	49.61	49.09	46.68
EBIT interest coverage	-0.74	3.75	7.05	7.70
EBITDA interest coverage	0.97	5.95	9.88	11.32
Ratio of personnel costs to total costs (%)	10.15	9.20	9.36	8.76
Ratio of material costs to total costs (%)	43.80	50.39	50.91	53.32
Return on investment (%)	19.22	3.11	5.10	4.45
Return on equity (%)	--	3.61	6.46	6.56
Net profit margin (%)	119.77	13.88	19.51	16.41
Interest burden (%)	--	93.84	96.02	91.32
Operating margin (%)	-4.34	17.43	25.60	21.75
Liquidity				
Cash ratio (%)	101.17	73.19	161.93	18.14
Quick ratio (%)	286.25	302.01	292.16	122.08
Current ratio (%)	334.33	375.59	372.67	162.31

Appendix

Rating history

The rating history is available at:

<https://www.creditreform-rating.de/de/ratings/published-ratings/>

Corporate issuer rating of Fortum Oyj

Event	Rating date	Publication date	Monitoring period	Result
Initial rating	11. Apr. 2019	www.creditreform-rating.de	Withdrawal of the rating	BBB+ / stable

Regulatory requirements

The present rating is an unsolicited rating. Creditreform Rating AG was not commissioned by the Issuer with the preparation of the rating. The present analysis was prepared on a voluntary basis.

The rating is based on the analysis of published information and on internal evaluation factors. The quantitative analysis is primarily based on the last annual report of the Issuer, the basis prospectuses and on press releases of the company. The information and documents meet the requirements and are in accordance with Creditreform Rating AG's rating methodology as published.

The rating was conducted on the basis of Creditreform Rating's "Corporate Issue Ratings" methodology, the "Government related companies" methodology and the "Corporate Issuer Rating" methodology. A complete description of Creditreform Rating's rating methodologies is published on the following internet page: www.creditreform-rating.de.

The documents submitted and information gathered were sufficient to meet the requirements of Creditreform Rating AG's rating methodology. A complete description of Creditreform Rating's rating methodologies and Creditreform's basic document "Rating Criteria and Definitions" is published on the following internet page:

www.creditreform-rating.de/en/regulatory-requirements/

This rating was carried out by analysts Rudger van Mook (r.vanmook@creditreform-rating.de) and Elena Alexeenco (e.alexenco@creditreform-rating.de), both located in Neuss, Germany. A management meeting did not take place.

The rating was presented to the rating committee on 11 April 2019. The company previously received the rating result along with the key reasons leading to the rating prior to publication, and was given at least one full working day to appeal the rating committee's decision and to provide additional information. The rating decision was not amended following this examination.

The rating will be monitored until CRA removes the rating and sets it to non-rated (n.r.).

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 (CRA) is

allowed to issue credit ratings within the EU and is bound to comply with the provisions of the CRA-Regulation.

Please note:

This report exists in an English version only. This is the only binding version.

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, CRA 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, CRA has used following substantially material sources:

Corporate Issuer rating:

1. Annual report
2. Website
3. Internet research

Corporate Issue rating:

1. Issuer corporate rating incl. information used for the Issuer corporate 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 CRA website. Furthermore, CRA 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' 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 '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: <https://cerep.esma.europa.eu/cerep-web/statistics/defaults.xhtml>.

An explanatory statement of the meaning of Creditreform`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.

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

We have assumed that the documents and information made available to us by the client are complete and accurate and that the copies provided to us represent the full and unchanged contents of the original documents. Creditreform Rating AG assumes no responsibility for the true and fair representation of the original information.

This report is protected by copyright. Any commercial use is prohibited without prior written permission from Creditreform Rating AG. Only the full report may be published in order to prevent distortion of the report's overall assessment. Excerpts may only be used with the express consent of Creditreform Rating AG. Publication of the report without the consent of Creditreform Rating AG is prohibited. Only ratings published on the Creditreform Rating AG web pages remain valid.

Creditreform Rating AG

Contact information

Creditreform Rating AG
Hellersbergstraße 11
D-41460 Neuss

Phone +49 (0) 2131 / 109-626
Fax +49 (0) 2131 / 109-627

E-Mail info@creditreform-rating.de
www.creditreform-rating.de

CEO: Dr. Michael Munsch

Chairman of the Board: Prof. Dr. Helmut Rödl