



Financial Statements 2018

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Table of contents

BOARD OF DIRECTORS' REVIEW 2018	2	3. Capital expenditures and acquisitions	44	6. Group structure	74
GROUP KEY FIGURES	18	3.1. Goodwill	44	6.1. Related parties	74
DEFINITION OF KEY FIGURES	21	3.2. Other intangible assets	46	6.2. The Group's subsidiaries and investment in associates	76
CONSOLIDATED FINANCIAL STATEMENTS (IFRS)	23	3.3. Property, plant and equipment	47	7. Off-balance sheet items	78
Consolidated Income Statement	23	3.4. Other shares	49	7.1. Commitments and contingent liabilities	78
Consolidated Comprehensive Income	23	3.5. Business combinations	50	7.2. Events after the balance sheet date	80
Consolidated Balance Sheet	24	4. Working capital and other balance sheet items	51	KEMIRA OYJ FINANCIAL STATEMENTS (FAS)	81
Consolidated Statement of Cash Flow	25	4.1. Inventories	51	BOARD'S PROPOSAL FOR PROFIT DISTRIBUTION AND SIGNATURES	96
Consolidated Statement of Changes in Equity	26	4.2. Trade receivables and other receivables	51	AUDITOR'S REPORT	97
Notes to the Consolidated Financial Statements	28	4.3. Trade payables and other current liabilities	52	QUARTERLY EARNINGS PERFORMANCE	101
1. The Group's accounting policies for the Consolidated Financial Statements	28	4.4. Deferred tax liabilities and assets	53	RECONCILIATION OF IFRS FIGURES	102
2. Financial performance	34	4.5. Defined benefit pension plans and employee benefits	55	SHARES AND SHAREHOLDERS	104
2.1. Segment information	34	4.6. Provisions	59	INFORMATION FOR INVESTORS	107
2.2. Other operating income and expenses	37	5. Capital structure and financial risks	60		
2.3. Share-based payments	39	5.1. Capital structure	60		
2.4. Depreciation, amortization and impairments	40	5.2. Shareholders' equity	62		
2.5. Finance income and expenses	41	5.3. Interest-bearing liabilities	63		
2.6. Income taxes	42	5.4. Financial assets and liabilities	65		
2.7. Earnings per share	43	by measurement categories	65		
2.8. Other comprehensive income	43	5.5. Management of financial risks	68		
		5.6. Derivative instruments	72		

 PART OF THE AUDITED FINANCIAL STATEMENTS 2018

Board of Directors' review 2018

In 2018, Kemira Group's revenue increased 4% to EUR 2,592.8 million (2,486.0) mainly due to higher sales prices. Revenue in local currencies, excluding acquisitions and divestments, increased by 7% with all businesses demonstrating growth.

Operative EBITDA increased 4% to EUR 323.1 million (311.3), as higher sales prices more than offset the increase in variable costs. Operative EBITDA margin was 12.5% (12.5%).

KEY FIGURES AND RATIOS

EUR million	2018	2017
Revenue	2,592.8	2,486.0
Operative EBITDA	323.1	311.3
Operative EBITDA, %	12.5	12.5
EBITDA	314.8	282.4
EBITDA, %	12.1	11.4
Operative EBIT	173.8	170.3
Operative EBIT, %	6.7	6.9
EBIT	148.2	141.4
EBIT, %	5.7	5.7
Finance costs, net	-25.0	-28.9
Profit before taxes	123.3	112.6
Net profit for the period	95.2	85.2
Earnings per share, EUR	0.58	0.52

*12-month rolling average (ROCE, % based on the EBIT).

Kemira provides certain financial performance measures (alternative performance measures), which are not defined by IFRS. Kemira believes that alternative performance measures followed by capital markets and Kemira management, such as organic growth**, EBITDA, operative EBITDA, cash flow after investing activities as well as gearing, provide useful information about Kemira's comparable business performance and financial position. Selected alternative performance measures are also used as performance criteria in remuneration. Kemira's alternative performance measures should not be viewed in isolation to the equivalent IFRS measures and alternative performance measures should be read in conjunction with the most directly comparable IFRS measures. Definitions of the alternative performance measures can be found in the definitions of the key figures in this report, as well as at www.kemira.com > Investors > Financial information. All the figures in this interim report have been individually rounded, and consequently the sum of the individual figures may deviate slightly from the sum figure presented.

**Revenue growth in local currencies, excluding acquisitions and divestments.

EBITDA increased by 11% to EUR 314.8 million (282.4) and the difference to operative EBITDA growth is explained by items affecting comparability.

EPS increased by 13% to EUR 0.58 (0.52) mainly due to higher operative EBITDA and lower items affecting comparability.

The Board of Directors proposes a cash dividend of EUR 0.53 per share (0.53) to the Annual General Meeting 2019, totaling EUR 81 million (81).

EUR million	2018	2017
Capital employed*	1,781.4	1,763.2
Operative ROCE*, %	9.8	9.7
ROCE*, %	8.3	8.0
Cash flow from operating activities	210.2	205.1
Capital expenditure excl. acquisitions	150.4	190.1
Capital expenditure	193.7	190.1
Cash flow after investing activities	29.0	13.0
Equity ratio, % at period-end	44	44
Equity per share, EUR	7.80	7.61
Gearing, % at period-end	62	59
Personnel at period-end	4,915	4,732

FINANCIAL PERFORMANCE, FULL YEAR 2018

Kemira Group's **revenue** increased by 4%, driven mainly by growth in sales prices. Revenue in local currencies, excluding acquisitions and divestments, increased by 7%.

Liikevaihto	2018 EUR million	2017 EUR million	Δ-%	Organic growth*, %	Currency impact, %	Acq. & div. impact, %
Pulp & Paper	1,520.2	1,476.9	+3	+6	-3	0
Industry & Water	1,072.6	1,009.1	+6	+9	-3	0
Total	2,592.8	2,486.0	+4	+7	-3	0

* Revenue in local currencies, excluding acquisitions and divestments

Geographically, the revenue split was as follows: EMEA (Europe, Middle East, Africa) 52% (52%), the Americas 39% (39%), and Asia Pacific 9% (9%).

Operative EBITDA increased by 4% mainly due to higher sales prices, which more than offset increased variable costs. The EUR 16 million volume growth benefit was offset by the EUR 14 million negative currency impact.

Variance analysis, EUR million		Jan–Dec
Operative EBITDA, 2017		311.3
Sales volumes	+15.9	
Sales prices	+149.5	
Variable costs	-129.0	
Fixed costs	-7.3	
Currency exchange	-14.0	
Others	-3.3	
Operative EBITDA, 2018		323.1

Operative EBITDA	2018 EUR million	2017 EUR million	Δ-%	2018 %-margin	2017 %-margin
Pulp & Paper	191.7	197.7	-3	12.6	13.4
Industry & Water	131.5	113.6	+15	12.3	11.3
Total	323.1	311.3	+4	12.5	12.5

EBITDA increased by 11%. The difference to operative EBITDA is explained by items affecting comparability. **Items affecting comparability within EBITDA** included organizational restructuring costs, a gain on sale, and positive adjustments for transaction costs. In the previous year the figure mainly resulted from the organizational restructuring costs and the EUR -12.7 million settlement for the damage claim relating to the alleged old infringement of competition law in the hydrogen peroxide business between 1994–2000.

Items affecting comparability, EUR million	2018	2017
Within EBITDA	-8.3	-28.9
Pulp & Paper	-3.9	-17.9
Industry & Water	-4.4	-11.0
Within depreciation, amortization and impairments	-17.3	0.0
Pulp & Paper	-7.9	0.0
Industry & Water	-9.3	0.0
Total items affecting comparability in EBIT	-25.6	-28.9

Depreciation, amortization and impairments increased to EUR 166.6 million (141.0) including the EUR 15.9 million (16.7) amortization of purchase price allocation. Depreciation, amortization and impairments included **items affecting comparability** of EUR -17.3 million (0.0) related to the write-downs of production units. The write-downs were part of the long-term polymer manufacturing optimization in Industry & Water and the decision to direct more hydrogen peroxide capacity to pulp customers in Pulp & Paper.

Operative EBIT increased by 2% as higher sales prices and volumes more than offset the increase in variable costs and the negative currency impact. **EBIT** increased by 5% and the difference between the two is explained by items affecting comparability.

Finance costs, net totaled EUR -25.0 million (-28.9). **Income taxes** were EUR -28.1 million (-27.4). The reported tax rate was 23% (24%). **Net profit for the period** increased by 12% mainly due to higher operative EBITDA and items affecting comparability

FINANCIAL POSITION AND CASH FLOW

Cash flow from operating activities in 2018 increased to EUR 210.2 million (205.1) due to higher operative EBITDA while cash flow after investing activities increased to EUR 29.0 million (13.0) mainly due to lower capital expenditure excluding acquisitions.

At the end of the period, interest-bearing liabilities totaled EUR 886 million (861). The average interest rate of the Group's interest-bearing liabilities was 1.9% (2.0%). In December, Kemira signed bilateral loan agreements of EUR 150 million, which will mature in 2023, replacing bilateral loan agreements that mature in 2020. The duration of the Group's interest-bearing loan portfolio was 31 months (33). Fixed-rate loans accounted for 79% of the interest-bearing liabilities (75%).

Short-term liabilities maturing in the next 12 months amounted to EUR 240 million (191). On December 31, 2018, cash and cash equivalents totaled EUR 145 million (166). The Group has a total of EUR 440 million of undrawn committed credit facilities.

At the end of the period, Kemira Group's net debt was EUR 741 million (694). The equity ratio was 44% (44%), while the gearing was 62% (59%).

Kemira is exposed to transaction and translation currency risks. The Group's most significant transaction currency risks arise from the Swedish krona, the U.S. dollar and the Canadian dollar. At the end of the year, the denominated 12-month exchange rate risk of the Swedish krona against the euro had an equivalent value of approximately EUR 50 million, 74% of which was hedged on an average basis. The U.S. dollar denominated exchange rate risk was approximately EUR 24 million, 59% of which was hedged on an average basis. The Canadian dollar denominated exchange rate risk against the U.S. dollar was approximately EUR 25 million, 24% of which was hedged on an average basis. The Canadian dollar denominated exchange rate risk against euro was EUR 15 million, of which 69 % was hedged on an average basis. In addition, Kemira is exposed to other transaction risks which mainly are related to the Chinese renminbi, Norwegian krona, Brazilian real, Polish zloty, and Russian ruble with the total annual exposure in these currencies amounting to approximately EUR 72 million.

As Kemira's consolidated financial statements are compiled in euros, Kemira is also subject to a currency translation risk to the extent to which the income statement and balance sheet items of subsidiaries located outside Finland are reported in a currency other than the euro. The most significant translation exposure on revenue and EBITDA derive from the U.S. dollar and the Canadian dollar. Strengthening of currencies against the euro would increase Kemira's revenue and EBITDA through a translation effect.

CAPITAL EXPENDITURE

In 2018, capital expenditure excluding acquisitions decreased 21% to EUR 150.4 million (190.1). Capital expenditure can be broken down as follows: expansion capex 29% (35%), improvement capex 36% (34%), and maintenance capex 35% (31%). The largest investment during the year was the expansion of CEOR polymer capacity in Botlek, Netherlands.

Including acquisitions, capital expenditure amounted to EUR 193.7 million (190.1). Kemira completed the closing of the deal with AKD producer in China. Kemira formed a joint venture - Kemira TC Wanfeng Chemicals Yanzhou ("NewCo") - with Shandong Tiancheng Wanfeng Chemical Technology ("TC Wanfeng"). Kemira has 80% and TC Wanfeng 20% of NewCo.

RESEARCH AND DEVELOPMENT

Research and Development expenses totaled EUR 30.2 million (30.3) in 2018 representing 1.2% (1.2%) of the Group's revenue.

Kemira's Research and Development is an enabler of growth and further differentiation. New product launches contribute to the efficiency and sustainability of customer processes and to improved profitability. Both Kemira's future market position and profitability depend on the company's ability to understand and meet current and future customer needs and market trends and on its ability to innovate new differentiated products and applications.

At the end of 2018, Kemira had 366 (389) patent families, including 1,546 (1,525) granted patents, and 1,042 (1,017) pending applications. During 2018, Kemira applied for 34 (52) new patents. Commercialization of 10 projects related to new products started in 2018 and nine of them are designed to improve customer resource efficiency.

HUMAN RESOURCES

At the end of the period, Kemira Group had 4,915 employees (4,732). Kemira employed 802 people in Finland (803), 1,777 people elsewhere in EMEA (1,768), 1,559 in the Americas (1,514), and 777 in APAC (647).

NON-FINANCIAL INFORMATION

CORPORATE RESPONSIBILITY PRIORITIES

Kemira has systematic procedures in place to evaluate and address economic, environmental and social impacts from its own operations and business relationships. Our corporate responsibility priorities are based on the most material impact through our business model, on the increasing expectations of our customers, investors and other stakeholders, and on our commitment to the Kemira Code of Conduct and internationally agreed sustainability principles. Kemira is a signatory of The United Nations Global Compact as our commitment to implement universal sustainability principles and to respect and promote human rights, implement decent work practices, reduce our environmental impact, and combat corruption. Kemira is also committed to operate according to the principles of Responsible Care®, a voluntary commitment made by the global chemicals industry to drive continuous improvement and achieve excellence in environmental, health and safety, and security performance.

We have three priority areas, which cover the six most material topics and their impact:

Sustainable products and solutions

- Product sustainability: Products improving our customers' sustainability, product design for use-phase resource efficiency.
- Product stewardship: chemical safety management throughout the life cycle of our products.

Responsible operations and supply chain

- Responsible management of our operations to ensure staff safety and to protect our assets and environment. Key topics are Workplace safety and Climate change.
- Supplier management for risk and compliance management.

People and integrity

- People: employee engagement and development of employee competence.
- Integrity: responsible business practices in our own operations and with our business partners.

Kemira measures progress in the priority areas through group-level key performance indicators (KPI) and targets that are approved by the Management Board and reviewed by the Board of Directors. The relevant management processes relating to material corporate responsibility issues are being developed and implemented as part of our integrated management system.

SUSTAINABLE PRODUCTS AND SOLUTIONS

Kemira is committed to ensuring the sustainability of our products and solutions. In 2018, we introduced a KPI to measure the share of revenue from products used to improve use-phase resource efficiency. This KPI provides a crucial linkage to our purpose and strategy.

Kemira's New Product Development (NPD) process evaluates the economic, environmental, and social impacts of any new product, compared to existing benchmarked solutions.

Successful NPD projects must demonstrate both improved sustainability and business benefits at each decision gate to justify the project's continuation, and ultimately the product launch.

Kemira's product stewardship policy defines principles for the proactive management of the health, safety and environmental aspects of a product throughout its life cycle. We also work to find less hazardous and more sustainable alternatives for raw materials. Other measures include ensuring safe transportation, handling, storage and disposal of our products in the value chain.

RESPONSIBLE OPERATIONS AND SUPPLY CHAIN

Kemira is committed to ensuring responsible operations to protect our assets, our environment, employees, contractors, customers and communities. Globally, we aim to bring together all of our operations under the Kemira integrated management system. The Kemira management system defines the way our organization is working through the set of policies, standards, procedures and processes. It also defines the requirements and accountabilities at each level of the organization. Kemira follows the principle that all operations under our Integrated Management System meet the international standards ISO 9001:2015 for quality management, ISO 14001:2015 for environmental management and OHSAS 18001:2007 for occupational health and safety management. Our energy management system is certified to the ISO 50001:2001 standard.

Ensuring workplace safety is a key priority in all our operations. We strive for continuous improvement to reduce our environmental impacts. Kemira has set a target to reduce greenhouse emissions by 20 percentage units by 2020 compared to the baseline year 2012.

Kemira is committed to ensuring compliance with responsible business practices throughout our supply chain. Kemira's Code of Conduct for Suppliers, Distributors and Agents (CoC SDA) sets out principles for responsible business conduct, respect for human rights and provision

of appropriate working conditions, and environmental responsibility. Compliance with the Kemira CoC-SDA is required by all our suppliers and business partners. Our strategic, critical, and large-spend suppliers are requested to participate in a sustainability assessment process sustainability evaluation based on the international sustainability standards of the Global Reporting Initiative, The United Nations Global Compact, and the ISO 26000 social responsibility guidance standard. Based on the results of the assessment, the suppliers are classified into risk categories and the necessary actions are defined. Suppliers with ongoing improvement plans are always reassessed the following year, and high-risk suppliers are audited.

PEOPLE AND INTEGRITY

Culture and commitment to our employees are an important success factor in our business. Kemira's performance management process aligns our strategic targets with each employees' personal targets, performance evaluation competences and development plans. The process is a part of Kemira's leadership culture and it forms the backbone of our management system.

Our Code of Conduct is the foundation for our business conduct in Kemira. It sets the minimum standards of expected behavior for our employees and business partners. Kemira is committed to the principles of The Universal Declaration of Human Rights and The United Nations Global Compact, and we also expect our suppliers and business partners to abide by these principles. Kemira principles of anti-corruption are included in the Code of Conduct. Kemira does not tolerate improper or corrupt payments made either directly or indirectly to a customer, government official or third party, including facilitation payments, improper gifts, entertainment, gratuities, favors, donations or any other improper transfer of value. We engage only reputable sales representatives and other third parties who share the same commitment.

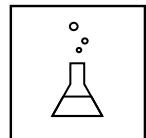
Code of Conduct training is mandatory for all our employees, and there are advisory, monitoring and reporting procedures in place to ensure proper accomplishment of the Code. We maintain an ethics and compliance hotline for employees to enable them to report potential violations of the Code of Conduct or any other concerns.

Mandatory anti-bribery training is provided for selected groups of personnel who need to have a comprehensive understanding of Kemira's anti-corruption principles. Awareness of anti-corruption matters is employed through our Code of Conduct training to all employees. Kemira has conducted an ethics and compliance risks assessment to evaluate corruption-related and bribery-related risks in its operations. There were no confirmed incidents of corruption or public legal cases regarding corruption in 2018.

NON-FINANCIAL REPORTING

More detailed information is presented in Kemira Annual Report 2018, in the section on the business overview of GRI disclosures. The non-financial disclosures are based on the Global Reporting Initiative disclosures, which are prepared in accordance with the GRI standards (2016) and externally assured by an independent third-party Deloitte.

CORPORATE RESPONSIBILITY PERFORMANCE

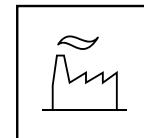
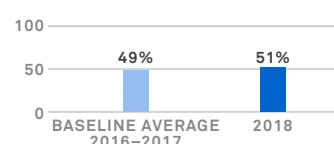


Sustainable products and solutions

Product sustainability

IN PROGRESS

Product sustainability
Share of revenue from products used for use-phase resource efficiency.
At least 50% of Kemira's revenue generated through products improving customers' resource efficiency.

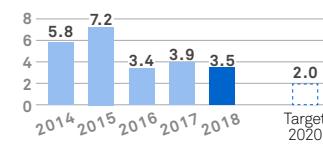


Responsible operations and supply chain

Workplace safety

IN PROGRESS

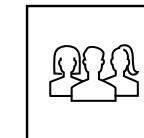
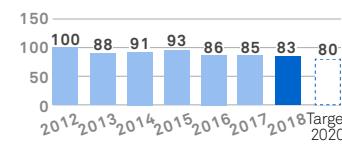
Achieve zero injuries on long term;
TRIF* 2.0 by end of 2020.



Climate change

IN PROGRESS

Kemira Carbon Index \leq 80 by end of 2020 (2012 = 100). This KPI is reported once a year.



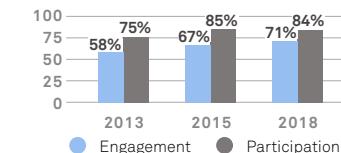
People and integrity

Employee engagement index based on Voices@Kemira biennial survey

AHEAD OF TARGET

The index at or above the external industry norm.

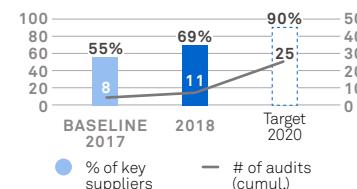
The participation rate target in Voices@Kemira is 75% or above.



Supplier management

IN PROGRESS

Share of direct key suppliers screened through sustainability assessments and audits (cumulative %).
The target includes 5 sustainability audits for highest risk** suppliers every year, and cumulatively 25 by 2020.



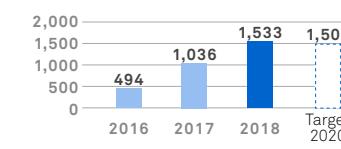
* TRIF = Number of Total Recordable Injury Frequency per million hours, Kemira + contractor

** Suppliers with lowest sustainability assessment score

Leadership development activities provided

AHEAD OF TARGET

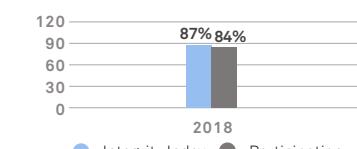
Two leadership development activities per people in manager position during 2016–2020, the cumulative target is 1,500 by 2020.



Integrity index

IN PROGRESS

New KPI to measure compliance with the Kemira Code of Conduct. The target is to maintain the Integrity Index level above the external industry norm.



SEGMENTS

PULP & PAPER

Pulp & Paper has unique expertise in applying chemicals and supporting pulp & paper producers in innovating and constantly improving their operational efficiency. The segment develops and commercializes new products to fulfill customer needs, ensuring the leading portfolio of products and services for paper wet-end, focusing on packaging and board, as well as on tissue. Pulp & Paper is leveraging its strong application portfolio in North America and EMEA, while also building a strong position in the emerging Asian and South American markets.

EUR million	2018	2017
Revenue	1,520.2	1,476.9
Operative EBITDA	191.7	197.7
Operative EBITDA, %	12.6	13.4
EBITDA	187.8	179.9
EBITDA, %	12.4	12.2
Operative EBIT	91.6	104.8
Operative EBIT, %	6.0	7.1
EBIT	79.8	86.9
EBIT, %	5.2	5.9
Capital employed*	1,177.6	1,165.2
Operative ROCE*, %	7.8	9.0
ROCE*, %	6.8	7.5
Capital expenditure excl. acquisitions	85.1	138.3
Capital expenditure	128.4	138.3
Cash flow after investing activities	29.9	15.7

*12-month rolling average

The segment's **revenue** increased by 3%, driven by higher sales prices and volumes while currency exchange rates had a -3% impact. Revenue in local currencies, excluding acquisitions and divestments, increased by 6%.

In **EMEA**, revenue increased by 6% to EUR 826.1 million (780.0) mainly due to higher sales prices, especially in caustic soda. The start-up of the new sodium chlorate line in Finland, opened in the second half of 2017, had a positive impact on sales volumes.

In the **Americas**, revenue decreased by 3% to EUR 488.3 million (505.9) due to a negative currency impact while sales prices increased in both regions. In North America, sales price growth was driven by bleaching chemicals and in South America, sales prices increased in all product categories.

In **APAC**, revenue increased by 8% to EUR 205.8 million (191.0) as a result of strong demand despite supply issues of key raw material at times for AKD product. The demand was particularly strong for sizing chemicals. Currencies had a negative impact on revenue.

Operative EBITDA decreased 3% due to the negative currency impact and higher fixed costs while growth in sales prices offset increased variable costs. **EBITDA** increased 4% mainly due to lower items affecting comparability.

INDUSTRY & WATER

Industry & Water supports municipalities and water intensive industries in the efficient and sustainable use of resources. In water treatment we provide assistance in optimizing various stages of the water cycle. In oil and gas applications our chemistries enable improved yield from existing reserves and reduced water and energy use.

EUR million	2018	2017
Revenue	1,072.6	1,009.1
Operative EBITDA	131.5	113.6
Operative EBITDA, %	12.3	11.3
EBITDA	127.0	102.5
EBITDA, %	11.8	10.2
Operative EBIT	82.2	65.5
Operative EBIT, %	7.7	6.5
EBIT	68.5	54.4
EBIT, %	6.4	5.4
Capital employed*	603.4	596.7
Operative ROCE*, %	13.6	11.0
ROCE*, %	11.3	9.1
Capital expenditure excl. acquisitions	65.3	51.7
Capital expenditure	65.3	51.7
Cash flow after investing activities	52.5	46.9

*12-month rolling average

The segment's **revenue** increased by 6%. Revenue in local currencies, excluding acquisitions and divestments, increased by 9% due to higher sales prices. Currency exchange rates had an impact of -3%.

Within the segment, the revenue for the Oil & Gas business increased by 23% to EUR 241.9 million (197.0). In the water treatment business, organic growth continued as a combination of higher sales prices and lower sales volumes reflecting the focus on improving profitability.

In **EMEA**, revenue increased by 5% to EUR 534.3 million (511.1) driven by higher sales prices, especially in caustic soda, coagulants and polymers.

In the **Americas**, revenue increased by 9% to EUR 512.9 million (472.2) driven by the strong growth in the North American oil & gas business and higher sales prices in the water treatment business. Currencies had a negative impact on revenue.

In **APAC**, revenue decreased by 2% to EUR 25.4 million (25.8) due to negative currency impact while higher prices more than offset the decline in sales volumes as the focus on profitable customers continued.

Operative EBITDA increased by 15% as a result of higher sales prices offsetting increased variable costs despite headwind from currencies. EBITDA increased by 24% and the difference to operative **EBITDA** is explained by items affecting comparability.

PARENT COMPANY'S FINANCIAL PERFORMANCE

Kemira Oyj's revenue increased to EUR 1,489.7 million (1,397.2) in 2018. EBITDA was EUR 49.1 million (82.1). EBITDA decreased, mainly due to an increase in materials and services. The parent company's financing income and expenses were EUR 119.6 million (4.6). Financing income and expenses increased, mainly due to a higher dividend distribution from the Group's companies. Net profit totaled EUR 132.5 million (41.3). The total capital expenditure was EUR 26.2 million (27.1), excluding investments in subsidiaries.

KEMIRA OYJ'S SHARES AND SHAREHOLDERS

On December 31, 2018, Kemira Oyj's share capital amounted to EUR 221.8 million and the number of shares was 155,342,557. Each share entitles to one vote at the Annual General Meeting.

At the end of December, Kemira Oyj had 34,378 registered shareholders (35,571). Non-Finnish shareholders held 27.4% of the shares (25.8%) including nominee-registered holdings. Households owned 17.1% of the shares (17.9%). Kemira held 2,832,297 treasury shares (2,988,935) representing 1.8% (1.9%) of all company shares.

Kemira Oyj's share price decreased by 14% from the beginning of the year and closed at EUR 9.85 on the Nasdaq Helsinki at the end of December 2018 (11.50). Shares registered a high of EUR 12.03 and a low of EUR 9.34 in January–December 2018 and the average share price was EUR 11.00. The company's market capitalization, excluding treasury shares, was EUR 1,502 million at the end of December 2018 (1,752).

In January–December 2018, Kemira Oyj's share trading turnover on Nasdaq Helsinki was EUR 479 million (615). The average daily trading volume was 175,444 (215,814) shares. The total volume of Kemira Oyj's share trading in January–December 2018 was 68 million shares (85), 35% (36%) of which was executed on other trading platforms (BATS, Chi-X, Turquoise). Source: Nasdaq and Kemira.com.

Ownership December 31, 2018

Owners	Shares and votes
Corporations	23.1%
Financial and insurance corporations	4.3%
General government	24.3%
Households	17.1%
Non-profit institutions	3.8%
Non-Finnish shareholders incl. nominee registered	27.4%

SHAREHOLDING BY NUMBER OF SHARES HELD DECEMBER 31, 2018

Number of shares	Number of shareholders	% of shareholders	Shares total	% of shares and votes
1–100	8,802	25.6	518,102	0.3
101–500	14,075	40.9	3,873,976	2.5
501–1,000	5,383	15.7	4,178,372	2.7
1,001–5,000	5,124	14.9	10,756,232	6.9
5,001–10,000	549	1.6	4,004,999	2.6
10,001–50,000	337	1.0	6,778,024	4.4
50,001–100,000	41	0.1	3,064,082	2.0
100,001–500,000	47	0.1	9,742,569	6.3
500,001–1,000,000	4	0.0	2,509,365	1.6
1,000,001–	10	0.0	109,916,836	70.8
Total	34,378	100.0	155,342,557	100.0

LARGEST SHAREHOLDERS DECEMBER 31, 2018

Shareholder	Number of shares	% of shares and votes
1 Oras Invest Ltd	28,278,217	18.2
2 Solidium Oy	25,896,087	16.7
3 Varma Mutual Pension Insurance Company	5,329,836	3.4
Ilmarinen Mutual Pension Insurance Company	3,100,000	2.1
5 Nordea funds	1,974,872	1.3
6 OP-Henkivakuutus Ltd.	1,403,278	0.9
7 Veritas Pension Insurance Company Ltd.	1,379,226	0.9
8 The State Pension Fund	700,000	0.5
9 Nordea Life Assurance Finland Ltd.	618,541	0.4
10 Laakkonen Mikko	600,000	0.4
11 Pohjola Fund Management	483,639	0.3
12 Paasikivi Pekka	434,000	0.3
13 Hulkko Juha Olavi	400,000	0.3
14 Valio Pension Fund	379,450	0.3
15 Sigrid Juselius Foundation	365,000	0.2
Kemira Oyj	2,832,297	1.8
Nominee registered and foreign shareholders	42,582,397	27.4
Others, total	38,585,717	24.7
Total	155,342,557	100.0

AGM DECISIONS

ANNUAL GENERAL MEETING

Kemira Oyj's Annual General Meeting was held on March 21, 2018 and confirmed the dividend of EUR 0.53. The dividend was paid out on April 5, 2018.

The AGM 2018 authorized the Board of Directors to decide on the repurchase of a maximum of 4,950,000 of the company's own shares ("Share Repurchase Authorization"). The Share Repurchase Authorization is valid until the end of the next Annual General Meeting. The Board had not exercised its authority by December 31, 2018.

The AGM 2018 also authorized the Board of Directors to decide to issue a maximum of 15,600,000 new shares and/or transfer a maximum of 7,800,000 of the company's own shares held by the company ("Share Issue Authorization"). The Share Issue Authorization is valid until May 31, 2019. The share issue authorization has been used and shares owned by the Group were conveyed to members of the Board and key employees in connection with the remuneration.

The AGM elected Deloitte Oy to serve as the company's auditor, with Jukka Vattulainen, Authorized Public Accountant, acting as the key audit partner.

CORPORATE GOVERNANCE AND GROUP STRUCTURE

Kemira Oyj's corporate governance is based on the Articles of Association, the Finnish Companies Act, and Nasdaq Helsinki's rules and regulations on listed companies. Furthermore, the company complies with the Finnish Corporate Governance Code. The company's corporate governance is presented as a separate statement on the company's website.

BOARD OF DIRECTORS

On March 21, 2018, the Annual General Meeting elected six members to the Board of Directors. The Annual General Meeting re-elected Wolfgang Büchele, Shirley Cunningham,

Kaisa Hietala, Timo Lappalainen, Jari Paasikivi, and Kerttu Tuomas as members of the Board of Directors. Jari Paasikivi was re-elected as the Board's Chairman and Kerttu Tuomas was re-elected as the Vice Chairman. In 2018, Kemira's Board of Directors met 9 times with a 100% attendance rate.

Kemira Oyj's Board of Directors has appointed two committees: the Personnel and Remuneration Committee and the Audit Committee. The Personnel and Remuneration Committee is chaired by Jari Paasikivi and has Timo Lappalainen and Kerttu Tuomas as members. In 2018, the Personnel and Remuneration Committee met six times with a 100% attendance rate. The Audit Committee is chaired by Timo Lappalainen and has Kaisa Hietala and Jari Paasikivi as members. In 2018, the Audit Committee met six times with a 100% attendance rate.

STRUCTURE

On December 3, 2018, Kemira announced that it has completed the closing of the deal with AKD producer in China announced on September 29, 2017. Kemira formed a joint venture - Kemira TC Wanfeng Chemicals Yanzhou ("NewCo") - with Shandong Tiancheng Wanfeng Chemical Technology ("TC Wanfeng"). Kemira has 80% and TC Wanfeng 20% of NewCo.

SHORT-TERM RISKS AND UNCERTAINTIES

PRICE AND AVAILABILITY OF RAW MATERIALS AND COMMODITIES

Continuous improvement of profitability is a crucial part of Kemira's strategy. Significant and sudden increase in the cost of raw materials, commodity, or logistics could place Kemira's profitability targets at risk if Kemira is not be able to pass on such increase to product prices without delay. For instance, remarkable changes in oil and electricity prices could materially impact Kemira's profitability. Changes in the raw material supplier field, such as consolidation or decreasing capacity, may also increase raw material prices. Furthermore, significant demand changes in industries that are the main users of certain raw materials may lead to raw material price fluctuations. 2018 was a year of increasing raw material prices overall and

put high pressure for Kemira to pass these changes on. Passing raw material cost increases onwards was a key focus area in 2018.

Poor availability of certain raw materials may affect Kemira's production and also profitability if Kemira fails to prepare for this by mapping out alternative suppliers or opportunities for process changes. Raw material and commodity risks can be effectively monitored and managed with Kemira's centralized Sourcing Unit. Risk management measures include, for instance, forward-looking forecasting of key raw materials and commodities, synchronization of raw material purchase agreements and sales agreements, captive manufacturing of some of the critical raw materials, strategic investment in energy-generating companies, and hedging a portion of the energy and electricity spend. In 2018, Kemira's joint venture with the fatty acid chloride producer Tiancheng is an example of helping to ensure the availability of key raw materials by backward integrating into the supply chain.

SUPPLIERS

The continuity of Kemira's business operations is dependent on accurate and good-quality supply of products and services. Kemira has currently in place numerous partnerships and other agreements with third-party product and service suppliers to secure its business continuity. Certain products used as raw materials are considered critical as the purchase can be made economically only from a sole or single source. In the event of a sudden and significant loss or interruption in such supply of raw material, Kemira's operations could be impacted, and this could have further effects on Kemira's ability to accomplish its profitability targets. Ineffective procurement planning, supply source selection, and contract administration, as well as inadequate supplier relationship management, create a risk of Kemira not being able to fulfill its promises to customers.

Kemira continuously aims to identify, analyze, and engage third-party suppliers in a way that ensures security of supply and competitive pricing of the end products and services. Collaborative relationships with key suppliers are being developed in order to uncover and realize new value and reduce risk. Supplier performance is also regularly monitored as a part of the supplier performance management process.

HAZARD RISKS

Kemira's production activities involve many hazard risks, such as fires and explosions, machinery breakdowns, natural catastrophes, exceptional weather conditions, environmental incidents, and the consequent possible resulting liabilities, as well as the employee health and safety risks. These risk events could derive from several factors, including also but not limited to unauthorized IT system access by malicious intruder causing possible damage to the systems and consequent financial losses. A systematic focus on achieving set targets, certified management systems, efficient hazard prevention programs, promotion of active safety culture, adequate maintenance, and competent personnel play a central role in managing these hazard risks. In addition, Kemira has several insurance programs that protect the company against financial impacts of hazard risks.

CHANGES IN CUSTOMER DEMAND

Significant unforeseen decline in the use of certain chemicals (e.g. chemicals for packaging and board production) or in the demand of customers' products and operations could have a negative impact on Kemira's business. Significant decline in certain raw material and utility prices (e.g. oil, gas, and metal) may shift customers' activities in areas, which can be exploited with fewer chemicals. Also, increased awareness of and concern about climate change and more sustainable products may change customer demands, for instance, in favor of water treatment technologies with lower chemical consumption. On the other hand, possible capacity expansions by customers could increase the chemical consumption and challenge Kemira's current production capacity.

In order to manage and mitigate this risk, Kemira systematically monitors leading and early warning indicators that focus on market development. Kemira has also continued to focus on the sustainability of its business and is further improving the coordination and cooperation between the Business Development, R&D, and Sales units in order to better understand the future needs and expectations of its customers. Timely capital investments as well as continuous discussions and follow-ups with customers ensure Kemira's ability to respond to changes in demand. Kemira's geographic and customer industry diversity also provides partial protection against the risk of changed customer demands.

ECONOMIC CONDITIONS AND GEOPOLITICAL CHANGES

Uncertainties in the global economic and geopolitical development are considered to include direct or indirect risks, such as a lower-growth period in the global GDP and possible unexpected trade-related political decisions, both of which could have unfavorable impacts on the demand for Kemira's products. Certain political actions or changes, especially in countries which are important to Kemira, could cause business interference or other adverse consequences. Current examples of these risks are related to Brexit and trade wars.

Weak economic development may result in customer closures or consolidations, resulting in a diminishing customer base. The liquidity of Kemira's customers could become weaker, resulting in increased credit losses for Kemira. Unfavorable market conditions may also increase the availability and price risk of certain raw materials.

Kemira's geographical and customer industry diversity provides only partial protection against these risks. Kemira continuously monitors geopolitical movements and changes and aims to adjust its business accordingly. For example, Brexit related risks are continuously monitored, and actions/preparations taken accordingly. Also trade war related risks are actively monitored and taken into account.

COMPETITION

Kemira operates in a rapidly changing and competitive business environment that represents a considerable risk to meeting its goals. New players seeking a foothold in Kemira's key business segments may use aggressive means as a competitive tool, which could affect Kemira's financial results. Major competitor or customer consolidations could change the market dynamics and possibly also change Kemira's market position.

Kemira is seeking growth in product categories that are less familiar and where new competitive situations prevail. In the long term, completely new types of technology may considerably change the current competitive situation. This risk is managed both at the Group and the segment levels through continuous monitoring of the competition. The company aims at responding to its competition with the active management of customer relationships and

continuous development of its products and services to further differentiate itself from the competitors and be competitive.

ACQUISITIONS

Acquisitions are one potential way to reach corporate goals and strategies, in addition to organic growth. Consolidations are driven by chemical manufacturers' interests in realizing synergies and establishing footholds in new markets. However, the integration as such of acquired businesses, operations, and personnel also involves risks. If integration is unsuccessful, results may fall short of targets for such acquisitions.

Kemira has created M&A procedures and established Group level-dedicated resources to actively manage merger and acquisition activities and to support the execution of its business transactions. In addition, external advisory services are being used to screen potential mergers and acquisitions and to help execute transactions and post-merger integration.

INNOVATION AND R&D

Kemira's Research and Development is a critical enabler for organic growth and further differentiation. New product launches contribute to the efficiency and sustainability of Kemira's or its customers' processes, as well as to the improved profitability. Kemira's future market position and profitability depend on its ability to understand and meet current and future customer needs and market trends, and its ability to innovate new differentiated products and applications. Failure to innovate or focus on the new disruptive technologies and products, or to efficiently commercialize new products or service concepts may result in non-achievement of growth targets.

Innovation and R&D related risks are being managed through the efficient R&D portfolio management in close collaboration between R&D and the two business segments. Kemira has focused on close coordination and cooperation between Business Development, R&D, Sales and Marketing units in order to better understand the future needs and expectations of its customers. With continuous development of innovation processes Kemira aims towards more stringent project execution. Kemira maintains increased focus towards the development of more differentiated and sustainable products and processes and is also continuously monitoring sales of its new products and applications.

CHANGES IN LAWS AND REGULATIONS

Kemira's business is subject to various laws and regulations, which have relevance in the development and implementation of Kemira's strategy. Laws and regulations can generally be considered as an opportunity for Kemira as regulation drives for example the treatment of water. However, certain legislative initiatives supporting, for instance, the use of biodegradable raw materials or biological water treatment, limiting the use of aluminum, may also have a negative impact on Kemira's business. Significant changes, for instance, also in chemical, environmental or transportation laws and regulations may impact Kemira's profitability through the increase in production and transportation costs. At the same time, such changes may also create new business opportunities for Kemira.

Inclusion of new substances into the REACH authorization process may also bring further requirements to Kemira, where failure to obtain the relevant authorization could impact Kemira's business. In addition, the changes in import/export and customs-related regulation create needs for monitoring and mastering global trade compliance in order to ensure for instance compliant product importation.

Kemira continuously follows regulatory developments in order to maintain the awareness of proposed and upcoming changes of those laws and regulations which may have an impact, for instance, on its sales, production, and product development needs. Kemira has established an internal process to manage substances of potential concern and to create management plans for them. These plans cover, for example, the possibilities to replace certain substances if those would be subject to stricter regulation. Kemira has also increased the focus and resources in the management of global trade compliance.

Regulatory effects are systematically taken into consideration in strategic decision making. Kemira takes an active role in regulatory discussions whenever justified from the perspective of the industry or business.

TALENT MANAGEMENT

To secure competitiveness and growth, as well as to improve operational efficiency, it is essential to attract and retain personnel with the right skills and competences (e.g. R&D,

sales, customer service and marketing competence). Kemira is continuously identifying high potentials and key competencies for future needs. By systematic development and improvement of compensation schemes, learning programs, and career development programs, Kemira aims to ensure the continuity of skilled personnel also in the future.

A detailed account of the Kemira's risk management principles is available on the company's website at www.kemira.com. Financial risks are also described in the Notes to the Financial Statements.

EVENTS AFTER THE REVIEW PERIOD

KEMIRA FORMED A JOINT VENTURE IN SOUTH KOREA

On January 14, 2019 Kemira signed an agreement to establish a joint venture – Kemira Yongsan Chemicals Co., Ltd ("NewCo") in Ulsan, Republic of Korea, with Yongsan Chemicals, a privately-owned chemicals company in South Korea.

Forming a joint venture in South Korea is an important step in expanding Kemira's presence in Asia Pacific and driving profitable growth in the region. NewCo will produce dry polyacrylamide ("DPAM"), cationic monomer Q9 ("AMD") and other chemicals, which are used for retention and drainage in packaging and paper production, as well as in wastewater treatment and in sludge dewatering.

With NewCo's production site, Kemira will provide customers premium quality DPAMs supported by backward integrated high-quality AMDs. This ensures a sustainable and cost-effective manufacturing capability, effectively fulfilling customer needs and requirements. It is also an important addition to balance the increasing demand for Kemira's dry polymers globally.

Kemira will make a multi-million investment in the joint venture and will have a 35% minority share of the established company.

PROPOSALS OF THE NOMINATION BOARD TO THE ANNUAL GENERAL MEETING 2019

The Nomination Board proposes to the Annual General Meeting of Kemira Oyj that six members be elected to the Board of Directors and that the present members Wolfgang Büchele, Shirley Cunningham, Kaisa Hietala, Timo Lappalainen, Jari Paasikivi and Kerttu Tuomas be re-elected as members of the Board of Directors. In addition, the Nomination Board proposes that Jari Paasikivi be re-elected as the Chairman of the Board of Directors and Kerttu Tuomas be re-elected as the Vice Chairman. All the nominees have given their consent to the position.

The Nomination Board proposes to the Annual General Meeting that the annual fee for the Chairman is increased to EUR 92,000 from EUR 80,000 per year, for the Vice Chairman and the Chairman of the Audit Committee to EUR 55,000 from EUR 49,000 per year and for the other members to EUR 44,000 from EUR 39,000 per year. The annual fees have not been increased since 2015.

The Nomination Board proposes that the fee payable for each meeting of the Board of Directors and the Board Committees would remain unchanged. A fee payable for each meeting would thus be as follows: for the members residing in Finland EUR 600, for the members residing in rest of Europe EUR 1,200 and for the members residing outside Europe EUR 2,400. Travel expenses are proposed to be paid according to Kemira's travel policy.

In addition, the Nomination Board proposes to the Annual General Meeting that the annual fee be paid as a combination of the company's shares and cash in such a manner that 40% of the annual fee is paid with the company's shares owned by the company or, if this is not possible, shares purchased from the market, and 60% is paid in cash. The shares will be transferred to the members of the Board of Directors and, if necessary, acquired directly on behalf of the members of the Board of Directors within two weeks from the release of Kemira's interim report January 1–March 31, 2019. The meeting fees are proposed to be paid in cash.

The Nomination Board has consisted of the following representatives: Annika Paasikivi, CEO of Oras Invest Oy as the Chairman of the Nomination Board; Antti Mäkinen, CEO of Solidium Oy; Reima Rytsölä, Executive Vice-President, Varma Mutual Pension Insurance Company and Mikko Mursula, Chief Investment Officer, Ilmarinen Mutual Pension Insurance Company as members of the Nomination Board and Jari Paasikivi, Chairman of Kemira's Board of Directors as an expert member.

DIVIDEND AND DIVIDEND POLICY

On December 31, 2018, Kemira Oyj's distributable funds totaled EUR 835,333,094 of which net profit for the period was EUR 132,458,292. No material changes have taken place in the company's financial position after the balance sheet date.

Kemira Oyj's Board of Directors proposes to the Annual General Meeting to be held on March 21, 2019, that a dividend of EUR 0.53 per share totaling EUR 81 million shall be paid on the basis of the adopted balance sheet for the financial year ended December 31, 2018.

Kemira's dividend policy aims to pay a stable and competitive dividend.

IFRS 16 ACCOUNTING CHANGE

Kemira adopts IFRS 16 -standard on January 1, 2019. In the profit and loss statement, current operating lease expenses are replaced by the depreciation of the right-of-use asset and interest cost associated with lease liability. As a result, it is estimated that impact on net profit in P&L is immaterial. Kemira currently estimates that the adaptation of IFRS 16 -standard is expected to increase the total amount of balance sheet by approximately 5%, EBITDA margin by approximately 1 percentage point and gearing by approximately 10 percentage points. In 2019, the impact on operative EBITDA due to the adoption of IFRS 16 is estimated to be around EUR 30 million.

OUTLOOK FOR 2019

Kemira expects its operative EBITDA (2018: EUR 323.1 million) to increase from the prior year on a comparable basis excluding the impact of the IFRS 16 accounting change.

MID- TO LONG-TERM FINANCIAL TARGETS (UPDATED DUE TO THE ADOPTION OF IFRS 16 ACCOUNTING CHANGE)

Kemira aims at above-the-market revenue growth with operative EBITDA margin of 15-17%. The gearing target is below 75%. (Previously, before the adoption of IFRS 16 accounting change, the financial targets were: Kemira aims at above-the-market revenue growth with operative EBITDA margin of 14–16%. The gearing target is below 60%).

Helsinki, February 7, 2019
Kemira Oyj
Board of Directors

All forward-looking statements in this review are based on the management's current expectations and beliefs about future events, and actual results may differ materially from the expectations and beliefs such statements contain.

Group key figures

Kemira provides certain financial performance measures (alternative performance measures), which are not defined by IFRS. Kemira believes that alternative performance measures followed by capital markets and Kemira management, such as organic growth*, EBITDA, operative EBITDA, cash flow after investing activities as well as gearing, provide useful information about Kemira's comparable business performance and financial position. Selected alternative performance measures are also used as performance criteria in remuneration.

	2018	2017	2016	2015	2014
Income statement and profitability					
Revenue, EUR million	2,593	2,486	2,363	2,373	2,137
Operative EBITDA, EUR million	323	311	303	287	253
Operative EBITDA, %	12.5	12.5	12.8	12.1	11.8
EBITDA, EUR million ¹⁾	315	282	284	264	253
EBITDA, %	12.1	11.4	12.0	11.1	11.8
Operative EBIT, EUR million	174	170	170	163	158
Operative EBIT, %	6.7	6.9	7.2	6.9	7.4
Operating profit (EBIT), EUR million ¹⁾	148	141	147	133	153
Operating profit (EBIT), %	5.7	5.7	6.2	5.6	7.1
Share of the results of associates, EUR million ¹⁾	0	0	0	0	0
Finance costs (net), EUR million	25	29	19	31	31
% of revenue	1.0	1.2	0.8	1.3	1.4
Interest cover, EUR million ¹⁾	12.6	9.8	14.9	8.6	8.2
Profit before tax, EUR million	123	113	128	102	122
% of revenue	4.8	4.5	5.4	4.3	5.7
Net profit for the period (attributable to equity owners of the parent), EUR million	89	79	92	71	90
Return on investment (ROI), %	7.0	6.5	7.2	6.6	8.2
Return of equity (ROE), %	7.6	6.7	7.8	6.1	7.9
Capital employed, EUR million	1,781	1,763	1,718	1,660	1,428
Operative return on capital employed (ROCE), %	9.8	9.7	9.9	9.8	11.1

Kemira's alternative performance measures should not be viewed in isolation to the equivalent IFRS measures and alternative performance measures should be read in conjunction with the most directly comparable IFRS measures. Definitions of the alternative performance measures can be found in the Definitions of the key figures in this financial statements, as well as at www.kemira.com > Investors > Financial information.

* Revenue growth in local currencies, excluding acquisitions and divestments.

	2018	2017	2016	2015	2014
Return on capital employed (ROCE), %					
Research and development expenses, EUR million	30	30	32	32	28
% of revenue	1.2	1.2	1.4	1.3	1.3
Cash flow					
Net cash generated from operating activities, EUR million	210	205	271	248	74
Proceeds from sale of subsidiaries and property, plant and equipment and intangible assets, EUR million	7	3	37	3	146
Capital expenditure, EUR million	194	190	211	305	145
% of revenue	7.5	7.6	8.9	12.9	6.8
Capital expenditure excl. acquisitions, EUR million	150	190	213	182	146
% of revenue	5.8	7.6	9.0	7.7	6.8
Cash flow after investing activities, EUR million	29	13	98	-54	75
Cash flow return on capital invested (CFROI), %	9.4	9.3	12.5	12.1	3.9
Balance sheet and solvency					
Non-current assets, EUR million	1,901	1,842	1,822	1,825	1,613
Shareholders' equity (Equity attributable to equity owners of the parent), EUR million	1,190	1,159	1,170	1,180	1,151
Total equity including non-controlling interests, EUR million	1,203	1,173	1,183	1,193	1,163
Total liabilities, EUR million	1,561	1,502	1,438	1,402	1,132
Total assets, EUR million	2,764	2,675	2,621	2,595	2,296

	2018	2017	2016	2015	2014
Net working capital	260	211	195	218	222
Interest-bearing net liabilities, EUR million	741	694	634	642	486
Equity ratio, %	44	44	45	46	51
Gearing, %	62	59	54	54	42
Interest-bearing net liabilities per EBITDA	2.4	2.5	2.2	2.4	1.9
Personnel					
Personnel at period-end	4,915	4,732	4,818	4,685	4,248
Personnel (average)	4,810	4,781	4,802	4,559	4,285
of whom in Finland	821	822	807	793	823
Exchange rates					
Key exchange rates at 31 Dec					
USD	1.145	1.199	1.054	1.089	1.214
CAD	1.561	1.504	1.419	1.512	1.406
SEK	10.255	9.844	9.553	9.190	9.393
CNY	7.875	7.804	7.320	7.061	7.536
BRL	4.444	3.973	3.431	4.312	3.221
Per share figures					
Earnings per share (EPS), basic and diluted, EUR ²⁾	0.58	0.52	0.60	0.47	0.59
Net cash generated from operating activities per share, EUR ²⁾	1.38	1.35	1.78	1.63	0.49
Dividend per share, EUR ²⁾³⁾	0.53	0.53	0.53	0.53	0.53
Dividend payout ratio, % ²⁾³⁾	90.7	102.7	88.0	113.5	89.6
Dividend yield, % ²⁾³⁾	5.4	4.6	4.4	4.9	5.4
Equity per share, EUR ²⁾	7.80	7.61	7.68	7.76	7.57
Price per earnings per share (P/E ratio) ²⁾	16.85	22.29	20.14	23.29	16.72
Price per equity per share ²⁾	1.26	1.51	1.58	1.40	1.31
Price per cash flow from operations per share ²⁾	7.14	8.54	6.83	6.68	20.24
Dividend paid, EUR million ³⁾	80.8	80.7	80.8	80.7	80.6

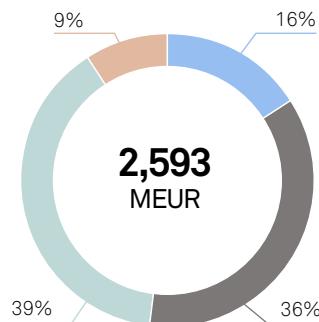
	2018	2017	2016	2015	2014
Share price and trading					
Share price, high, EUR	12.03	12.44	12.55	12.27	12.27
Share price, low, EUR	9.34	10.33	8.92	9.14	9.11
Share price, average, EUR	11.00	11.47	10.96	10.86	10.87
Share price at 31 Dec, EUR	9.85	11.50	12.13	10.88	9.89
Number of shares traded (1,000)	43,837	54,169	64,827	74,877	75,018
% on number of shares	29	36	42	49	49
Market capitalization at 31 Dec, EUR million ²⁾	1,502.2	1,752.1	1,848.2	1,654.4	1,503.8
Number of shares and share capital					
Average number of shares, basic (1,000) ²⁾	152,484	152,359	152,314	152,059	152,048
Average number of shares, diluted (1,000) ²⁾	152,768	152,594	152,526	152,395	152,203
Number of shares at 31 Dec, basic (1,000) ²⁾	152,510	152,354	152,367	152,062	152,051
Number of shares at 31 Dec, diluted (1,000) ²⁾	152,927	152,512	152,619	152,544	152,373
Increase (+) / decrease (-) in number of shares outstanding (1,000)	156	-14	305	11	9
Share capital, EUR million	221.8	221.8	221.8	221.8	221.8

1) The share of the results of associates is presented after the finance costs, net.

2) Number of shares outstanding, excluding the number of treasury shares.

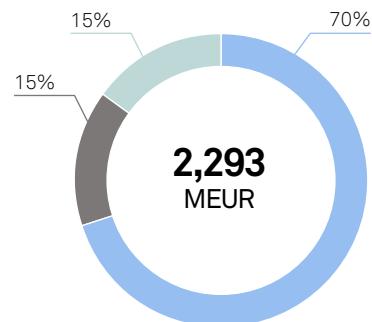
3) The dividend for 2018 is the Board of Directors' proposal to the Annual General Meeting.

REVENUE BY GEOGRAPHICAL AREAS



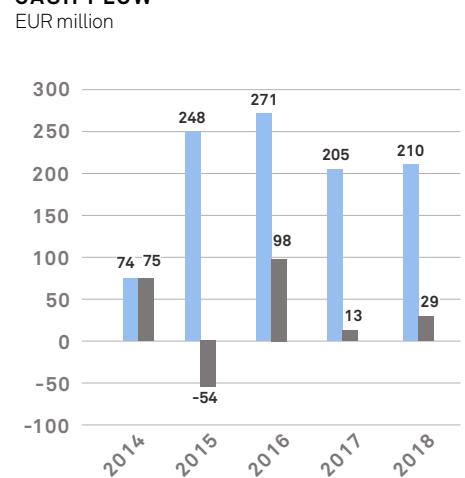
- Finland, domicile of the parent company
- Other Europe, Middle-East and Africa
- Americas
- Asia Pacific

OPERATING EXPENSES



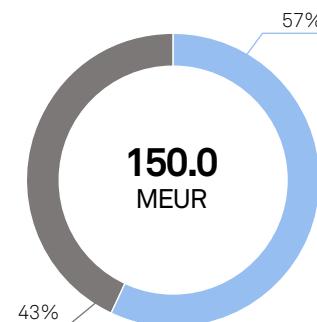
- Material and services
- Employee benefit expenses
- Other operating expenses

CASH FLOW



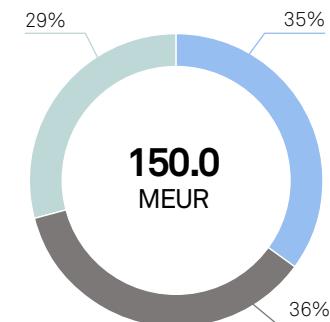
- Net cash generated from operating activities
- Cash flow after investing activities

CAPITAL EXPENDITURE BY SEGMENT EXCLUDING ACQUISITIONS



- Pulp & Paper
- Industry & Water

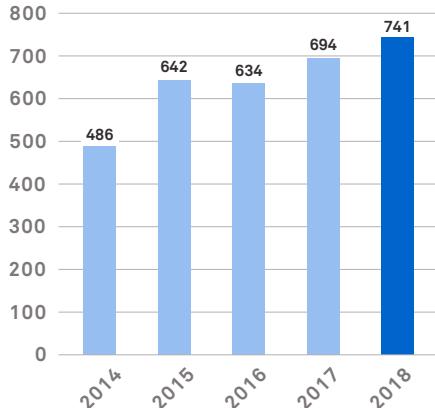
CAPITAL EXPENDITURE EXCLUDING ACQUISITIONS



- Maintenance
- Improvement
- Expansion

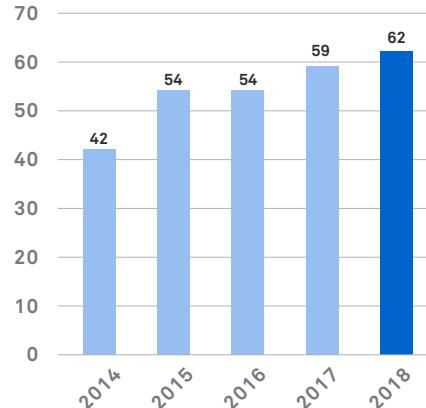
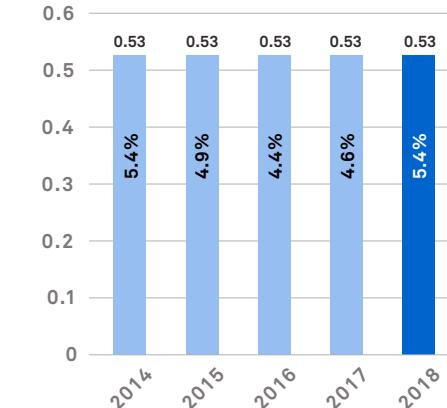
INTEREST-BEARING NET LIABILITIES

EUR million



GEARING

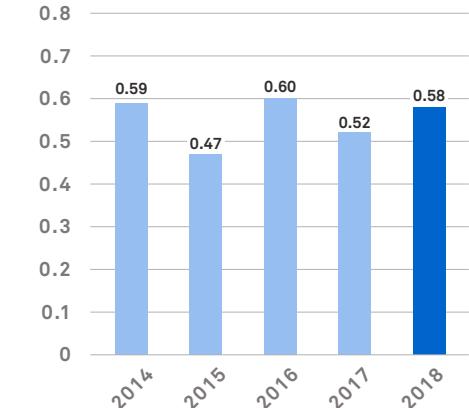
%

DIVIDEND PER SHARE AND, EUR
DIVIDEND YIELD, %¹⁾

¹⁾ The dividend for 2018 is the Board of Directors' proposal to the Annual General Meeting.

EARNINGS PER SHARE

EUR



Definition of key figures

FINANCIAL FIGURES

Operative EBITDA	=	Operating profit (EBIT) + depreciation and amortization + impairments +/- items affecting comparability	Cash flow after investing activities	=	Net cash generated from operating activities + net cash used in investing activities
Items affecting comparability¹⁾	=	Restructuring and streamlining programs + transaction and integration expenses in acquisitions + divestment of businesses and other disposals + other items	Operative return on capital employed (operative ROCE) (%)	=	100 x $\frac{\text{Operative EBIT} + \text{share of profit or loss of associates}^3)}{\text{Capital employed}^4)}$
Operative EBIT	=	Operating profit (EBIT) +/- items affecting comparability	Return on capital employed (ROCE) (%)	=	100 x $\frac{\text{Operating profit} + \text{share of the results of associates}^3)}{\text{Capital employed}^4)}$
Interest-bearing net liabilities	=	Interest-bearing liabilities - cash and cash equivalents	Capital turnover	=	$\frac{\text{Revenue}}{\text{Capital employed}^4)}$
Equity ratio (%)	=	100 x $\frac{\text{Total equity}}{\text{Total assets} - \text{prepayments received}}$	Interest-bearing net liabilities / EBITDA	=	$\frac{\text{Interest-bearing net liabilities}}{\text{Operating profit (EBIT)} + \text{depreciation and amortization} + \text{impairments}}$
Gearing (%)	=	100 x $\frac{\text{Interest-bearing net liabilities}}{\text{Total equity}}$	Net financial cost (%)	=	100 x $\frac{\text{Finance costs, net} - \text{dividend income} + \text{exchange rate differences}}{\text{Interest-bearing net liabilities}^2)}$
Interest cover	=	$\frac{\text{EBITDA}}{\text{Finance costs, net}}$	Net working capital	=	Inventories + trade receivables + other receivables, excluding derivatives, accrued interest income and other financing items - trade payables - other liabilities, excluding derivatives, accrued interest expenses and other financing items
Return on investments (ROI) (%)	=	100 x $\frac{\text{Profit before tax} + \text{interest expenses} + \text{other financial expenses}}{\text{Total assets} - \text{non-interest-bearing liabilities}^2)}$	Capital employed	=	Property, plant and equipment + intangible assets + net working capital + investments in associates
Return on equity (ROE) (%)	=	100 x $\frac{\text{Net profit attributable to equity owners of the parent}}{\text{Equity attributable to equity owners of the parent}^2)}$			
Cash flow return on investment (CFROI) (%)	=	100 x $\frac{\text{Net cash generated from operating activities}}{\text{Total assets} - \text{interest-free liabilities}^2)}$			

1) Financial performance measures which are not defined by IFRS may include items of income and expenses that affects the comparability of the financial reporting of Kemira Group. Restructuring and streamlining programs; transaction and integration expenses in acquisition; divestments of businesses and other disposals are considered the most common items affecting comparability.

2) Average

3) Operating profit (EBIT) and share of profit or loss of associates taken into account for a rolling 12-month period ending at the end of the review period.

4) 12-month rolling average

PER SHARE FIGURES

Earnings per share (EPS)	=	$\frac{\text{Net profit attributable to equity owners of the parent}}{\text{Average number of shares}}$
Net cash generated from operating activities per share	=	$\frac{\text{Net cash generated from operating activities}}{\text{Average number of shares}}$
Dividend per share	=	$\frac{\text{Dividend paid}}{\text{Number of shares at 31 Dec}}$
Dividend payout ratio (%)	=	$100 \times \frac{\text{Dividend per share}}{\text{Earnings per share (EPS)}}$
Dividend yield (%)	=	$100 \times \frac{\text{Dividend per share}}{\text{Share price at 31 Dec}}$
Equity per share	=	$\frac{\text{Equity attributable to equity owners of the parent at 31 Dec}}{\text{Number of shares at 31 Dec}}$
Share price, year average	=	$\frac{\text{Shares traded (EUR)}}{\text{Shares traded (volume)}}$
Price per earnings per share (P/E)	=	$\frac{\text{Share price at 31 Dec}}{\text{Earnings per share (EPS)}}$
Price per equity per share	=	$\frac{\text{Share price at 31 Dec}}{\text{Equity per share attributable to equity owners of the parent}}$
Price per net cash generated from operating activities per share	=	$\frac{\text{Share price at 31 Dec}}{\text{Net cash generated from operating activities per share}}$
Share turnover (%)	=	$100 \times \frac{\text{Number of shares traded in main stock exchange}}{\text{Average number of shares}}$

Consolidated Income Statement

EUR million	Note	Year ended 31 December	
		2018	2017
Revenue	2.1.	2,592.8	2,486.0
Other operating income	2.2.	14.8	6.8
Operating expenses	2.2.	-2,292.8	-2,210.4
EBITDA		314.8	282.4
Depreciation, amortization and impairments	2.4.	-166.6	-141.0
Operating profit (EBIT)		148.2	141.4
Finance income	2.5.	8.6	4.7
Finance expense	2.5.	-33.4	-30.4
Exchange differences	2.5.	-0.1	-3.2
Finance costs, net	2.5.	-25.0	-28.9
Share of the results of associates	6.2.	0.0	0.2
Profit before tax		123.3	112.6
Income taxes	2.6.	-28.1	-27.4
Net profit for the period		95.2	85.2
Net profit attributable to			
Equity owners of the parent		89.1	78.6
Non-controlling interests	6.2.	6.1	6.6
Net profit for the period		95.2	85.2
Earnings per share for net profit attributable to the equity owners of the parent company, EUR			
Basic and diluted	2.7.	0.58	0.52

The notes are an integral part of the Consolidated Financial Statements.

Consolidated Comprehensive Income

EUR million	Note	Year ended 31 December	
		2018	2017
Net profit for the period		95.2	85.2
Other comprehensive income			
Items that may be reclassified subsequently to profit or loss			
Other shares		-	24.0
Exchange differences in translating foreign operations		0.2	-46.4
Cash flow hedges		17.5	3.4
Items that will not be reclassified subsequently to profit or loss			
Other shares		-5.9	-
Remeasurements on defined benefit plans		10.1	9.6
Other comprehensive income for the period, net of tax	2.8.	21.8	-9.4
Total comprehensive income for the period		117.0	75.8
Total comprehensive income attributable to			
Equity owners of the parent		111.4	68.7
Non-controlling interests	6.2.	5.6	7.2
Total comprehensive income for the period		117.0	75.8

Items in the Consolidated Statement of Comprehensive Income are disclosed net of tax. The income tax relating to each component of other comprehensive income is disclosed in Note 2.8. Other comprehensive income.

The notes are an integral part of the Consolidated Financial Statements.

Consolidated Balance Sheet

EUR million	Note	As at 31 December		
		2018	2017	
ASSETS				
Non-current assets				
Goodwill	3.1.	512.5	505.0	
Other intangible assets	3.2.	128.6	100.5	
Property, plant and equipment	3.3.	938.3	922.9	
Investments in associates	6.2.	0.7	0.7	
Other shares	3.4.	228.4	235.8	
Deferred tax assets	4.4.	28.2	24.8	
Other investments	5.4.	2.3	3.8	
Receivables of defined benefit plans	4.5.	61.8	48.0	
Total non-current assets		1,900.7	1,841.5	
Current assets				
Inventories	4.1.	283.8	223.8	
Interest-bearing receivables	4.2.	0.2	5.3	
Trade receivables and other receivables	4.2.	420.2	418.8	
Current income tax assets		13.9	18.7	
Cash and cash equivalents	5.4.	144.9	166.1	
Total current assets		863.1	832.8	
Non-current assets classified as held-for-sale	6.2.	-	0.6	
Total assets		2,763.8	2,674.9	

The notes are an integral part of the Consolidated Financial Statements.

EUR million	Note	As at 31 December		
		2018	2017	
EQUITY AND LIABILITIES				
Equity				
Equity attributable to equity owners of the parent				
Share capital		221.8	221.8	
Share premium		257.9	257.9	
Fair value and other reserves		110.2	98.7	
Unrestricted equity reserve		196.3	196.3	
Translation differences		-47.1	-47.7	
Treasury shares		-19.1	-20.1	
Retained earnings		469.6	452.1	
Equity attributable to equity owners of the parent	5.2.	1,189.6	1,159.0	
Non-controlling interests	6.2.	12.9	13.8	
Total equity		1,202.5	1,172.8	
Non-current liabilities				
Interest-bearing liabilities	5.3.	646.3	669.1	
Other liabilities	5.4.	29.0	21.4	
Deferred tax liabilities	4.4.	71.1	62.4	
Liabilities of defined benefit plans	4.5.	81.2	82.3	
Provisions	4.6.	29.6	27.2	
Total non-current liabilities		857.3	862.5	
Current liabilities				
Interest-bearing liabilities	5.3.	240.0	191.4	
Trade payables and other liabilities	4.3.	439.1	422.8	
Current income tax liabilities		15.6	14.2	
Provisions	4.6.	9.2	11.3	
Total current liabilities		703.9	639.7	
Total liabilities		1,561.2	1,502.1	
Total equity and liabilities		2,763.8	2,674.9	

Consolidated Statement of Cash Flow

EUR million	Note	2018	2017
CASH FLOW FROM OPERATING ACTIVITIES			
Net profit for the period		95.2	85.2
Adjustments for			
Depreciation, amortization and impairments	2.4.	166.6	141.0
Income taxes	2.6.	28.1	27.4
Finance costs, net	2.5.	25.0	28.9
Share of the results of associates	6.2.	0.0	-0.2
Other non-cash income and expenses not involving cash flow		0.0	6.3
Operating profit before change in net working capital		314.8	288.7
Change in net working capital			
Increase (-) / decrease (+) in inventories		-64.7	-24.5
Increase (-) / decrease (+) in trade and other receivables		8.5	-47.2
Increase (+) / decrease (-) in trade payables and other liabilities		5.1	37.8
Change in net working capital		-51.1	-33.9
Cash flow from operations before financing items and taxes			
		263.7	254.8
Interest paid		-26.9	-25.8
Interest received		3.7	3.9
Other finance items, net		-6.8	-4.0
Dividends received		0.1	0.9
Income taxes paid		-23.6	-24.7
Net cash generated from operating activities		210.2	205.1

EUR million	Note	2018	2017
CASH FLOW FROM INVESTING ACTIVITIES			
Purchases of subsidiaries and asset acquisitions, net of cash acquired		-43.3	0.0
Purchases of other shares		0.0	-3.6
Purchases of property, plant and equipment and intangible assets		-150.4	-186.4
Change in loan receivables decrease (+) / increase (-)		5.2	-5.1
Proceeds from sale of subsidiaries, net of cash disposed		2.5	0.0
Proceeds from sale of associates and paid-in-capital from associates		4.3	0.0
Proceeds from sale of other shares and capital repayments		0.2	0.2
Proceeds from sale of property, plant, equipment and intangible assets		0.3	2.8
Net cash used in investing activities		-181.3	-192.2
CASH FLOW FROM FINANCING ACTIVITIES			
Proceeds from non-current interest-bearing liabilities (+)	5.1.	96.2	100.0
Repayment from non-current interest-bearing liabilities (-)	5.1.	-69.2	-62.1
Short-term financing, net increase (+) / decrease (-)	5.1.	10.3	36.3
Dividends paid		-87.3	-86.9
Net cash used in financing activities		-50.1	-12.7
Net decrease (-) / increase (+) in cash and cash equivalents			
		-21.1	0.3
Cash and cash equivalents at 31 Dec		144.9	166.1
Exchange gains (+) / losses (-) on cash and cash equivalents		-0.1	-7.5
Cash and cash equivalents at 1 Jan		166.1	173.4
Net decrease (-) / increase (+) in cash and cash equivalents		-21.1	0.3

The notes are an integral part of the Consolidated Financial Statements.

Consolidated Statement of Changes in Equity

EUR million	Equity attributable to owners of the parent								Non-controlling interests	Total equity
	Share capital	Share premium	Fair value and other reserves	Unrestricted equity reserve	Exchange differences	Treasury shares	Retained earnings	Total		
Equity at January 1, 2018	221.8	257.9	98.7	196.3	-47.7	-20.1	452.1	1,159.0	13.8	1,172.8
Change in accounting policy (IFRS 9 and IFRS 2) ¹⁾							-0.2	-0.2		-0.2
Restated equity at January 1, 2018	221.8	257.9	98.7	196.3	-47.7	-20.1	451.9	1,158.8	13.8	1,172.6
Net profit for the period							89.1	89.1	6.1	95.2
Other shares			-5.9						-5.9	-5.9
Exchange differences in translating foreign operations					0.6			0.6	-0.4	0.2
Cash flow hedges			17.5					17.5		17.5
Remeasurements on defined benefit plans							10.1	10.1		10.1
Total comprehensive income			11.5		0.6		99.3	111.4	5.6	117.0
Transactions with owners										
Dividends paid							-80.8	-80.8	-6.5	-87.3
Treasury shares issued to the target group of share-based incentive plan						1.0		1.0		1.0
Treasury shares issued to the Board of Directors						0.1		0.1		0.1
Treasury shares given back					0.0			0.0		0.0
Share-based payments							-0.8	-0.8		-0.8
Transactions with owners						1.1	-81.6	-80.5	-6.5	-87.0
Equity at December 31, 2018	221.8	257.9	110.2	196.3	-47.1	-19.1	469.6	1,189.6	12.9	1,202.5

1) Kemira has adopted IFRS 15 Revenue from Contracts with Customers and IFRS 9 Financial Instruments standards and the amendments to the IFRS 2 Share-based Payments standard. As a result of the changes in the standards, retained earnings in equity have been adjusted on January 1, 2018. IFRS 15 standard did not change Kemira's revenue recognition principles and thus did not result in any adjustments in retained earnings. IFRS 9 standard mainly impacts Kemira's valuation of loan receivables and credit losses recognition of trade receivables. Due to the change in the accounting policy, retained earnings have been adjusted for a total of EUR -1.0 million. When adopting the amendments to the IFRS 2 standard, Kemira has classified share-based payment arrangements as equity-settled in its entirety and liability related to the share-based payment arrangement has reclassified to retained earnings in equity. As a result of the change in the accounting policy, an adjustment of EUR 0.8 million has been recognized in the retained earnings. The total effect on equity from loan receivables, trade receivables and share-based payments is EUR -0.2 million including the deferred tax effect. Comparative financial periods were not restated.

The notes are an integral part of the Consolidated Financial Statements.

EUR million	Equity attributable to owners of the parent								Non-controlling interests	Total equity
	Share capital	Share premium	Fair value and other reserves	Unrestricted equity reserve	Exchange differences	Treasury shares	Retained earnings	Total		
Equity at January 1, 2017	221.8	257.9	72.2	196.3	-0.8	-20.0	442.6	1,170.0	12.9	1,182.9
Net profit for the period							78.6	78.6	6.6	85.2
Other shares			24.0						24.0	24.0
Exchange differences in translating foreign operations					-46.9				-46.9	0.5
Cash flow hedges			3.4						3.4	3.4
Remeasurements on defined benefit plans							9.6	9.6		9.6
Total comprehensive income			27.4		-46.9		88.2	68.7	7.2	75.8
Transactions with owners										
Dividends paid							-80.7	-80.7	-6.2	-86.9
Treasury shares given back					-0.2				-0.2	-0.2
Treasury shares issued to the Board of Directors					0.1				0.1	0.1
Share-based payments							1.1	1.1		1.1
Transfers in equity			-0.9				0.9	0.0		0.0
Transactions with owners			-0.9		-0.1		-78.7	-79.7	-6.2	-85.9
Equity at December 31, 2017	221.8	257.9	98.7	196.3	-47.7	-20.1	452.1	1,159.0	13.8	1,172.8

1. THE GROUP'S ACCOUNTING POLICIES FOR THE CONSOLIDATED FINANCIAL STATEMENTS

GROUP PROFILE

Kemira is a global chemicals company serving customers in water-intensive industries. The company provides expertise in application and chemicals that improve efficiency for customers in the use of water, energy and raw materials. Kemira's two segments Pulp & Paper and Industry & Water focus on customers in pulp & paper, oil & gas, mining and water treatment respectively.

The Group's parent company is Kemira Oyj, domiciled in Helsinki, Finland, and its registered address is Energiakatu 4, FI-00180 Helsinki, Finland. The parent company is listed on Nasdaq Helsinki. A copy of the Consolidated Financial Statements is available at www.kemira.com.

The Board of Directors of Kemira Oyj has approved the Financial Statements for publication at its meeting on February 7, 2019. Under the Finnish Limited Liability Companies Act, the shareholders may accept or reject the Financial Statements at the General Meeting of Shareholders held after their publication. The meeting also has the power make a decision to amend the Financial Statements.

BASIS OF PREPARATION FOR THE CONSOLIDATED FINANCIAL STATEMENTS

The Group has prepared its Consolidated Financial Statements in accordance with IAS and IFRS (International Financial Reporting Standards) and the related SIC and IFRIC interpretations, issued by the IASB (International Accounting Standards Board) and the Finnish Accounting Act and the statutes under it. The International Financial Reporting Standards refer to the endorsed standards and their interpretations under the European Union Regulation No. 1606/2002, which concerns the adoption of the International Financial Reporting Standards that are applicable within the Community. The Notes to the Consolidated Financial Statements also comply with the requirements of the Finnish accounting and corporate legislation, which supplement the IFRS regulations.

The Consolidated Financial Statements are presented in EUR million and have been prepared based on the historical cost except for the items measured at fair value through other comprehensive income including unlisted PVO/TVO shares, financial assets and liabilities at fair value through profit or loss, and share-based payments on the grant date.

The preparation of the Consolidated Financial Statements in conformity with the IFRS requires the use of certain critical accounting estimates. It also requires management to exercise its judgment in the process of applying the Group's accounting policies. The areas that need a higher degree of judgment, and that are significant to the Consolidated Financial Statements are described below in the section "Critical accounting estimates and judgments".

All the figures in the Consolidated Financial Statements have been individually rounded and consequently the sum of individual figures may deviate from the sum figure presented.

CONSOLIDATION PRINCIPLES OF SUBSIDIARIES AND NON-CONTROLLING INTERESTS

The Consolidated Financial Statements include the parent company and its subsidiaries. Subsidiaries are all entities that the Group has control over (voting rights generally being over 50%). The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity, and when it has the ability to affect those returns through its power over the entity.

Subsidiaries are fully consolidated from the date on which the control is transferred to the Group. They are de-consolidated from the date on which this control ceases.

All intra-group transactions are eliminated. Intra-group shareholdings are eliminated by using the acquisition method. The consideration transferred for acquisition of a subsidiary is defined as an aggregate of the fair values of the assets transferred, the liabilities assumed and the equity interest issued by the Group. The consideration transferred may include the fair value of any asset or liability resulting from the contingent consideration arrangement. Acquisition-related costs are expensed as incurred. Identifiable assets acquired, and liabil-

ties and contingent liabilities that are assumed in a business combination are measured at their fair values on the acquisition date. On an acquisition-by-acquisition basis, the Group recognizes any non-controlling interest in the acquiree either at fair value or at the non-controlling interest's proportionate share of the acquiree's net assets.

The amount that exceeds the aggregate of consideration transferred, the amount of any non-controlling interest in the acquiree and the acquisition-date fair value of any previous equity interest in the acquiree over the fair value of the Group's share of the net assets acquired is recognized as goodwill in the balance sheet. If this is less than the fair value of the net assets of the subsidiary acquired by bargain purchase, the difference is recognized directly in the income statement.

Net profit or loss for the financial year and other comprehensive income attributable to the equity holders of the parent and non-controlling interests are presented in the income statement and in the statement of comprehensive income. The portion of equity attributable to non-controlling interests is stated as an individual item separately from the equity to the equity holders of the parent. Total comprehensive income separately shows the total amounts attributable to the equity holders of the parent and to non-controlling interests. The Group recognizes negative non-controlling interests, unless the non-controlling interest does not have a binding obligation to cover the losses up to the amount of their investment.

If the parent company's ownership interest in the subsidiary is reduced but the control is retained, then the transactions are treated as equity transactions. When the Group ceases to have control or significant influence, any retained interest in the entity is remeasured at its fair value, and the difference is recognized in profit or loss.

ASSOCIATES

Associated companies are companies over which the Group exercises significant influence (voting rights generally being 20–50%), but not control. Holdings in associated companies are consolidated using the equity method. If the Group's share of the associate's losses exceeds the carrying amount of the investment, the exceeding losses will not be consolidated unless the Group has a commitment to fulfill the obligations on behalf of the associate. The Group's

share of the associated companies' net profit for the financial year is stated as a separate item in the consolidated income statement after operating profit, in proportion to the Group's holdings. The Group's share of the movements of its associates in other comprehensive income is recognized in the Group's other comprehensive income.

FOREIGN CURRENCY TRANSLATION

Items included in the financial statements of each of the Group's entities are measured by using the currency of the primary economic environment in which the entity operates (the functional currency). The Consolidated Financial Statements are presented in EUR, which is the Group's presentation currency and the parent company's functional and presentation currency.

In the Consolidated Financial Statements, the income statements of foreign subsidiaries are translated into EUR using the financial year's average foreign currency exchange rates, and the balance sheets are translated using the exchange rates quoted on the balance sheet date. Translating the net profit for the period using different exchange rates in the income statement and in the balance sheet causes a translation difference recognized in equity in the balance sheet. The change in this translation difference is presented under other comprehensive income. Goodwill and fair value adjustments to the carrying amounts of the assets and liabilities that arise from the acquisition of a foreign entity are accounted for as part of the assets and liabilities of the foreign entity, and are translated into EUR at the rate quoted on the balance sheet date.

Translation differences in the loans granted to some foreign subsidiaries are treated as an increase or decrease in other comprehensive income. When the Group ceases to have control over a subsidiary, the accumulated translation difference is transferred into the income statement as part of the gain or loss on the sale.

In their day-to-day accounting, the Group companies translate foreign currency transactions into their functional currency at the exchange rates quoted on the transaction date. In the Financial Statements, foreign currency denominated receivables and liabilities are measured at the exchange rates quoted on the balance sheet date. Non-monetary items are measured using the rates quoted on the transaction date. Any foreign exchange gains and losses related

to business operations are treated as adjustments to sales and purchases. Exchange rate differences associated with financing transactions and the hedging of the Group's overall foreign currency position are stated in foreign exchange gains or losses under finance income and expenses.

NEW, AMENDED IFRS STANDARDS AND IFRIC INTERPRETATIONS

IFRS 9 Financial Instruments

As of January 1, 2018, Kemira adopted the IFRS 9 Financial Instruments standard. IFRS 9 superseded IAS 39 Financial Instruments: Recognition and Measurement. IFRS 9 introduced new requirements for the classification and measurement of financial assets and introduced a new impairment model for financial assets, which is based on expected credit losses.

Recognition and measurement of financial liabilities mainly continue to be carried out on the same basis as currently adopted under IAS 39 requirements. The new general hedge accounting requirements retain the three types of hedge accounting mechanisms currently available in IAS 39. However, greater flexibility has been introduced to the types of transactions eligible for hedge accounting, specifically broadening the types of instruments that qualify as hedging instruments and the types of risk components of non-financial items that are eligible for hedge accounting.

IFRS 9 changed Kemira's current credit loss recognition accounting policies relating to trade receivables. Kemira adopted a simplified credit loss model for trade receivables in which the amount of credit losses is estimated by using the impairment model based on expected credit losses. In the new expected credit loss model, the credit losses vary according to aging categories of trade receivables and geographical areas: EMEA, the Americas and APAC. In addition, the credit loss provision for trade receivables continues to be recognized based on individual risk assessments. In accordance with the new credit loss model, an adjustment of EUR -0.4 million (including deferred tax effect of EUR 0.1 million) was recognized in the retained earnings as of January 1, 2018, and subsequent adjustments are recognized in profit or loss. The comparative periods were not restated.

IFRS 9 impacts the valuation of loan receivables due to the expected credit losses reduce the amount of loan receivables. Expected credit loss of EUR -1.0 million (including deferred tax effect of EUR 0.3 million) arising from the measurement of loan receivables was recognized in transition into equity in retained earnings as of January 1, 2018. Subsequent adjustments are recognized in profit or loss. The comparative periods were not restated.

As of January 1, 2018, non-listed PVO/TVO shares are classified as fair value through other comprehensive income in the fair value reserve. Under IAS 39 PVO/TVO shares are classified in available-for-sale financial assets. In IFRS 9 fair value changes, including gains and losses on sale, are recognized in other comprehensive income in equity and the dividends are recognized in profit or loss. The comparative periods were not restated, except the classification change.

In the previous financial years, the Group has applied cash flow hedge accounting for electricity derivatives in accordance with IAS 39. IFRS 9 provides an opportunity to apply hedge accounting separately for electricity price components of the system price and area price quoted by the Nordic Electricity Exchange.

Under IAS 39 the fair value changes of cash flow hedge accounted electricity derivatives were recognized in other comprehensive income and potential ineffectiveness in profit or loss. Kemira adopted IFRS 9 hedge accounting for electricity derivatives from January 1, 2018. When effective part of the fair value changes related to cash flow hedge accounted electricity derivatives is recognized in other comprehensive income, ineffectiveness does not generally arise because the components of the electricity price risk are separately hedged. The comparative periods were not restated.

The total effect on equity from trade receivables and loan receivables were EUR 1.0 million.

On the date of initial application, January 1, 2018, financial assets and liabilities were classified under IFRS 9 as follows:

FINANCIAL ASSETS EUR million	Classification		Book value 1.1.2018		
	IAS 39	IFRS 9	IAS 39	IFRS 9	Adjustment
Financial assets at fair value through profit and loss not qualifying for hedge accounting	Financial assets at fair value through profit and loss	Fair value through profit and loss	3.9	3.9	-
Derivatives qualifying for hedge accounting	Financial assets at fair value through other comprehensive income	Fair value through other comprehensive income	9.7	9.7	-
Other non-current assets	Loans and receivables	Amortized cost	3.8	3.2	0.6
Current interest-bearing loan receivables	Loans and receivables	Amortized cost	5.3	4.9	0.4
Trade receivables	Loans and receivables	Amortized cost	315.2	314.8	0.4
Cash and cash equivalents	Loans and receivables	Amortized cost	166.1	166.1	-
Other shares	Available-for-sale financial assets	Fair value through other comprehensive income	235.8	235.8	-
FINANCIAL LIABILITIES					
Financial liabilities at fair value through profit and loss not qualifying for hedge accounting	Financial liabilities at fair value through profit or loss	Fair value through profit and loss	3.7	3.7	-
Derivatives qualifying for hedge accounting	Financial liabilities at fair value through profit or loss	Fair value through other comprehensive income	1.7	1.7	-
Interest-bearing liabilities	Other financial liabilities	Amortized cost	860.5	860.5	-
Non-interest-bearing liabilities	Other financial liabilities	Amortized cost	52.4	52.4	-
Trade payables	Other financial liabilities	Amortized cost	187.2	187.2	-

IFRS 15 Revenue from Contracts with Customers

As of January 1, 2018, Kemira adopted IFRS 15 Revenue from Contracts with Customers. IFRS 15 establishes a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers. IFRS 15 supersedes the revenue recognition guidance including IAS 18 Revenue, IAS 11 Construction Contracts and the related interpretations. The core principle of IFRS 15 is that an entity should recognize revenue to depict the transfer of promised goods or services to customers an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. Under IFRS 15, an entity recognizes revenue when (or as) a performance obligation is satisfied, i.e. when 'control' of the good or service underlying the particular performance obligation is transferred to the customer.

Kemira provides delivery and handling services together with the sale of the chemical products to the customers. The delivery and handling services are recognized at the same time with revenue of products and are not treated as a separate performance obligation in accordance with IFRS 15 standard. Recognition of revenue on both the sale of products and delivery and handling services in the same reporting period is consistent with the accounting policy under IAS 18.

Discounts provided to customers are not a significant component of the sales price in Kemira's sales contracts. Implementing IFRS 15 does not change the accounting treatment.

The Group adopted IFRS 15 using a full retrospective method as of January 1, 2018. The comparative periods are not restated as the revenue recognition criteria remains unchanged.

Amendment to IFRS 2 Classification and Measurement of Share-based Payment Transactions

As of January 1, 2018, Kemira adopted the amendments to IFRS 2 Share-based Payments Transactions. The amendments clarify the measurement basis for cash-settled share-based payments and the accounting for modifications that change an award from cash-settled to equity-settled. Where a tax law or regulation requires the employer to withhold a specified number of equity instruments equal to the monetary value of the employee's tax obligation to

meet the employee's tax liability which is then remitted to the tax authority, such an arrangement should be classified as equity-settled in its entirety, if this would have been the classification of the arrangement without the net settlement feature.

The application of the amendments had an impact on the Group's consolidated financial statements as the Group has a share-based payment arrangement in which the Group settles the employee's withholding tax with the tax authorities. Before adoption of the amendment this feature was accounted for as a cash-settled arrangement. On the adoption of this amendment, the Group will derecognize the liability related to this arrangement and reclassify the amount to equity. As a result of the change in the accounting policy, an adjustment of EUR 0.8 million has been recognized in retained earnings.

IFRS 16 Leases

IFRS 16 Leases standard provides a comprehensive model for the identification of lease arrangements and their treatment in the financial statements of both lessees and lessors. It supersedes the current IAS 17 Leases and the related interpretations. IFRS 16 distinguishes leases and service contracts on the basis of whether an identified asset is controlled by a customer. Distinction of operating leases (off balance sheet) and finance leases (on balance sheet) are removed for lessee accounting and is replaced by a model where a right-of-use asset and a corresponding liability have to be recognized for all leases by lessees (i.e. all on balance sheet) except for short-term leases and leases of low value assets. In contrast to lessee accounting, IFRS 16 substantially carries forward the lessor accounting requirements in IAS 17, and continues to require a lessor to classify a lease either as an operating lease or a finance lease. In addition, IFRS 16 requires extensive disclosures.

Kemira adopts IFRS 16 -standard on January 1, 2019. All the relevant Group functions have been involved in the implementation project and the project has covered e.g. the accounting process and control changes, collecting and maintaining lease data as well as training the organization. As a part of the project, Kemira has implemented a lease administration tool for contract administration and lease calculation purposes and the tool has deployed at the beginning of 2019.

IFRS 16 standard affects the accounting treatment for Kemira Group's operating leases. On December 31, 2018, the Group's off-balance sheet operating lease commitments were EUR 205 million. Some of the commitments are covered by the short-term and low-value leases exemptions and some commitments relate to arrangements that will not qualify as leases under IFRS 16 -standard. In P&L, current operating lease expenses are replaced by the depreciation of the right-of-use asset and interest cost associated with lease liability. As a result, it is estimated that impact on net profit in P&L is immaterial.

Kemira adopts IFRS 16 -standard using modified retrospective transition approach. At the date of transition on January 1, 2019, Kemira estimates that implementation of IFRS 16 -standard will increase the right-of-use assets in the balance sheet of approximately EUR 120 million, lease liabilities of approximately EUR 125–130 million, and decrease the retained earnings of approximately EUR 5 million including the deferred tax effect. The information from the prior years is not restated. Kemira will publish figures in accordance with the new IFRS 16 standard in the Interim financial statements Q1/2019.

Kemira currently estimates that the adaptation of IFRS 16 -standard is expected to increase the total amount of balance sheet by approximately 5%, EBITDA margin by approximately 1 percentage point and gearing by approximately 10 percentage points. In 2019, the impact on operative EBITDA due to the adoption of IFRS 16 is estimated to be around EUR 30 million. The adaption of IFRS 16 standard will also affect to certain key figures and cash flow.

IFRIC 23 Uncertainty over Income Tax Treatments

The IFRIC 23 interpretation addresses the determination of taxable profit (tax loss), tax bases, unused tax losses, unused tax credits and tax rates when there is uncertainty over income tax treatments under IAS 12.

The interpretation requires to assess, whether it is probable that the tax authority will or will not accept the uncertain income tax treatment used (or proposed to be used) by an entity in its income tax filings and to determine whether the uncertain tax positions should be considered separately or collectively. If it is probable that the tax authorities will not accept the uncertain tax treatment, the entity should reflect the effect of the uncertainty in determining

its accounting tax position. The entity should assume that the tax authorities will examine the uncertain tax treatments and have full knowledge of all related information. The impact of the uncertainty should be measured using either the most likely amount or the expected value method, depending on which method better predicts the resolution of the uncertainty. The judgments and estimates made are reassessed whenever circumstances have changed or there is new information that affects the judgements.

The Group has a process in which it aims to identify and assess the potential uncertainties over the income tax treatment. The Group applies the interpretation first time for the accounting period starting on January 1, 2019. The impact on adaption of the interpretation has estimated not to be material on the Consolidated Financial Statements.

Critical accounting estimates and judgments

Estimates and judgments are continuously evaluated, and are based on previous experience and other factors, such as expectations of future events that are expected to be reasonable under the circumstances.

The Group makes estimates and assumptions concerning the future. The resulting accounting estimates will, by definition, seldom equal the related actual results. The items of the financial statements that carry a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are addressed below.

Critical accounting estimates and judgments	Note
Estimated impairment of goodwill	3.1. Goodwill
Estimated fair value of shares in the PVO Group	3.4. Other shares
Deferred taxes and uncertain tax positions	2.6. Income taxes and 4.4. Deferred tax liabilities and assets
Defined benefit pension plans	4.5. Defined benefit pension plans and employee benefits
Provisions	4.6. Provisions

2. FINANCIAL PERFORMANCE

2.1. SEGMENT INFORMATION

Kemira's organization consists of two segments: Pulp & Paper and Industry & Water.

Pulp & Paper

Pulp & Paper has expertise in applying chemicals and supporting pulp & paper producers in innovating and constantly improving their operational efficiency. The segment develops and sells products to fulfill customer needs, ensuring the leading portfolio of products and services for paper wet-end, focusing on packaging and board, as well as tissue.

Industry & Water

Industry & Water supports municipalities and water intensive industries in the efficient and sustainable utilization of resources. In water treatment, the segment helps in the optimization of every stage of the water cycle. In the oil and gas industry, the segment helps to improve yield from existing reserves and reduce water and energy use.

ALTERNATIVE PERFORMANCE MEASURES

Kemira provides certain financial performance measures (alternative performance measures), which are not defined by IFRS. Kemira believes that alternative performance measures followed by capital markets and Kemira management, such as organic growth*, EBITDA, operative EBITDA, cash flow after investing activities as well as gearing, provide useful information about Kemira's comparable business performance and financial position. Selected alternative performance measures are also used as performance criteria in remuneration.

Kemira's alternative performance measures should not be viewed in isolation to the equivalent IFRS measures and alternative performance measures should be read in conjunction with the most directly comparable IFRS measures. Definitions of the key figures is disclosed in the section on the Definitions of key figures.

* Revenue growth in local currencies, excluding acquisitions and divestments.

INCOME STATEMENT ITEMS

2018, EUR million	Pulp & Paper	Industry & Water	Group
Revenue¹⁾	1,520.2	1,072.6	2,592.8
EBITDA²⁾	187.8	127.0	314.8
Depreciation, amortization and impairments	-108.0	-58.6	-166.6
Operating profit (EBIT)²⁾	79.8	68.5	148.2
Finance costs, net			-25.0
Share of the results of associates			0.0
Profit before tax			123.3
Income taxes			-28.1
Net profit for the period			95.2

1) Revenue consists mainly of sales of products to external customers, and there are no intersegment sales.

2) Includes items affecting comparability.

ITEMS AFFECTING COMPARABILITY IN EBITDA AND EBIT

2018, EUR million	Pulp & Paper	Industry & Water	Group
Operative EBITDA	191.7	131.5	323.1
Restructuring and streamlining programs			-8.9
Transaction and integration expenses in acquisition			2.8
Divestment of businesses and other disposals			5.7
Other items			-7.9
Total items affecting comparability	-3.9	-4.4	-8.3
EBITDA	187.8	127.0	314.8
Operative EBIT	91.6	82.2	173.8
Items affecting comparability in EBITDA	-3.9	-4.4	-8.3
Items affecting comparability in depreciation, amortization and impairments	-7.9	-9.3	-17.3
Operating profit (EBIT)	79.8	68.5	148.2

Quarterly information on items affecting comparability is disclosed in the section on Reconciliation of IFRS figures.

BALANCE SHEET ITEMS

2018, EUR million	Pulp & Paper	Industry & Water	Group
Segment assets	1,472.3	779.3	2,251.6
Reconciliation to total assets as reported in the Group balance sheet:			
Other shares		228.4	
Deferred income tax assets		28.2	
Other investments		2.3	
Defined benefit pension receivables		61.8	
Other assets		46.6	
Cash and cash equivalents		144.9	
Total assets		2,763.8	
Segment liabilities	238.0	173.2	411.1
Reconciliation to total liabilities as reported in the Group balance sheet:			
Interest-bearing non-current financial liabilities		646.3	
Interest-bearing current financial liabilities		240.0	
Other liabilities		263.8	
Total liabilities		1,561.2	
OTHER ITEMS			
2018, EUR million	Pulp & Paper	Industry & Water	Group
Capital employed by segments at 31 Dec	1,234.3	606.1	1,840.5
Capital employed by segments, 12-month rolling average	1,177.6	603.4	1,781.4
Operative ROCE, %	7.8	13.6	9.8
Capital expenditure	128.4	65.3	193.7

INCOME STATEMENT ITEMS

2017, EUR million	Pulp & Paper	Industry & Water	Group
Revenue ¹⁾	1,476.9	1,009.1	2,486.0
EBITDA ²⁾	179.9	102.5	282.4
Depreciation, amortization and impairments	-92.9	-48.1	-141.0
Operating profit (EBIT) ²⁾	86.9	54.4	141.4
Finance costs, net			-28.9
Share of the results of associates			0.2
Profit before tax			112.6
Income taxes			-27.4
Net profit for the period			85.2

1) Revenue consists mainly of sales of products to external customers, and there are no intersegment sales.

2) Includes items affecting comparability.

ITEMS AFFECTING COMPARABILITY IN EBITDA AND EBIT

2017, EUR million	Pulp & Paper	Industry & Water	Group
Operative EBITDA	197.7	113.6	311.3
Restructuring and streamlining programs			-13.1
Transaction and integration expenses in acquisition			0.3
Divestment of businesses and other disposals			-1.9
Other items			-14.4
Total items affecting comparability	-17.9	-11.0	-28.9
EBITDA	179.9	102.5	282.4
Operative EBIT	104.8	65.5	170.3
Items affecting comparability in EBITDA	-17.9	-11.0	-28.9
Items affecting comparability in depreciation, amortization and impairments	0.0	0.0	0.0
Operating profit (EBIT)	86.9	54.4	141.4

Quarterly information on items affecting comparability is disclosed in the section on Reconciliation of IFRS figures.

BALANCE SHEET ITEMS

2017, EUR million	Pulp & Paper	Industry & Water	Group
Segment assets	1,380.8	769.6	2,150.3
Reconciliation to total assets as reported in the Group balance sheet:			
Other shares		235.8	
Deferred income tax assets		24.8	
Other investments		3.8	
Defined benefit pension receivables		48.0	
Other assets		45.4	
Cash and cash equivalents		166.1	
Non-current assets classified as held-for-sale		0.6	
Total assets	2,674.9		
Segment liabilities			
223.0	187.8	410.8	
Reconciliation to total liabilities as reported in the Group balance sheet:			
Interest-bearing non-current financial liabilities		669.1	
Interest-bearing current financial liabilities		191.4	
Other liabilities		230.8	
Total liabilities	1,502.1		

OTHER ITEMS

2017, EUR million	Pulp & Paper	Industry & Water	Group
Capital employed by segments at 31 Dec	1,157.7	581.8	1,739.5
Capital employed by segments, 12-month rolling average	1,165.2	596.7	1,763.2
Operative ROCE, %	9.0	11.0	9.7
Capital expenditure	138.3	51.7	190.1

Information about geographical areas**REVENUE BY GEOGRAPHICAL AREA BASED ON CUSTOMER LOCATION**

EUR million	2018	2017
Finland, domicile of the parent company	417.2	354.4
Other Europe, Middle East and Africa	942.3	932.9
Americas	1,001.6	979.0
Asia Pacific	231.7	219.7
Total	2,592.8	2,486.0

NON-CURRENT ASSETS BY GEOGRAPHICAL AREA

EUR million	2018	2017
Finland, domicile of the parent company	725.8	731.0
Other Europe, Middle East and Africa	467.1	476.4
Americas	426.5	433.3
Asia Pacific	191.4	128.0
Total	1,810.7	1,768.7

Information about major customers

The Group has several significant customers. At least 10% of the Group's revenue was not accumulated from any single external customer in 2018 or 2017.

The Group's accounting policies

Segment reporting

Segment information is presented in a manner consistent with the Group's internal organizational and reporting structure. Kemira's management evaluates the segments performance based on operative EBITDA and operating EBIT, among other factors. Assets and liabilities dedicated to a particular segment's operations are included in that segment's total assets and liabilities. Segment assets include property, plant and equipment, intangible assets, investments in associates, inventories, and current non-interest-bearing receivables. Segment liabilities include current non-interest-bearing liabilities. Geographically, Kemira's operations are divided into three business regions: Europe, the Middle East and Africa (EMEA), the Americas and Asia Pacific (APAC).

Revenue recognition

IFRS 15 standard establishes a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers. The core principle is that an entity should recognize revenue to depict the transfer of promised goods or services to customers an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. Kemira recognizes revenue when (or as) a performance obligation is satisfied, i.e. when 'control' of the good or service underlying the particular performance obligation is transferred to the customer.

Kemira's revenue consists mainly of contract types that include sales of chemical products and services which are related to sales of these products. Revenue recognition occurs at the point when the control of the products is transferred to the customer. In Kemira's sales agreements, control is transferred to the customer based on delivery terms and the revenue is recognized at a point in time.

Kemira provides delivery and handling services together with the sale of the chemical products to the customers. The delivery and handling services are recognized at the same time with revenue of products and are not treated as a separate performance obligation. Kemira recognizes the sale of products and the delivery and handling of services for the same reporting period.

Discounts provided to customers are not a significant component of the sales price in Kemira's sales contracts.

2.2. OTHER OPERATING INCOME AND EXPENSES

OTHER OPERATING INCOME

EUR million	2018	2017
Gains on sale of non-current assets	6.4	1.8
Rental income	1.2	1.1
Services	3.2	3.7
Other income from operations	4.1	0.3
Total	14.8	6.8

OPERATING EXPENSES

EUR million	2018	2017
Change in inventories of finished goods (inventory increase + / decrease -)	48.8	-4.5
Own work capitalized ¹⁾	-1.8	-3.2
Total	47.0	-7.7
Materials and services		
Materials and supplies		
Purchases during the financial year	1,542.6	1,502.1
Change in inventories of materials and supplies (inventory increase + / decrease -)	11.2	11.5
External services	45.6	40.2
Total	1,599.4	1,553.8
Employee benefit expenses	351.5	364.0
Other operating expenses		
Rents	49.3	51.1
Other expenses ²⁾	245.6	249.3
Total	294.9	300.4
Total operating expenses	2,292.8	2,210.4

1) Own work capitalized mainly comprises wages, salaries and other personnel expenses, and changes in inventories relating to self-constructed property, plant and equipment for own use.

2) In 2018, other operating expenses included research and development expenses of EUR 30.2 million (30.3) including government grants received. Government grants received for R&D were EUR 0.3 million (0.5). The extent of the grants received reduces the research and development expenses.

EMPLOYEE BENEFIT EXPENSES

EUR million	Note	2018	2017
Wages and salaries			
Wages		274.6	279.5
Emoluments of Kemira Oyj's CEO and the Board of Directors	6.1.	1.4	1.3
Share-based payments to others	2.3.	2.2	3.5
Total		278.2	284.3
 Indirect employee benefit expenses			
Expenses for defined benefit plans	4.5.	2.7	3.5
Pension expenses for defined contribution plans		20.6	20.5
Other employee benefit costs		49.9	55.7
Total		73.2	79.7
 Total employee benefit expenses		351.5	364.0

NUMBER OF PERSONNEL

	2018	2017
Average number of personnel by geographical area		
Europe, Middle East and Africa	2,590	2,611
Americas	1,546	1,532
Asia Pacific	674	638
Total	4,810	4,781
 Personnel in Finland, average	821	822
Personnel outside Finland, average	3,989	3,959
Total	4,810	4,781
 Number of personnel at 31 Dec	4,915	4,732

DELOITTE NETWORK'S FEES AND SERVICES

EUR million	2018	2017
Audit fees	1.5	1.7
Tax services	0.4	0.2
Other services	0.7	0.7
Total	2.6	2.6

 **The Group's accounting policies****Government grants**

Government grants for investments are recognized as a deduction from the carrying amount of PP&E. The grants are recognized in the income statement as smaller depreciations over the asset's useful life. Government grants for research activities are recognized as a deduction from expenses and certain other grants are recognized in other income from operations.

Research and developments costs

Research and development costs are recognized as an expense as incurred. Development costs are capitalized as intangible assets when it can be shown that a development project will generate a probable future economic benefit, and the costs attributable to the development project can reliably be measured. Capitalized development costs include material, labor and testing costs, and any capitalized borrowing costs that are directly attributable to bringing the asset ready for its intended use. Other development costs that do not meet these criteria are recognized as an expense as incurred. Development costs previously recognized as an expense are not recognized as an asset in the subsequent periods.

2.3. SHARE-BASED PAYMENTS

Share incentive plans 2015–2018

Kemira's share incentive plan comprises four performance periods for the calendar years 2015, 2016, 2017 and 2018. The Board of Directors of Kemira will decide on the plan's performance criteria and on the required performance levels for each criterion at the beginning of each performance period.

The rewards for the performance periods will be paid partly in Kemira's shares and partly in cash. The cash proportion is intended to cover taxes and tax-related costs arising from the reward to the participant. As a rule, no reward will be paid if a participant's employment or service ends before the reward payment.

The shares paid as a reward may not be transferred during the restriction period, which will end two years after the end of the performance period. If a participant's employment or service ends during the restriction period, as a rule, a participant must gratuitously return the shares given as a reward.

	Share incentive plan 2015	Share incentive plan 2016 ²⁾	Share incentive plan 2017	Share incentive plan 2018
Performance period (calendar year)	2015	2016	2017	2018
Lock-up period of shares	2 years	2 years	2 years	2 years
Issue year of shares	2016	-	2018	2019
Number of transferred shares at December 31, 2018	268,851 ¹⁾	-	145,928	- ⁴⁾
Number of participants at December 31, 2018	81	-	76	78
Performance criteria	Group's revenue and operative EBITDA margin	Group's revenue and operative EBITDA margin	Intrinsic value ³⁾	Intrinsic value ³⁾

1) At the end of the financial year ending 31 December, 2017, the commitment period for the performance period 2015 ended and the 268,851 shares paid on the basis of the share-based incentive scheme were released in January 2018.

2) The set objectives were not achieved, therefore the share-based incentives were not paid on the basis of the share-based incentive plan.

3) The amount of the reward is based on the Intrinsic value which is calculated using Kemira's operative EBITDA and Interest-bearing net liabilities.

4) In accordance with the terms and conditions of the share-based incentive plan, approximately 140,000 shares will be transferred to the participants during 2019.

CHANGES IN THE NUMBER OF SHARES IN THE SHARE INCENTIVE PLANS

	Share incentive plan 2015	Share incentive plan 2016	Share incentive plan 2017	Share incentive plan 2018
January 1, 2017	292,572	-	-	-
The shares issued to participants	-	-	-	-
The shares returned by participants	-23,721	-	-	-
December 31, 2017	268,851	-	-	-
January 1, 2018	268,851	-	-	-
The shares issued to participants	-	-	149,328	-
The shares returned by participants	-	-	-3,400	-
December 31, 2018	268,851	-	145,928	-

THE EFFECT OF SHARE-BASED PAYMENTS ON OPERATING PROFIT

EUR million	2018	2017
Rewards provided in shares	1.1	1.4
Rewards provided in cash	1.2	2.1
Total	2.2	3.5

Long-term share incentive plan 2019–2023

On December 21, 2018, the Board of Directors of Kemira Oyj decided to establish a long-term share incentive plan directed to a group of key employees. The long-term share incentive plan includes altogether two one-year performance periods for the years 2019 and 2020 and, three three-year performance periods for the years 2019–2021, 2020–2022 and 2021–2023.

Participation in the long-term share incentive plan's performance periods for 2019 & 2019–2021 is directed to approximately 90 key employees. The rewards to be paid in these performance periods, if the criteria are fulfilled, will amount up to a maximum of 643,500 Kemira Oyj shares. In addition, a cash proportion intended to cover the taxes and tax-related costs arising from the reward is included.

☒ The Group's accounting policies

Share-based payments

The Group has equity-settled share-based incentive plans under which the Group receives services from persons as consideration for the share-based rewards. The potential rewards for these services are provided to the person partly in shares and partly in cash.

The Group's share incentive plan includes persons in several different countries where the Group is obliged under local tax laws or regulations to pay the tax liability to the tax authorities on behalf of a person in cash.

The share-based incentive plans have been entirely classified as an equity-settled transaction. The rewards granted on the basis of a share-based arrangement are recognized as a personnel expenses in the income statement and in the equity. The expense is recognized over the vesting period, which is the period over which the specified vesting conditions are to be satisfied.

Share-based compensation expenses are determined on the grant date based on the Group's estimate of the number of shares that are expected to vest at the end of the vesting period. Based on the vesting conditions, the Group revises its estimates of the number of shares expected to vest based on the balance sheet date. It recognizes the potential impact of the revision on original estimates in the income statement as a personnel expense, with the corresponding adjustment made to equity at fair value.

2.4. DEPRECIATION, AMORTIZATION AND IMPAIRMENTS

EUR million	2018	2017
Amortization of intangible assets and depreciation of property, plant and equipment		
Other intangible assets ¹⁾	28.0	26.2
Buildings and constructions	17.7	17.5
Machinery and equipment	97.3	91.2
Other tangible assets	6.4	6.2
Total	149.3	141.0
Impairments of intangible assets and property, plant and equipment ²⁾		
Other intangible assets	0.1	0.0
Buildings and constructions	2.3	0.0
Machinery and equipment	14.9	0.0
Total	17.3	0.0
Total depreciation, amortization and impairments	166.6	141.0

1) Amortization of intangible assets related to business acquisitions amounted to EUR 15.9 million (16.7) during the financial year 2018.

2) Impairments are related to the closure of plants.

Goodwill impairment tests are disclosed in Note 3.1. Goodwill.

📘 The Group's accounting policies

Depreciation/amortization

Depreciation/amortization is calculated on a straight-line basis over the estimated asset's useful life. Land is not depreciated. The most commonly applied depreciation/amortization periods according to the Group's accounting policies are presented in the following table.

Depreciation of property, plant and equipment and amortization of intangible assets in years

Buildings and constructions	20–40
Machinery and equipment	3–15
Development costs	a maximum of 8 years
Customer relationships	5–7
Technologies	5–10
Non-compete agreements	3–5
Other intangible assets	5–10

Depreciation/amortization of an asset begins when it is available for use and it ceases at the moment when the asset is classified under IFRS 5 as held for sale, or is included in the disposal group.

2.5. FINANCE INCOME AND EXPENSES

EUR million	2018	2017
Finance income		
Dividend income	0.1	0.8
Interest income		
Interest income from loans and receivables	3.4	1.1
Interest income from financial assets at fair value through profit or loss	1.6	2.5
Other finance income ¹⁾	3.6	0.3
Total	8.6	4.7

EUR million	2018	2017
Finance expense		
Interest expenses		
Interest expenses from other liabilities	-21.6	-20.3
Interest expenses from financial liabilities at fair value through profit or loss	-6.9	-6.1
Other finance expenses	-4.9	-4.0
Total	-33.4	-30.4
Exchange differences		
Exchange differences from financial assets and liabilities at fair value through profit or loss	12.1	9.0
Exchange differences, other	-12.2	-12.2
Total	-0.1	-3.2
Total finance income and expenses	-25.0	-28.9
Net finance expenses as a percentage of revenue	1.0	1.2
Net interest as a percentage of revenue	0.9	1.0
Change in Consolidated Statement of Comprehensive Income from hedge accounting instruments		
Cash flow hedge accounting: amount recognized in the Consolidated Statement of Comprehensive Income	17.5	3.4
Total	17.5	3.4
Exchange differences		
Realized	-2.1	6.3
Unrealized	1.9	-9.4
Total	-0.1	-3.2

1) In 2018, other finance income included gains from the sale of shares in energy production companies.

2.6. INCOME TAXES

EUR million	2018	2017
Current taxes	-29.9	-21.6
Taxes for prior years	-0.1	0.1
Change in deferred taxes	1.9	-5.9
Total	-28.1	-27.4

RECONCILIATION BETWEEN TAX EXPENSE AND TAX CALCULATED AT DOMESTIC TAX RATE

EUR million	2018	2017
Profit before tax	123.3	112.6
Tax at parent's tax rate 20%	-24.7	-22.5
Foreign subsidiaries' different tax rate	-1.6	-2.0
Non-deductible expenses and tax-exempt profits	-0.1	-3.2
Share of profit or loss of associates	0.0	0.0
Tax losses	-4.4	-5.9
Tax for prior years	-0.1	0.1
Effect of change in tax rates	0.1	8.4
Changes in deferred taxes related to prior years	2.6	-2.3
Total taxes	-28.1	-27.4

The effective tax rate of the Group is 22.8% (24.3%).

The subsidiaries have EUR 131.5 million (125.5) tax losses, of which no deferred tax benefits have been recognized. The subsidiaries' tax losses are incurred in different currencies and borne mainly in Brazil and China.

According to the U.S. tax reform signed on December 22, 2017, the federal corporate income tax rate reduced from 35% to 21%, which was taken into account when calculating deferred tax assets and liabilities in 2017. The effect of tax rate change in deferred taxes in 2017 was EUR 8.4 million positive.

The Group has subsidiaries in approximately 40 countries and, hence, has continuously tax audits on-going of which results have not yet been finalized. The potential uncertainties over the income tax treatments of the periods open for tax re-assessment and uncertainties potentially identified in the on-going tax audits are required to be assessed by the management as the outcomes are unknown. The prior tax audits have not resulted in material adjustments to the Group's income taxes.

The Group has a tax dispute pending in the Supreme Administrative Court in Finland related to the tax deductibility of certain interest costs. In case of an unfavourable decision, there will be no impact to the Group's financial position. As a result of a favourable decision, the Group's income tax credits and tax losses carried forward would increase materially.

□ The Group's accounting policies

Income taxes

The Group's tax expense for the period comprises current tax, adjustments prior tax periods and deferred tax. Tax is recognized in the income statement, except where it relates to items recognized in other comprehensive income or directly in equity. In this case, the tax is also recognized in other comprehensive income or directly in equity.

The current income tax charge is calculated based on tax laws enacted or substantively enacted at the balance sheet date in the countries where the company and its subsidiaries operate and generate taxable income.

✗ Critical accounting estimates and judgments

Deferred taxes and uncertain tax positions

The management evaluates regularly the positions taken in the tax returns to identify situations in which the applicable tax regulation may be subject to interpretation. The management evaluates also other potential uncertainties related to the tax positions identified in the tax audits or tax disputes. The potential provisions are recorded based on the management's estimations of the final taxes to be paid to the tax authorities.

2.7. EARNINGS PER SHARE

	2018	2017
Earnings per share, basic		
Net profit attributable to equity owners of the parent, EUR million	89.1	78.6
Weighted average number of shares ¹⁾	152,483,502	152,359,250
Basic earnings per share, EUR	0.58	0.52
 Earnings per share, diluted		
Net profit attributable to equity owners of the parent, EUR million	89.1	78.6
Weighted average number of shares ¹⁾	152,483,502	152,359,250
Adjustments:		
Average number of treasury shares possibly to be issued on the basis of the share-based payments	284,449	234,668
Weighted average number of shares for diluted earnings per share	152,767,951	152,593,919
Diluted earnings per share, EUR	0.58	0.52

1) Weighted average number of shares outstanding, excluding the number of treasury shares.

The Group's accounting policies

Earnings per share

The basic earnings per share are calculated by dividing the profit attributable to the equity owners of the parent company by the weighted average number of shares in issue during the period excluding shares purchased by Kemira Oyj and held as treasury shares. The diluted earnings per share are calculated by adjusting the weighted average number of ordinary shares with the diluted effect of all the potential dilutive shares, such as shares from share-based payments.

2.8. OTHER COMPREHENSIVE INCOME

OTHER COMPREHENSIVE INCOME

EUR million	2018	2017
Items that may be reclassified subsequently to profit or loss		
Other shares	-	30
Exchange differences on translating foreign operations	1.2	-58.1
Cash flow hedges	21.9	4.3
Items that will not be reclassified subsequently to profit or loss		
Other shares	-7.5	-
Remeasurements on defined benefit plans	13.3	12.6
Other comprehensive income for the period before taxes	28.9	-11.2
 The tax relating to components of other comprehensive income	-7.1	1.8
Other comprehensive income for the period, net of tax	21.8	-9.4

THE TAX RELATING TO COMPONENTS OF OTHER COMPREHENSIVE INCOME

EUR million	2018			2017		
	Before tax	Tax charge (-)/ credit (+)	After tax	Before tax	Tax charge (-)/ credit (+)	After tax
Items that may be reclassified subsequently to profit or loss						
Other shares	-	-	-	30.0	-6.0	24.0
Exchange differences on translating foreign operations	1.2	-1.0	0.2	-58.1	11.7	-46.4
Cash flow hedges	21.9	-4.4	17.5	4.3	-0.9	3.4
Items that will not be reclassified subsequently to profit or loss						
Other shares	-7.5	1.5	-5.9	-	-	-
Remeasurements on defined benefit plans	13.3	-3.2	10.1	12.6	-3.0	9.6
Total other comprehensive income	28.9	-7.1	21.8	-11.2	1.8	-9.4

3. CAPITAL EXPENDITURES AND ACQUISITIONS

3.1. GOODWILL

EUR million	Note	2018	2017
Net book value at 1 Jan		505.0	522.4
Acquisition of subsidiaries and business acquisitions ¹⁾	3.5.	2.2	0.0
Decreases and other changes		0.0	0.0
Exchange differences		5.4	-17.4
Net book value at 31 Dec		512.5	505.0

1) In 2018, goodwill has increased due to the business acquisition in China.

Impairment testing of goodwill

The Group carries out its annual impairment testing of goodwill on September 30. Impairment testing of goodwill is also carried out when changes in circumstances indicate that the carrying amount exceeds its recoverable amount. The recoverable amounts of cash-generating units have been determined based on value in use calculations. The key assumptions are the long-term growth rate and discount rate. In 2018, impairment testing did not indicate any impairment (2017: no impairment).

Goodwill is allocated to two individual cash-generating units that are the Group's reportable segments. The reportable segment represents the lowest level within the Group at which the goodwill is monitored for internal management purposes. The Group's two reportable segments are Pulp & Paper and Industry & Water. A summary of the tested net book values and goodwill to the Group's reportable segments is presented in the following table.

EUR million	2018		2017	
	Net book value	of which goodwill	Net book value	of which goodwill
Pulp & Paper	1,234	355	1,158	350
Industry & Water	606	157	581	155
Total	1,841	513	1,739	505

Key assumptions for impairment testing of goodwill

Long-term growth rate assumption

A long-term growth rate assumption is used for the impairment testing of goodwill. The assumptions of the long-term growth rate were used based on financial forecasts prepared by the Group and approved by the management covering a five-year horizon. Forecasts for cash flow growth reflect the management's perception of developments in sales and cost items during the forecast period. The expected growth used to extrapolate cash flows subsequent to the five-year forecast period was assumed to be zero.

Discount rate

The discount rates applied were based on the Group's adjusted pre-tax weighted average cost of capital (WACC). The risk-adjusted WACC rate was defined separately for each cash-generating unit. The discount rates used in performing the impairment tests of the Group's reportable segments are presented in the following table.

%	2018	2017
Pulp & Paper ²⁾	5.2	6.6
Industry & Water ²⁾	5.1	6.6

2) Changes in the discount rate are mainly due to changes in the appropriate risk factors (beta).

Sensitivity analysis

Sensitivity analyses were made under the assumption that there would be a decline in the growth rate of cash flows during and after the forecast period. A general increase in interest rates has also been taken into consideration as well as a decrease in profitability. A decrease of 10% in the estimated cash flow, or an increase of 2 percentage points in the discount rate, would not result in impairment losses to be recorded in either of the reportable segments.

☒ The Group's accounting policies

Goodwill

Goodwill arises from business combinations. Goodwill represents the excess of the consideration transferred, the amount of any non-controlling interest in the acquiree and the acquisition-date fair value of any previous equity interest in the acquiree over the fair value of the identifiable net assets acquired. Goodwill is measured at cost less the accumulated impairment losses. Goodwill is tested for impairment annually and whenever there is any indication that an asset may be impaired. For this purpose, goodwill is allocated to cash-generating units.

Impairment testing

On each balance sheet date, the Group's assets are assessed to determine whether there is any indication of an asset's impairment. If any indication of impairment exists, the recoverable amount of the asset or the cash-generating unit is calculated on the basis of the value in use or the net selling price. Annual impairment tests cover goodwill and intangible assets not yet ready for use.

A cash-generating unit has been defined as an operating segment. The operating segments are Pulp & Paper and Industry & Water. Two or more operating segments are not combined into one reportable segment. Goodwill impairment is tested by comparing the reportable segment's (Pulp & Paper and Industry & Water) recoverable amount with its carrying amount. The Group does not have intangible assets with indefinite useful lives other than goodwill. All goodwill has been allocated to the reportable segments.

The recoverable amount of a reportable segment is defined as its value in use, which consists of the discounted future cash flows to the unit. Estimates of future cash flows are based on the continuing use of an asset and on the latest five-year forecasts by the management. The annual growth rate used to extrapolate cash flows subsequent to the forecast period is assumed to be zero. Cash flow estimates do not include the effects of improved asset performance, investments or future reorganizations.

An impairment loss is recognized whenever the carrying amount of an asset or a cash-generating unit exceeds its recoverable amount. An impairment loss is recognized in the income statement.

If there has been a positive change in the estimates used to determine an asset's recoverable amount since the last impairment loss was recognized, an impairment loss recognized for previous years is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined if no impairment loss had been recognized for the previous years. An impairment loss for goodwill is never reversed.

☒ Critical accounting estimates and judgments

Estimated impairment of goodwill

The impairment tests of goodwill and other assets include determining future cash flows which, with regard to the most significant assumptions, are based on margin levels, discount rates and the projected period. Major adverse developments in cash flows and interest rates may necessitate the recognition of an impairment loss.

3.2. OTHER INTANGIBLE ASSETS

2018, EUR million	Other intangible assets	Prepayments	Total
Acquisition cost at 1 Jan	267.3	10.5	277.8
Additions	19.7	-7.4	12.4
Purchases of subsidiaries and business acquisitions ¹⁾	41.2	2.5	43.7
Decreases and other changes	0.0	0.0	0.0
Exchange rate differences	0.5	0.0	0.4
Acquisition cost at 31 Dec	328.6	5.6	334.2
 Accumulated amortization at 1 Jan	 -177.2		 -177.2
Accumulated amortization relating to decreases and transfers	0.0		0.0
Amortization during the financial year	-28.0		-28.0
Impairments	-0.1		-0.1
Exchange rate differences	-0.3		-0.3
Accumulated amortization at 31 Dec	-205.6		-205.6
 Net book value at 31 Dec	 123.0	 5.6	 128.6
 2017, EUR million			
Acquisition cost at 1 Jan	269.4	4.2	273.6
Additions	7.5	6.3	13.8
Decreases and other changes	-4.7		-4.7
Exchange rate differences	-4.9		-4.9
Acquisition cost at 31 Dec	267.3	10.5	277.8
 Accumulated amortization at 1 Jan	 -157.7		 -157.7
Accumulated amortization relating to decreases and transfers	4.7		4.7
Amortization during the financial year	-26.0		-26.0
Exchange rate differences	1.8		1.8
Accumulated amortization at 31 Dec	-177.2		-177.2
 Net book value at 31 Dec	 90.0	 10.5	 100.5

¹⁾ Includes patents and a non-compete agreement that were allocated to intangible assets from the business acquisition in China.

The Group holds assigned emissions allowances under the EU Emissions Trading System at the Helsingborg site in Sweden and at the Bradford site in the UK. At the Group level, the allowances showed a surplus of 51,801 tons of carbon dioxide in 2018 (a net surplus of 122,464 tons).

📘 The Group's accounting policies

Other intangible assets

Other intangible assets include software and software licenses, for instance, patents, technologies, non-compete agreements and customer relationships acquired in business combinations. Intangible assets are measured at cost less accumulated amortization and any impairment losses. The Group has no intangible assets that have an indefinite useful life other than goodwill.

Emissions allowances

Emission allowances are accounted for as intangible assets measured at cost. Emission allowances received free of charge are measured at their nominal value (zero). A provision for the fulfillment of the obligation to return allowances is recognized if the free-of-charge allowances are not sufficient to cover actual emissions. The Group's consolidated balance sheet shows no items related to emissions allowances when the volume of actual emissions is lower than that of the free-of-charge emissions allowances and the Group has not bought allowances on the market.

3.3. PROPERTY, PLANT AND EQUIPMENT

2018, EUR million	Land	Buildings and constructions	Machinery and equipment	Other property, plant and equipment	Prepayments and assets under construction ²⁾	Total
Acquisition cost at 1 Jan	51.0	499.0	1,551.7	66.3	89.4	2,257.5
Additions	0.1	2.5	127.0	4.6	1.4	135.6
Acquisitions of subsidiaries and business acquisitions ¹⁾		5.5	6.2		11.7	23.3
Decreases and other changes		-6.4	-44.6	-0.6	0.0	-51.5
Disposed subsidiaries	-0.1	-1.7	-0.4			-2.2
Reclassifications	0.0	0.0	0.0	0.0	0.0	0.0
Exchange rate differences	-0.5	-4.5	-2.7	0.1	-0.6	-8.3
Acquisition cost at 31 Dec	50.4	494.4	1,637.3	70.4	101.9	2,354.5
 Accumulated depreciation at 1 Jan	-9.8	-267.8	-1,022.9	-34.1		-1,334.7
Accumulated depreciation related to decreases and transfers		8.3	45.1	0.6		54.0
Depreciation during the financial year		-17.7	-97.3	-6.4		-121.3
Impairments		-2.3	-14.0	-0.9		-17.2
Exchange rate differences		3.1	0.0	-0.1		3.0
Accumulated depreciation at 31 Dec	-9.8	-276.4	-1,089.1	-40.8		-1,416.3
 Net book value at 31 Dec³⁾	40.6	218.0	548.2	29.6	101.9	938.3

1) Includes items that were transferred to property, plant and equipment from the business acquisition in China.

2) Prepayment and non-current assets under construction are mainly comprised of plant investments.

3) Property, plant and equipment also includes the assets leased under finance leases. These are disclosed in Note 5.3. Interest-bearing liabilities.

2017, EUR million	Land	Buildings and constructions	Machinery and equipment	Other property, plant and equipment	Prepayments and assets under construction ²⁾	Total
Acquisition cost at 1 Jan	53.1	480.9	1,452.7	61.7	154.4	2,202.8
Additions	0.2	40.7	183.2	9.6	-61.0	172.7
Decreases and other changes	-0.7	-1.1	-10.5			-12.3
Reclassifications		0.2	-0.2			0.0
Exchange rate differences	-1.7	-21.6	-73.5	-4.9	-4.0	-105.6
Acquisition cost at 31 Dec	51.0	499.0	1,551.7	66.3	89.4	2,257.5
 Accumulated depreciation at 1 Jan	 -9.9	 -261.2	 -985.4	 -30.7		 -1,287.2
Accumulated depreciation related to decreases and transfers		0.7	10.4			11.1
Depreciation during the financial year		-17.1	-88.5	-6.0		-111.5
Impairments	0.0					0.0
Exchange rate differences		9.7	40.7	2.5		53.0
Accumulated depreciation at 31 Dec	-9.8	-267.8	-1,022.9	-34.1		-1,334.7
 Net book value at 31 Dec³⁾	 41.1	 231.2	 528.8	 32.2	 89.4	 922.9

2) Prepayment and non-current assets under construction are mainly comprised of plant investments.

3) Property, plant and equipment also includes the assets leased under finance leases. These are disclosed in Note 5.3. Interest-bearing liabilities.

📘 The Group's accounting policies

Property, plant and equipment

Property, plant and equipment are measured at cost less accumulated depreciation and any impairment losses. The residual values and useful lives of the assets are reviewed at least at the end of each financial year. Gains and losses on the sale of non-current assets are included in other operating income and expenses. Borrowing costs directly attributable to the acquisition or construction of a qualifying asset are capitalized as part of the cost of

the asset in question when it is probable that they will generate future economic benefits and the costs can be reliably measured. The costs of major inspections or the overhaul of an asset performed at regular intervals and identified as separate components are capitalized and depreciated over their useful lives.

3.4. OTHER SHARES

EUR million	The shares of Pohjolan Voima Group	Other non-listed shares	Total
Net book value at Jan 1, 2017	201.0	1.5	202.5
Additions	3.3	0.3	3.6
Decreases	0.0	-0.3	-0.3
Change in fair value	30.0	0.0	30.0
Net book value at Dec 31, 2017	234.3	1.5	235.8
Net book value at Jan 1, 2018	234.3	1.5	235.8
Additions	-	-	-
Decreases	-	-	-
Change in fair value	-7.4	-0.1	-7.5
Net book value at Dec 31, 2018	226.9	1.4	228.4

SHARES IN THE POHJOLAN VOIMA GROUP

EUR million	Class of shares	Holding %	Class of assets	2018	2017
Pohjolan Voima Oy	A	5	hydro power	76.2	68.9
Pohjolan Voima Oy	B	2	nuclear power	43.2	40.9
Pohjolan Voima Oy ¹⁾	B2	7	nuclear power	21.3	21.3
Teollisuuden Voima Oyj	A	2	nuclear power	83.3	78.8
Other Pohjolan Voima Oy and Teollisuuden Voima Oyj ²⁾	C, C2, G5, G6, M	several	several	3.0	24.4
Total				226.9	234.3

1) The plant supplier (AREVA-Siemens consortium) is building the Olkiluoto 3 (OL3) nuclear power plant in Finland with fixed-price turnkey contracts. In spring 2005, the plant supplier started construction work with a contractual obligation to start the electricity production in the OL3 nuclear power plant in spring 2009. However, OL3 has been delayed several times from its original start-up schedule. TVO's release on November 29, 2018, explains the updated schedule for the start-up of OL3 nuclear plant by the plant supplier. According to the plant supplier, the nuclear fuel of OL3 will be loaded into the reactor in June 2019, the first connection to the grid will take place in October 2019, and the start of regular electricity production of the OL3 nuclear power plant unit will take place in January 2020.

In addition, in connection with the OL3 project, an arbitration procedure was between the plant supplier and the owner of the plant, Teollisuuden Voima, regarding the delay in the project and the costs incurred. On March 11, 2018, TVO published information in which TVO confirmed that it has signed a settlement agreement related to the project's dispute with the OL3 plant supplier.

The uncertainty of the start-up date of regular electricity generation at the OL3 nuclear power plant effects on the estimated fair value of the B2 series shares.

2) On September 12, 2018, Venator announced its intention to close its Pori TiO2 manufacturing facility. Resulting from the shut down announce, Kemira's fair value of PVO G6 share series has decreased by EUR 21.4 million.

Kemira Oyj owns 5% of Pohjolan Voima Oy, a company of the Pohjolan Voima Group, and 1% of its subsidiary Teollisuuden Voima Oyj.

The fair value of the shares is based on the discounted cash flow model. The discount rate used in the fair value calculation is the annually defined weighted average cost of capital. The short-term discount rate in 2018 was 3.8% (3.9%), and the long-term discount rate was 4.4% (4.7%). A 10% decrease in the electricity market price in the future would decrease the fair value of the shares by approximately EUR 35 million. An increase of one percentage point in the discount rate would decrease the fair value by approximately EUR 30 million.

□ The Group's accounting policies

Other shares

Other shares are classified at fair value through other comprehensive income. Changes in the fair value of other shares are recognized in other comprehensive income under equity in the fair value reserve taking the tax effect into account, including gains and losses from sales. The dividends are recognized in profit or loss. Other shares include non-listed companies, the shareholdings in Pohjolan Voima Oy (PVO) and Teollisuuden Voima Oyj (TVO) representing the largest investments.

PVO and its subsidiary TVO comprise a private electricity-generating group owned by Finnish manufacturing and power companies, to which it supplies electricity at cost. The PVO Group owns and operates two nuclear power plant units in Olkiluoto in the municipality of Eurajoki. Kemira Group has A and C series shares in TVO and A, B, C, G and M series shares in PVO. Different share series entitle the shareholder to electricity generated by different power plants. The owners of each share series are responsible for the fixed costs of the series in question in proportion to the number of the shares, regardless of whether they use their power or energy share or not, and for variable costs in proportion to the amount of energy used.

Kemira Oyj's holding in the PVO Group entitling Kemira to the electricity from completed power plants is measured at the fair value based on the discounted cash flow resulting from the difference between the market price of the electricity and the cost price. The forward electricity price quotations in Finland area published by the Nordic Electricity Exchange

have been used as the basis for the market price for the electricity for the first five years, and after this, the development of the prices is based on a fundamental simulation model of the Nordic electricity market. The impact of inflation in the coming years is taken into account in the price of the electricity and the cost prices. The cost prices are determined by each share series. Future cash flows have been discounted based on the estimated useful lifecycles of the plants related to each share series, and hydro power also includes terminal value. The discount rate has been calculated using the annually determined average weighted cost of capital.

critical accounting estimates and judgments

Estimated fair value of shares in the PVO Group

The Group's shareholding in the unlisted PVO Group is measured at fair value, based on the discounted cash flow resulting from the difference between the market price of electricity and the cost price using the valuation model. Developments in the actual fair value may differ from the estimated value due to factors, such as electricity prices, inflation, the forecast period or the discount rate.

3.5. BUSINESS COMBINATIONS

Acquisition of business with Kemira TC Wanfeng Chemicals Yanzhou company in China

On September 29, 2017, Kemira signed an agreement to form a company - Kemira TC Wanfeng Chemicals Yanzhou ("NewCo") - with Shandong Tiancheng Wanfeng Chemical Technology ("TC Wanfeng") which is an AKD producer in China. NewCo will strengthen Kemira's position as the leading global producer of chemicals in the Pulp & Paper industry.

NewCo mainly produces AKD wax and its key raw material fatty acid chloride (FACL). AKD wax for which the main component is based on renewable raw materials, is a sizing chemical used in board and paper manufacturing to create resistance against liquid absorption.

Through backward integration, Kemira expanding its position in the value chain. NewCo is the largest AKD wax manufacturing unit globally, improving Kemira's AKD wax capacity. NewCo's site is located in the same chemical park with Kemira's first AKD wax plant in Yanzhou, China

and the proximity of the two sites results in operational synergies. The NewCo site also offers growth opportunities for other chemicals.

On November 30, 2018, Kemira closed the deal for the acquisition of business into NewCo and received final authority permits in China. The purchase price of the acquired business into NewCo was EUR 68 million and part of the purchase price is outstanding. The purchase price does not involve contingent consideration. Kemira owns 80% and TC Wanfeng 20% of NewCo. The deal includes put and call options regarding the TC Wanfeng 20% holding of NewCo's shares. The obligation related to the put option is recognized as a liability in the balance sheet.

The calculations under IFRS 3 related to the acquisition are provisional and the presented values of the assets and goodwill may change during the 12-month period during which the acquisition calculation will be finalized. Based on preliminary calculations, EUR 39 million was allocated to intangible assets as patents and a non-compete agreement. A provisional goodwill of EUR 2 million arises mainly from the expected synergy in the business combination. The acquired business has been consolidated into the Pulp & Paper segment starting on December 1, 2018.

The purchase price for the business on the acquisition date and the preliminary fair value for the amounts of the assets acquired and goodwill are as follows:

	EUR million
Purchase price of the acquisition, total	68
Intangible assets	43
Property, plant and equipment	23
Identifiable assets acquired	66
Goodwill	2
Net assets acquired at the acquisition date	68

In 2018, acquired business related costs of EUR 0.3 million (1.0) is included in other operating expenses. Revenue and EBITDA from the acquired business on December 1–31, 2018 had no material impact on Kemira's income statement in 2018.

📘 The Group's accounting policies

Business combinations

Subsidiaries are fully consolidated from the date on which the control is transferred to the Group. They are de-consolidated from the date on which this control ceases.

The consideration transferred for acquisition of a subsidiary is defined as an aggregate of the fair values of the assets transferred, the liabilities assumed and the equity interest issued by the Group. The consideration transferred may include the fair value of any asset or liability resulting from the contingent consideration arrangement. Acquisition-related costs are expensed as incurred. Identifiable assets acquired, and liabilities and contingent liabilities that are assumed in a business combination are measured at their fair values on the acquisition date. On an acquisition-by-acquisition basis, the Group recognizes any non-controlling interest in the acquiree either at fair value or at the non-controlling interest's proportionate share of the acquiree's net assets.

The amount that exceeds the aggregate of the consideration transferred, the amount of any non-controlling interest in the acquiree and the acquisition-date fair value of any previous equity interest in the acquiree over the fair value of the Group's share of the net assets acquired is recognized as goodwill in the balance sheet. If this is less than the fair value of the net assets of the subsidiary acquired by bargain purchase, the difference is recognized directly in the income statement.

4. WORKING CAPITAL AND OTHER BALANCE SHEET ITEMS

NET WORKING CAPITAL

EUR million	Note	2018	2017
Inventories	4.1	283.8	223.8
Trade receivables and other receivables	4.2	420.2	418.8
Excluding financing items in other receivables ¹⁾		-32.5	-21.4
Trade payables and other liabilities	4.3	439.1	422.8
Excluding financing items in other liabilities ¹⁾		-28.0	-12.0
Total		260.4	210.5

¹⁾ Includes interest income and expenses, exchange gains and losses and hedging related items.

Quarterly information on net working capital is disclosed in the section on Reconciliation of IFRS figures.

4.1. INVENTORIES

EUR million	2018	2017
Materials and supplies	86.5	77.9
Finished goods	179.1	130.3
Prepayments	18.2	15.5
Total	283.8	223.8

In 2018, EUR 5.4 million (4.2) of the inventory value were recognized as an expense in order to decrease the book values of the inventories to correspond with their net realizable value.

📘 The Group's accounting policies

Inventories

Inventories are measured at the lower of cost and net realizable value. Costs are determined on a first-in first-out (FIFO) basis or by using a weighted average cost formula, depending on the nature of the inventory. The cost of finished goods and work in progress include the proportion of production overheads of the normal capacity. The net realizable value is the sales price received in the ordinary course of business less the estimated costs for completing the asset and the sales costs.

4.2. TRADE RECEIVABLES AND OTHER RECEIVABLES

EUR million	2018	2017
Trade and other receivables		
Trade receivables	307.3	315.2
Prepayments	1.9	4.9
Prepaid expenses and accrued income	62.7	49.2
Other receivables	48.4	49.5
Total	420.2	418.8

AGING OF OUTSTANDING TRADE RECEIVABLES

EUR million	2018		2017	
	Receivables, gross amount	Expected credit losses	Receivables, net amount	Receivables, net amount
Undue trade receivables	265,4	-0,2	265,2	266,3
Trade receivables 1–90 days overdue	40,9	-0,1	40,8	49,5
Trade receivables more than 91 days overdue	1,5	-0,2	1,3	-0,6
Total	307,8	-0,5	307,3	315,2

In 2018, impairment loss of trade receivables amounted to EUR 0.6 million (0.8).

In 2018, items that were due in a time period longer than one year included prepaid expenses and an accrued income of EUR 10.4 million (7.9), other receivables of EUR 5.0 million (10.8) and prepayments of EUR 0.6 million (0.4).

📘 The Group's accounting policies

Trade receivables, loan receivables and other receivables

Trade receivables, loan receivables and other receivables are initially recognized at fair value and subsequently measured at amortized cost, taking impairment into account. These items are subject to a simplified impairment model in accordance with IFRS 9 standard, where the estimated amount of credit losses is based on the expected credit losses on life expectancy.

The expected credit loss rates for the impairment model vary for trade receivables by age distribution and geographical area of the EMEA, America and APAC. Credit loss rates are based on sales payment profiles and historical credit losses.

The expected credit losses for trade receivables are recognized using the simplified impairment model in accordance with IFRS 9 standard. The expected credit losses are calculated by multiplying the book value of unpaid trade receivables by the expected credit loss rate according to geographical area. In addition, any overdue trade receivables over 180 days are assessed based on a specific risk assessment.

Trade receivables, loan receivables and other receivables do not include a significant financial component.

4.3. TRADE PAYABLES AND OTHER CURRENT LIABILITIES

EUR million	2018	2017
Trade payables and other liabilities		
Prepayments received	1.9	1.1
Trade payables	179.9	187.2
Accrued expenses	230.0	203.4
Other non-interest-bearing current liabilities	27.4	31.1
Total	439.1	422.8
Accrued expenses		
Employee benefits	66.5	67.7
Items related to revenue and purchases	108.0	96.4
Interest	8.8	8.2
Exchange rate differences	17.9	0.0
Other	28.8	31.2
Total	230.0	203.4

📘 The Group's accounting policies

Trade payables and other liabilities

Trade payables are initially recognized at fair value and subsequently measured at amortized cost.

4.4. DEFERRED TAX LIABILITIES AND ASSETS

EUR million	Jan 1, 2018	Recognized in the income statement	Recognized in other comprehensive income	Recognized in equity	Acquired and disposed subsidiaries	Exchange differences and reclassifications	Dec 31, 2018
Deferred tax liabilities							
Depreciations and untaxed reserves	41.3	2.4				1.7	45.4
Other shares	22.7		-1.5				21.2
Defined benefit pensions	11.1	-0.1	2.9				13.8
Fair value adjustments of net assets acquired ¹⁾	4.8	-1.5				0.0	3.3
Other items	5.2	-1.0	1.5	0.5		-1.0	5.3
Total	85.1	-0.1	2.9	0.5	0.0	0.7	89.1
Deducted from deferred tax assets	-22.7						-17.9
Deferred tax liabilities in the balance sheet	62.4						71.1
Deferred tax assets							
Provisions	13.8	0.0				0.4	14.1
Tax losses	10.4	-1.0				-0.1	9.3
Defined benefit pensions	9.9	0.1	0.3			-0.2	10.2
Other items ²⁾	13.8	2.7	-3.9			0.0	12.6
Total	47.9	1.8	-3.6	0.0	0.0	0.0	46.1
Deducted from deferred tax liabilities	-22.7						-17.9
Deferred tax assets in the balance sheet	25.2						28.2

1) The identifiable assets acquired and liabilities assumed in a business combination are recognized at their fair values. The resulting deferred taxes affect goodwill.

2) Other items includes a EUR 0.4 million adjustment related to the adoption of IFRS 9 Financial Instruments standard on January 1, 2018, as well as the amendment in IFRS 2 Share-based Payments standard. Further information of the standard changes is available in Note 1. The Group's accounting policies.

EUR million	Jan 1, 2017	Recognized in the income statement	Recognized in other comprehensive income	Recognized in equity	Acquired and disposed subsidiaries	Exchange differences and reclassifications	Dec 31, 2017
Deferred tax liabilities							
Depreciations and untaxed reserves	56.8	-11.2				-4.4	41.3
Other shares	16.7		6.0				22.7
Defined benefit pensions	7.8	-0.1	3.3				11.0
Fair value adjustments of net assets acquired ¹⁾	7.3	-2.4				-0.1	4.8
Other items	18.7	-2.0	-11.5	0.3		-0.2	5.2
Total	107.3	-15.6	-2.2	0.3	0.0	-4.7	85.1
Deducted from deferred tax assets	-44.1						-22.7
Deferred tax liabilities in the balance sheet	63.2						62.4
Deferred tax assets							
Provisions	16.1	-4.8				2.5	13.8
Tax losses	22.8	-6.5				-5.9	10.4
Defined benefit pensions	8.1	1.0	1.0			-0.1	9.9
Other items ²⁾	24.6	-11.2	-0.6			0.6	13.4
Total	71.6	-21.6	0.4	0.0	0.0	-2.9	47.6
Deducted from deferred tax liabilities	-44.1						-22.7
Deferred tax assets in the balance sheet	27.5						24.8

1) The identifiable assets acquired and liabilities assumed in a business combination are recognized at their fair values. The resulting deferred taxes affect goodwill.

2) Other items includes a EUR 0.4 million adjustment related to the adoption of IFRS 9 Financial Instruments standard on January 1, 2018, as well as the amendment in IFRS 2 Share-based Payments standard. Further information of the standard changes is available in Note 1. The Group's accounting policies.

As a result of the change in tax legislation signed on December 22, 2017, the U.S. corporate tax rate was reduced from 35% to 21%. Therefore, the relevant deferred tax balances have been remeasured at the new 21% tax rate in the Consolidated Financial statements for year ending on December 31, 2017. The change in the U.S. corporate income tax is presented in more detail in Note 2.6. Income taxes.

📘 The Group's accounting policies

Deferred taxes

Deferred tax is recognized, using the liability method, on temporary differences arising between the tax bases of the assets and liabilities and their carrying amounts in the Consolidat-

ed Financial Statements. However, deferred tax liabilities are not recognized if they arise from the initial recognition of an asset or liability in a transaction other than a business combina-

tion that at the time of the transaction affects neither accounting profit nor taxable profit or loss. Deferred income tax is determined using tax rates (and laws) that have been enacted or substantially enacted by the balance sheet date and are expected to apply when the related deferred income tax asset is realized or the deferred income tax liability is settled.

Deferred income tax assets are recognized only to the extent that it is probable that a future taxable profit will be available against which the temporary differences can be utilized.

Deferred income tax is provided on temporary differences arising on investments in subsidiaries and associates, except for deferred income tax liability where the timing of the reversal of the temporary difference is controlled by the Group and it is probable that the temporary difference will not reverse in the foreseeable future.

Deferred income tax assets and liabilities are offset when there is a legally enforceable right to offset the current tax assets against current tax liabilities, and when the deferred income taxes assets and liabilities relate to the income taxes levied by the same taxation authority on either the same tax entity or different taxable entities where there is an intention to settle the balances on a net basis.

☒ Critical accounting estimates and judgments

Deferred taxes

For the recognition of deferred tax assets for tax losses and other items, the management assesses the amount of a probable future taxable profit against which unused tax assets can be utilized. Actual profits may differ from the forecasts and in such cases, the change will affect the taxes in future periods.

4.5. DEFINED BENEFIT PENSION PLANS AND EMPLOYEE BENEFITS

The Group has several defined benefit pension plans and other employee benefit obligations. The main defined benefit pension plans are in Finland, Sweden, Germany, the UK and Norway.

Finland

The Group's most significant defined benefit plan is in Finland, through Pension Fund Neliapila, which takes care of part of some employees' supplementary pension benefits. The Pension Fund Neliapila covers employees whose employment with Kemira began before January 1, 1991, meaning that the fund is closed to new employees. The plan is a final average pay pension plan relating to supplementary pension benefits. The obligations of Pension Fund Neliapila are a total of EUR 212.3 million (241.1) and assets of the plan are EUR 272.6 million (287.4).

The Pension Fund Neliapila's supplementary benefit includes old-age pensions, disability pensions, survivors' pensions and funeral grants. The aggregated pension benefit is 66% of the pension salary. To qualify for a full pension, an employee must have accrued a pensionable service of 25 years. The supplementary pension benefits is the difference between the aggregated and compulsory pension benefits. At the beginning of 2017, the pension legislation was amended so that the retirement age will increase gradually from 63 years upwards. Under the new rules, the Pension Fund Neliapila will compensate for a portion of this increase in the retirement age. This had no material impact on the pension fund's liabilities.

The Board of Directors of Pension Fund Neliapila decided on December 2018 to return the fund's surplus of EUR 15 million to Kemira Group companies. The surplus return will be paid by Pension Fund Neliapila if an approval is obtained from the Financial Supervisory Authority. The approval is required by the Pension Fund Act. The surplus payment is expected to take place during the first half of 2019. The surplus return of the pension plan assets will be recognized as a re-classification to financial assets in the Group's consolidated balance sheet.

Sweden

In Sweden, there is a defined benefit pension plan called the ITP 2 plan for white-collar employees. To qualify for a full pension, an employee must have a projected period of pensionable service, from the date of entry until retirement age, of at least 30 years. The pension arrangements comprise the normal retirement pension, complementary retirement pensions and a survivors' pension. In addition, Kemira must have credit insurance from PRI Pensionsgaranti Mutual Insurance Company for the ITP 2 plan pension liability. The defined benefit obligations in Sweden is a total of EUR 47.1 million (46.6).

**ASSETS AND LIABILITIES OF DEFINED BENEFIT PLANS RECOGNIZED
IN THE BALANCE SHEET**

EUR million	2018	2017
Present value of defined benefit obligations	306.7	343.9
Fair value of plan assets	-287.9	-310.4
Surplus (-) / Deficit (+)	18.7	33.5
The effect of asset ceiling	0.7	0.7
Net recognized assets (-) / liabilities (+) in the balance sheet	19.4	34.3
Liabilities of defined benefit plans	81.2	82.3
Receivables of defined benefit plans	-61.8	-48.0
Net receivables (-) / liabilities (+) of defined benefit plans recognized in the Balance Sheet	19.4	34.3

**AMOUNTS OF DEFINED BENEFIT PLANS RECOGNISED
IN THE INCOME STATEMENT**

	2018	2017
Service costs	2.7	3.5
Net interest cost ¹⁾	1.0	1.3
Defined benefit expenses (+) / income (-) in the Income Statement	3.7	4.8

1) Net interest costs are presented in net finance costs in the Income Statement.

DEFINED BENEFIT PLANS RECOGNISED IN THE OTHER COMPREHENSIVE INCOME

EUR million	2018	2017
Items resulting from remeasurements of defined benefit plans ²⁾		
Actuarial gains (-) / losses (+) in defined benefit obligations arising from changes in demographic assumptions	0.1	0.1
Actuarial gains (-) / losses (+) in defined benefit obligations arising from changes in financial assumptions ³⁾	-13.7	1.2
Actuarial gains (-) / losses (+) in defined benefit obligations arising from experience based assumptions	-4.3	-3.4
Actuarial gains (-) / losses (+) in plan assets ³⁾	4.6	-11.2
Effect from asset ceiling	0.0	0.7
Defined benefit plan expenses (+) / income (-) in the other comprehensive income	-13.3	-12.6

2) The remeasurements of defined benefit plans are included in the Statement of Comprehensive Income as part of other comprehensive income. The item has been disclosed net of tax and the related income tax is disclosed in Note 2.8. Other comprehensive income.

3) In 2018 and 2017, the actuarial gains and losses are mainly due to return on assets and change in the discount rate in Pension Fund Neliapila.

CHANGES IN THE DEFINED BENEFIT OBLIGATIONS OVER THE PERIOD

EUR million	2018	2017
Defined benefit obligation at 1 Jan	343.9	359.0
Current service costs	2.3	3.1
Interest costs	5.2	5.6
Actuarial losses (+) / gains (-)	-17.9	-2.1
Exchange differences on foreign plans	-2.2	-2.6
Benefits paid	-18.5	-19.2
Curtailments and settlements ⁴⁾	-6.1	0.0
Past service costs	0.0	0.0
Other items	0.1	0.1
Present value of defined benefit obligations at 31 Dec	306.7	343.9

CHANGES IN PLAN ASSETS OVER THE PERIOD IN DEFINED BENEFIT PLANS

EUR million	2018	2017
Fair value at 1 Jan	310.4	311.3
Interest income	4.2	4.3
Contributions	0.5	0.7
Actuarial losses (-) / gains (+)	-4.6	11.2
Exchange differences on foreign plans	-0.5	-1.1
Benefits paid	-15.5	-15.6
Settlements ⁴⁾	-6.5	0.0
Other items	-0.2	-0.4
Fair value of plan assets at 31 Dec	287.9	310.4

4) In Canada, the defined benefit (DB) pension plan has been converted to a defined benefit contribution plan. DB pension obligations have been transferred to an insurance company. Due to the DB plan surplus position, the wind-up of the DB plan has generated a settlement loss in profit or loss of EUR 0.2 million in the financial statements for 2018.

PLAN ASSETS BY ASSET CATEGORY IN DEFINED BENEFIT PLANS

EUR million	2018	2017
Interest rate investments and other assets	224.9	186.9
Shares and share funds	38.2	106.7
Properties occupied by the Group	23.7	15.5
Kemira Oyj's shares	1.1	1.3
Total assets	287.9	310.4

The Finnish Pension Fund Neliapila, which has most of the defined benefit plan's assets of EUR 272.6 million (287.4), consists of interest rate investments and other assets of EUR 212.5 million (176.9), shares and share funds of EUR 35.2 million (93.7), properties of EUR 23.7 million (15.5) and Kemira Oyj's shares of EUR 1.1 million (1.3). In Pension Fund Neliapila, the investment position is managed within an asset-liability matching (ALM) framework that has been developed to combine long-term investments in line with the obligations under the pension plan. In Pension Fund Neliapila, a market risk can be considered a significant investment risk. The market risk arising from cyclical fluctuations of the financial market, is managed by ensuring that the investment position is sufficiently diversified.

The income (+) / expense (-) of the actual returns on the plan assets of the Group's defined benefit plan were EUR -0.4 million (15.4).

SIGNIFICANT ACTUARIAL ASSUMPTIONS

%	2018	2017
Discount rate	1.6 - 3.1	1.3 - 3.3
Inflation rate	1.1 - 2.5	1.1 - 2.5
Future salary increases	1.4 - 2.8	1.6 - 3.0
Future pension increases	0.8 - 2.5	0.4 - 3.0

The significant assumptions used in calculating the obligations of the Finnish Pension Fund Neliapila were as follows: discount rate 1.6% (1.3%), inflation rate 1.4% (1.6%), future salary increases 1.4% (1.6%) and future pension increases 1.7% (1.9%).

Sensitivity analysis

The sensitivity analysis is based on keeping other assumptions constant when one assumption is changed. In practice, this is unlikely to occur and changes in some of the assumptions may correlate with each other. When calculating the sensitivity of the defined benefit obligation to significant actuarial assumptions the same method has been applied as when calculating the pension liability recognized within the balance sheet.

If the discount rate would be 0.5 percentage points lower in all of the significant countries, the defined benefit obligation would increase by EUR 17.5 million (5.9%) if all other assumptions were held constant.

PENSION FUND NELIAPILA IN FINLAND

EUR million	Defined benefit obligation		Impact on defined benefit obligation	
	2018	2017	2018	2017
Discount rate 1.6% (2017: 1.3%)	212.3	241.0		
Discount rate +0.5%	200.8	227.2	-5.4%	-5.7%
Discount rate -0.5%	225.0	256.5	6.0%	6.4%
Future pension increases 1.7% (2017: 1.9%)	212.3	241.0		
Future pension increases +0.5%	223.6	254.8	5.4%	5.7%
Future pension increases -0.5%	201.9	228.4	-4.9%	-5.2%

A change in mortality assumption of an increase in life expectancy by one year will increase the defined benefit obligation by EUR 9.2 million (4.3%).

ITP 2 PENSION PLAN IN SWEDEN

EUR million	Defined benefit obligation		Impact on defined benefit obligation	
	2018	2017	2018	2017
Discount rate 2.3% (2017: 2.2%)	47.1	46.6		
Discount rate +0.5%	43.7	43.2	-7.2%	-7.3%
Discount rate -0.5%	51.0	50.4	8.3%	8.2%
Future salary increases 2.5% (2017: 2.5%)	47.1	46.6		
Future salary increases +0.5%	48.2	47.8	2.3%	2.4%
Future salary increases -0.5%	46.1	45.5	-2.1%	-2.6%

A change in mortality assumption of an increase in life expectancy by one year will increase the defined benefit obligation by EUR 2.1 million (4.5%).

Expected contributions to the defined benefit plans for the year ending on December 31, 2019, are EUR 2.9 million. In addition, the return of surplus of EUR 15 million from Pension Fund Neliapila is expected to take place during 2019.

¶ The Group's accounting policies

Defined benefit pension plans and employee benefits

The Group has different post-employment schemes, including both defined contribution and defined benefit pension plans in accordance with the local conditions and practices in the countries in which it operates. Pension plans are generally funded through contributions to pension insurance companies or a separate pension fund.

A defined contribution plan is a pension plan under which the Group pays fixed contributions into a separate entity. The Group has no legal or constructive obligations to pay further contributions if the fund does not hold sufficient assets to pay all employees the benefits relating to employee service in the current and prior periods. A defined benefit plan is a pension plan that is not a defined contribution plan.

Typically defined benefit plans define an amount of pension benefit that an employee will receive on retirement, usually dependent on one or more factors such as their compensation level and years of service.

The liability recognized in the balance sheet in respect to the defined benefit pension plans is the present value of the defined benefit obligation at the end of the reporting period less the fair value of plan assets. The defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using interest rates of high-quality corporate bonds that are denominated in the currency in which the benefits will be paid, and with their terms to maturity approximating to the terms of the related pension obligation. In countries where there is no deep market in such bonds, the market rates for government bonds are used.

Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions are charged or credited to equity in other comprehensive income in the period in which they arise.

Current service costs are included in the Consolidated Income Statement in the employee benefit expenses and net interest costs on finance income and finance expense. Past-service costs are recognized immediately in profit or loss.

For defined contribution plans, the Group pays contributions to publicly or privately administered pension insurance plans on a mandatory, contractual or voluntary basis. The Group has no further payment obligations once the contributions have been paid. The contributions are recognized as employee benefit expenses when they are due. Prepaid contributions are recognized as an asset to the extent that a cash refund or a reduction in the future payments is available.

Critical accounting estimates and judgments

Defined benefit pension plans

Determining pension liabilities under defined benefit pension plans includes a number of actuarial assumptions, and significant changes in these assumptions may affect the amounts of pension liabilities and expenses. Actuarial calculations include assumptions by the management, such as the discount rate and assumptions of salary increases and the termination of employment contracts. The pension liability is calculated by independent actuaries.

4.6. PROVISIONS

EUR million	Personnel related provisions	Restructuring provisions	Environmental provisions ¹⁾	Other provisions	Total
Non-current provisions					
At January 1, 2018	0.3	1.6	17.7	7.6	27.2
Exchange rate differences			-0.1	-0.6	-0.7
Additional provisions and increases in existing provisions	1.4		3.7	0.2	5.4
Used during the financial year			-0.4	-0.6	-1.0
Unused provisions reversed	-0.1		-1.1		-1.2
Reclassification		-0.2			-0.2
At December 31, 2018	1.6	1.4	19.9	6.6	29.6
 Current provisions					
At January 1, 2018	5.1	4.7	1.5	0.0	11.3
Exchange rate differences	0.1				0.1
Additional provisions and increases in existing provisions	5.2	0.1	1.1		6.4
Used during the financial year	-4.2	-3.8	-0.2		-8.3
Unused provisions reversed	-0.5		-0.1		-0.6
Reclassification		0.2			0.2
At December 31, 2018	5.6	1.2	2.4	0.0	9.2
 EUR million					
Analysis of total provisions					
Non-current provisions				29.6	27.2
Current provisions				9.2	11.3
Total				38.7	38.5

1) The bulk of Kemira's business is in the chemical industry. The Group's operations are governed by numerous international agreements and regional and national legislation all over the world. The Group treats its environmental liabilities and risks in accordance with the established internal principles and procedures. In 2018, provisions for environmental remediation totaled EUR 22.3 million (19.2). The biggest provisions relate to site closures and reconditioning of the sediment of a lake in Vaasa, Finland.

□ The Group's accounting policies

Provisions

Provisions for restructuring costs, personnel related costs, environmental obligations, legal claims, and onerous contracts are recognized when the Group has a present legal or constructive obligation as a result of past events, and it is probable that an outflow of resources will be required to settle the obligation, and a reliable estimate of the amount of this obligation can be made. A restructuring provision is recognized when there is a detailed and appropriate plan prepared for it and the implementation of the plan has begun or has been notified to those whom the restructuring concerns.

The amount recognized as a provision is the present value of the expenditure expected to be required to settle the obligation on the balance sheet date using a pre-tax interest rate that reflects current market assessments of the time value of money and the risks specific to the obligation.

✗ Critical accounting estimates and judgments

Provisions

Recognizing provisions requires the management's estimates, since the precise amount of obligations related to the provisions is not known when preparing the Financial Statements.

5. CAPITAL STRUCTURE AND FINANCIAL RISKS

5.1. CAPITAL STRUCTURE

EUR million	2018	2017
Equity	1,202.5	1,172.8
Total assets	2,763.8	2,674.9
Gearing ¹⁾	62%	59%
Equity ratio ²⁾	44%	44%

1) The definition of the key figure for Gearing is $100 \times \text{Interest-bearing net liabilities} / \text{Total equity}$.

2) The definition of the key figure for the Equity ratio is $100 \times \text{Total equity} / (\text{Total assets} - \text{prepayments received})$.

INTEREST-BEARING NET LIABILITIES

EUR million	Note	2018	2017
Non-current interest-bearing liabilities	5.3.	646.3	669.1
Current interest-bearing liabilities	5.3.	240.0	191.4
Interest-bearing liabilities		886.3	860.5
Cash and cash equivalents	5.4.	144.9	166.1
Interest-bearing net liabilities		741.4	694.4

Quarterly information on interest-bearing net liabilities is disclosed in the section on the Reconciliation of IFRS figures.

The Group's objective is to maintain a gearing ratio below 60% before the adoption of IFRS 16 standard. To calculate the gearing ratio, interest-bearing net liabilities (interest-bearing liabilities less cash and cash equivalents) are divided by the shareholders' equity. The revolver credit facility agreement contains a covenant according to which the company gearing must be below 100%.

The Board of Directors will propose a per-share dividend of EUR 0.53 for 2018 (EUR 0.53), corresponding to a dividend payout ratio of 91% (103%). Kemira's dividend policy aims at paying a stable and competitive dividend.

INTEREST-BEARING NET LIABILITIES CONNECTED IN CASH FLOW STATEMENTS

EUR million	Non-current interest- bearing liabilities including payments of non-current portion	Current interest- bearing liabilities	Interest- bearing liabilities total	Cash and cash equivalents	Interest- bearing net liabilities
Net book value at Jan 1, 2017	712.8	94.6	807.4	173.4	634.0
Change in net liabilities with cash flows					
Proceeds from non-current liabilities (+)	100.0		100.0		100.0
Payments of non-current liabilities (-)	-62.1		-62.1		-62.1
Proceeds from current liabilities (+) and payments (-)		36.3	36.3		36.3
Change in cash and cash equivalents			0.3		-0.3
Change in net liabilities without cash flows					
Effect on change in exchange gains and losses	-9.7	-6.1	-15.8	-7.5	-8.3
Other changes without cash flows	-0.8	-4.5	-5.3		-5.3
Net book value at Dec 31, 2017	740.1	120.4	860.5	166.1	694.4

EUR million	Non-current interest- bearing liabilities including payments of non-current portion	Current interest- bearing liabilities	Interest- bearing liabilities total	Cash and cash equivalents	Interest- bearing net liabilities
Net book value at Jan 1, 2018	740.1	120.4	860.5	166.1	694.4
Change in net liabilities with cash flows					
Proceeds from non-current liabilities (+)	96.2		96.2		96.2
Payments of non-current liabilities (-)	-69.2		-69.2		-69.2
Proceeds from current liabilities (+) and payments (-)		10.3	10.3		10.3
Change in cash and cash equivalents				-21.2	21.2
Change in net liabilities without cash flows					
Effect on change in exchange gains and losses	-3.3	-0.9	-4.2	-0.1	-4.1
Other changes without cash flows	-7.1	-0.2	-7.3	0.1	-7.4
Net book value at Dec 31, 2018	756.8	129.5	886.3	144.9	741.4

The Group's accounting policies

Interest-bearing liabilities and cash and cash equivalents

The accounting policies for interest-bearing liabilities and cash and cash equivalents are described in Note 5.4. Financial assets and liabilities by measurement categories.

Dividend distribution

Any dividend proposed by the Board of Directors is not deducted from distributable equity until it has been approved by the Annual General Meeting.

5.2. SHAREHOLDERS' EQUITY

SHARE CAPITAL AND TREASURY SHARES

EUR million	Number of shares outstanding (1,000)	Number of treasury shares (1,000)	Number of shares (1,000)	Book value of share capital	Book value of treasury shares
January 1, 2017	152,367	2,975	155,343	221.8	20.0
Treasury shares issued to the Board of Directors	10	-10	-	-	-0.1
The shares returned by participants from the long-term share incentive plan 2015	-24	24	-	-	0.2
December 31, 2017	152,354	2,989	155,343	221.8	20.1
January 1, 2018	152,354	2,989	155,343	221.8	20.1
Treasury shares issued to the participants in the long-term share incentive plan 2017	149	-149	-	-	-1.0
Treasury shares issued to the Board of Directors	10	-10	-	-	-0.1
The shares returned by participants from the long-term share incentive plan 2017	-3	3	-	-	0.0
December 31, 2018	152,510	2,832	155,343	221.8	19.1

Kemira Oyj has one class of shares. Each share entitles its holder to one vote at the Annual General Meeting. On December 31, 2018, the share capital was EUR 221.8 million and the number of shares was 155,342,557 including 2,832,297 treasury shares. Under the Articles of Association of Kemira Oyj, the company does not have a minimum or maximum share capital or a par value for a share. All issued shares have been fully paid.

Kemira had possession of 2,832,297 (2,988,935) treasury shares on December 31, 2018. The average share price of the treasury shares was EUR 6.73 and they represented 1.8% (1.9%) of

the share capital, and the aggregate number of votes conferred by all shares. The aggregate par value of the treasury shares is EUR 4.0 million.

Share premium

The share premium is a reserve accumulated through subscriptions that are entitled by the management stock option program of 2001. This reserve is based on the old Finnish Companies Act (734/1978), and the value of reserve will not change anymore.

Fair value reserves

The fair value reserve is a reserve accumulated based on other shares measured at fair value and hedge accounting.

Other reserves

Other reserves originate from local legal requirements. On December 31, 2018, other reserves were EUR 3.9 million (4.0).

Unrestricted equity reserve

The unrestricted equity reserve includes other equity type investments and the subscription price of shares to the extent that they will not, based on a specific decision, be recognized in share capital.

Exchange differences

The foreign currency exchange differences arise from the translation of foreign subsidiaries' financial statements. Additionally, loans have been granted to some foreign subsidiaries, and the exchange differences of these have been included in foreign currency exchange differences.

📘 The Group's accounting policies

Treasury shares

Purchases of own shares (treasury shares), including the related costs, are deducted directly from equity in the Consolidated Financial Statements.

5.3. INTEREST-BEARING LIABILITIES

MATURITY OF INTEREST-BEARING LIABILITIES

2018, EUR million	2019	2020	2021	2022	2023	2024-	Book value total
Loans from financial institutions	10.4	55.4	-	-	148.1	90.0	303.9
Bonds	100.0	-	-	150.0	-	194.8	444.8
Finance lease liabilities	0.0	0.0	-	-	-	-	0.1
Other non-current liabilities	-	1.8	-	-	6.1	-	7.9
Other current interest-bearing liabilities	129.5	-	-	-	-	-	129.5
Total amortizations of interest-bearing liabilities	240.0	57.2	0.0	150.0	154.2	284.8	886.3
2017, EUR million	2018	2019	2020	2021	2022	2023-	Book value total
Loans from financial institutions	71.0	11.9	205.0	-	-	-	287.9
Bonds	-	100.0	-	-	150.0	200.0	450.0
Finance lease liabilities	0.0	0.0	-	-	-	-	0.1
Other non-current liabilities	-	-	2.3	-	-	-	2.3
Other current interest-bearing liabilities	120.4	-	-	-	-	-	120.4
Total amortizations of interest-bearing liabilities	191.4	111.9	207.3	0.0	150.0	200.0	860.5

MATURITY OF NON-CURRENT INTEREST-BEARING LIABILITIES BY CURRENCIES

2018 Currency, EUR million	2019	2020	2021	2022	2023	2024-	Book value total
EUR	110.2	57.2	-	150.0	148.1	284.8	750.3
USD	-	-	-	-	-	-	-
Other	0.2	-	-	-	6.1	-	6.3
Total	110.4	57.2	0.0	150.0	154.2	284.8	756.6
2017 Currency, EUR million	2018	2019	2020	2021	2022	2023-	Book value total
EUR	10.0	111.6	207.3	-	150.0	200.0	678.9
USD	60.7	-	-	-	-	-	60.7
Other	0.3	0.2	-	-	-	-	0.6
Total	71.0	111.9	207.3	0.0	150.0	200.0	740.1

At year's end 2018, the Group's interest-bearing net liabilities were EUR 741.4 million (694.4).

For more information, see Note 5.1. Capital structure.

FINANCE LEASE AGREEMENTS

EUR million	2018	2017
Acquisition cost - capitalized finance leases	3.5	3.5
Accumulated depreciation	-3.1	-2.6
Book value at 31 Dec	0.4	1.0
Maturity of minimum lease payments		
No later than 1 year	0.0	0.0
1–5 years	0.0	0.0
Later than 5 years	-	-
Total minimum lease payments	0.1	0.1
Present value of finance lease liabilities		
Total minimum lease payments	0.1	0.1
Future finance charges on finance leases	0.0	0.0
Total	0.1	0.1
Maturity of the present value of finance lease liabilities		
No later than 1 year	0.0	0.0
1–5 years	0.0	0.0
Later than 5 years	-	-
Total present value of finance lease liabilities	0.1	0.1

The Group leases buildings and constructions, machinery and equipment and other property, plant and equipment under finance lease agreements. Commitments related to other lease agreements than finance leases are disclosed in Note 7.1. Commitments and contingent liabilities.

■ The Group's accounting policies

Finance lease

Leases involving tangible assets, in which the Group acts as a lessee, are classified as finance leases if all of the risks and rewards of ownership transfer substantially to the Group.

At the commencement of the lease term, the finance lease assets are recognized at the lower of the fair value of the leased asset and the present value of the minimum lease payments. These assets and related rental obligations are presented as part of the Group's non-current assets and interest-bearing liabilities. In respect to the finance lease agreements, depreciation on the leased assets and interest expenses from the associated liability are shown in the income statement. Rents paid on the basis of operating leases are expensed on a straight-line basis over the lease terms.

When the Group is a lessor, it recognizes assets held under the finance lease as receivables in the balance sheet. Assets held under operating leases are included in property, plant and equipment.

Also arrangements that are not leases in their legal form but convey the rights to use assets in return for a payment or series of payments are treated as leases.

5.4. FINANCIAL ASSETS AND LIABILITIES BY MEASUREMENT CATEGORIES

BOOK VALUES OF FINANCIAL ASSETS

EUR million	Note	2018	2017
Fair value through profit and loss	5.6.		
Derivatives not qualifying for hedge accounting		2.1	3.9
Fair value through other comprehensive income	5.6.		
Derivatives qualifying for hedge accounting			
Cash flow hedges		27.8	7.0
Fair value hedges		1.7	2.7
Other shares	3.4.		
The shares of Pohjolan Voima Group		226.9	234.3
Other non-listed shares		1.4	1.5
Amortized cost			
Other non-current assets ¹⁾		2.3	3.8
Current interest-bearing loan receivables ¹⁾		0.2	5.3
Trade receivables ¹⁾	4.2.	307.3	315.2
Cash and cash equivalents			
Cash in hand and at bank accounts		135.6	124.6
Deposits and money market investments ²⁾		9.3	41.6
Total financial assets		714.7	739.9

1) In 2018, other non-current liabilities and current interest-bearing loan receivables include expected credit losses of EUR 0.6 million in accordance with IFRS 9 standard. Trade receivables include expected credit losses of EUR 0.5 million. Trade receivables are disclosed in more detail in Note 4.2. Trade receivables and other receivables.

2) Deposits and money market investments comprise bank deposits and other liquid investments with a maximum original maturity of three months.

BOOK VALUES OF FINANCIAL LIABILITIES

EUR million	Note	2018	2017
Fair value through profit and loss	5.6.		
Derivatives not qualifying for hedge accounting		2.2	3.7
Fair value through other comprehensive income	5.6.		
Derivatives qualifying for hedge accounting			
Cash flow hedges		1.3	1.7
Amortized cost			
Interest-bearing liabilities	5.3.		
Non-current loans from financial institutions		293.1	215.2
Current portion		10.2	71.0
Bonds ³⁾		345.2	451.5
Current portion		100.0	0.0
Other non-current liabilities		8.0	2.4
Current portion		0.2	0.0
Current loans from financial institutions		129.5	120.4
Non-interest-bearing liabilities			
Other non-current liabilities		29.0	21.4
Other current liabilities		27.4	31.0
Trade payables	4.3.	179.9	187.2
Total financial liabilities		1,126.0	1,105.5

3) Includes a hedge accounting adjustment of EUR 0.4 million (1.5).

FAIR VALUE OF FINANCIAL ASSETS

Fair value hierarchy, EUR million	2018				2017			
	Level 1	Level 2	Level 3	Total net	Level 1	Level 2	Level 3	Total net
Other shares	-	-	228.4	228.4	-	-	235.8	235.8
Other non-current assets	-	2.3	-	2.3	-	3.8	-	3.8
Currency derivatives	-	2.1	-	2.1	-	3.9	-	3.9
Currency derivatives, hedge accounting	-	0.2	-	0.2	-	0.8	-	0.8
Interest rate derivatives, hedge accounting	-	1.7	-	1.7	-	2.7	-	2.7
Other derivatives, hedge accounting	-	27.6	-	27.6	-	6.2	-	6.2
Other receivables	-	0.2	-	0.2	-	5.3	-	5.3
Trade receivables	-	307.3	-	307.3	-	315.2	-	315.2
Cash and cash equivalents	-	144.9	-	144.9	-	166.1	-	166.1
Total financial assets	-	486.3	228.4	714.7	-	504.0	235.8	739.8

Level 3 specification, EUR million	Total net 2018	Total net 2017	Total net	
			2018	2017
Net book value at 1 Jan	235.8	202.5		
Effect on other comprehensive income	-7.5	30.0		
Increases	0.0	3.6		
Decreases	0.0	-0.3		
Net book value at 31 Dec	228.4	235.8		

FAIR VALUE OF FINANCIAL LIABILITIES

Fair value hierarchy, EUR million	2018				2017			
	Level 1	Level 2	Level 3	Total net	Level 1	Level 2	Level 3	Total net
Non-current interest-bearing liabilities	-	671.1	-	671.1	-	697.2	-	697.2
Current portion of non-current interest-bearing liabilities	-	110.6	-	110.6	-	74.8	-	74.8
Non-current other liabilities	-	29.0	-	29.0	-	21.4	-	21.4
Finance lease liabilities	-	0.1	-	0.1	-	0.1	-	0.1
Short-term loans from financial institutions	-	136.0	-	136.0	-	126.8	-	126.8
Other current liabilities	-	27.4	-	27.4	-	31.0	-	31.0
Currency Derivatives	-	2.2	-	2.2	-	3.7	-	3.7
Interest rate derivatives, hedge accounting	-	1.3	-	1.3	-	1.6	-	1.6
Other derivatives, hedge accounting	-	-	-	-	-	0.1	-	0.1
Trade payables	-	179.9	-	179.9	-	187.2	-	187.2
Total financial liabilities	-	1,157.6	-	1,157.6	-	1,143.9	-	1,143.9

There were no transfers between levels 1–3 during the financial year.

📘 The Group's accounting policies

When a financial asset or a financial liability is initially recognized on the trade date, it is measured at cost, which equals the fair value of the consideration given or received.

Financial Assets

The Group's financial assets are classified for subsequent measurement as financial assets at fair value through profit or loss, at amortized cost and at fair value through other comprehensive income.

Category	Financial instrument
Fair value through profit or loss	Currency forward contracts, currency swaps, interest rate swaps, electricity forwards, electricity futures, electricity options, certificates of deposit and commercial papers
Amortized cost	Non-current loan receivables, cash in hand and at bank accounts, bank deposits, trade receivables and other receivables
Fair value through other comprehensive income	Other investments: shares; derivatives qualifying for hedge accounting (cash flow or fair value hedging)

Financial assets at fair value through income statements

All derivatives are recognized at fair value in the balance sheet. Fair value is the amount for which an asset could be exchanged or loans paid between knowledgeable, willing parties in an arm's length transaction. These derivative contracts to which hedge accounting in accordance with IFRS 9 is not applied are classified as financial assets at fair value through profit or loss. In the balance sheet, these derivative contracts are shown under prepaid expenses and accrued income and accrued expenses and prepaid income. Any gains or losses arising from changes in fair value are recognized through profit or loss on the transaction date.

Financial assets at amortized cost

Financial assets at amortized cost include non-current receivables carried at amortized cost using the effective interest rate method and accounting for any impairment.

Cash and cash equivalents

Cash and cash equivalents consist of cash in hand and cash in bank accounts, demand deposits and other short-term, highly liquid investments. Items classified as cash and cash equivalents have a maximum maturity of three months from the date of purchase. Credit facilities in use are included in current interest-bearing liabilities.

Financial assets at fair value through other comprehensive income

The accounting policy of Other shares is described in Notes 3.4. Other shares. The accounting treatment of change in the fair value of the derivatives qualifying for hedge accounting is presented in 5.6. Derivatives.

Impairment of financial assets

The Group assesses any impairment losses on its financial instruments on each balance sheet date. An impairment of financial asset is recognized in accordance with the requirements of expected credit loss model of IFRS 9 standard. For items measured at an amortized cost, the amount of the impairment loss equals the difference between the asset's carrying amount and the present value of estimated future cash flows from the receivable. This is discounted at the financial asset's original effective interest rate. For items measured at fair value, the fair value determines the amount of impairment. Impairment charges are recognized in the income statement.

The Group sells certain trade receivables to finance companies within the framework of limits stipulated in the agreement. The credit risk associated with these sold receivables and contractual rights to the financial assets in question are transferred from the Group on the selling date. The related expenses are recognized in the financial expenses.

Financial liabilities

Financial liabilities are classified as financial liabilities accounted at fair value through profit or loss, at amortized cost and at fair value through other comprehensive income. Financial liabilities at fair value through profit or loss include derivatives to which hedge accounting is not applied, whereas derivatives which are qualified for hedge accounting are booked at fair value through other comprehensive income.

Other financial liabilities are initially recognized in the balance sheet at the initial value of received net assets deducted with direct costs. Later, these financial liabilities are measured at amortized cost, and the difference between the received net assets and amortizations is recognized as an interest cost over the loan term. Changes in the fair value of loans under fair value hedge accounting are booked in the income statement together with the changes in the fair value of derivatives under fair value hedge accounting.

If the terms of a loan measured at amortized cost are modified and the loan is not derecognized, the gain or loss of the modification is booked in the income statement at the point of modification and amortized over the life of the modified loan. Profit or loss is equal to the difference between the present value of the cash flows under the original and modified terms discounted at the original effective interest rate.

Category	Financial instrument
Financial liabilities at fair value through profit or loss	Currency forward contracts and currency swaps, interest rate swaps, electricity forwards, electricity futures and electricity options
Amortized cost	Current and non-current loans, pension loans, bonds and trade payables
Financial liabilities at fair value through other comprehensive income	Derivatives qualifying for hedge accounting (cashflow hedging)

The following levels are used to measure the fair values:

Level 1:

Fair value is determined based on quoted market prices.

Level 2:

Fair value is determined with valuation techniques. The fair value refers either to the value that is observable from the market value of elements of the financial instrument or the market value of corresponding financial instruments; or to the value that is observable by using commonly accepted valuation models and techniques if the market value can be reliably measured with them.

Level 3:

Fair value is determined by using valuation techniques, which use inputs that have a significant effect on the recorded fair value and the inputs are not based on observable market data. Level 3 mainly includes the shares of Pohjolan Voima Group.

5.5. MANAGEMENT OF FINANCIAL RISKS

Kemira Group Treasury's objective is to ensure sufficient funding in the most cost efficient way, and to manage financial risks. Treasury policy, approved by the Board of Directors, defines treasury management principles. The Board of Directors approves the annual Treasury plan and the maximum permissible financial risk levels.

Financial risk management aims to protect the company from unfavorable changes in financial markets, thereby contributing to safeguarding the company's profit performance and shareholders' equity and to ensure sufficient sources of finance. Management of financial risks is centralized in the Group Treasury, which uses derivative instruments for hedging purposes derivative instruments for which market values and risks can be monitored continuously and reliably.

Foreign exchange risk

Foreign currency transaction risk arises from currency flows, assets and liabilities denominated in currencies other than the domestic currency. Transaction risks arise from cash flows and balance sheet items where changes in exchange rates will have an impact on earnings and cash flows. Translation risk arises when the currency denominated income and balance sheet items of Group companies located outside the euro area are consolidated into EUR. The transaction risk is hedged mainly using foreign currency forwards.

The Group's most significant transaction currency risks arise from the Swedish krona, the Canadian dollar and the U.S. dollar. At the end of the year the denominated exchange rate risk of the Swedish krona against the euro had an equivalent value of approximately EUR 50 million (58), the average hedging rate being 74% (63%). The Canadian dollar's denominated exchange rate risk against U.S. dollar had an equivalent value of approximately EUR 25 million (23), the average hedging rate being 24% (-). The Canadian dollar's denominated exchange rate risk against EUR had an equivalent value of approximately EUR 15 million (36), the average hedging rate being 69% (63%). The U.S. dollar denominated exchange rate risk was approximately EUR 24 million (50), the average hedging rate being 59% (58%). In addition, Kemira is exposed to smaller transaction risks mainly in relation to the Chinese renminbi, the Norwegian krona, the Polish zloty, the Russian rouble and the Brazilian real, with the annual exposure in those currencies being approximately EUR 72 million.

Transaction exposure, the most significant currencies, EUR million	2018				2017		
	SEK against EUR	CAD against USD	CAD against EUR	USD against EUR	SEK against EUR	CAD against EUR	USD against EUR
Operative cash flow forecast, net ¹⁾	-49.7	25.4	14.7	24.4	-57.6	36.2	30.4
Loans, net	-9.3	-	10.3	327.3	-7.5	2.3	355.7
Derivatives, operative cash flow hedging, net	34.2	-9.6	-9.9	-12.7	41.2	-13.7	-18.8
Derivatives, hedging of loans, net	8.8	-	-10.3	-76.1	8.1	-2.3	-26.6
Total	-16.0	15.8	4.8	262.9	-15.8	22.5	340.7

1) Based on 12-month foreign currency operative cash flow forecast.

At the turn of 2018/2019, the foreign currency operative cash flow forecast for 2019 was EUR 246 million of which 50% was hedged (41%). The hedge ratio is monitored daily. A minimum of 40% and a maximum of 100% of the forecast flow must always be hedged. A 10% fall in foreign exchange rates against the euro, based on the exchange rates as of December 31, 2018, and without hedging, would decrease EBITDA by approximately EUR 1 million.

The most significant translation risk currencies are the U.S. dollar, the Swedish krona, the Canadian dollar, the Chinese renminbi, the Brazilian real and the Polish zloty.

Kemira's main equity items denominated in foreign currencies are in the Canadian Dollar, the Swedish krona and U.S. dollar. The objective is to hedge the balance sheet risk by maintaining a balance between foreign currency denominated liabilities and assets, currency by currency. In hedging the net investment in its units abroad, Kemira monitors the equity ratio. Long-term loans and currency derivatives can be used for hedging net investments in foreign subsidiaries. These hedges do not apply to hedge accounting. To some foreign subsidiaries loans in U.S. dollars have been granted, and currency differences have been included in foreign currency translation differences.

Interest rate risk

Kemira is exposed to interest rate risks when fixing interest rates of floating rate loans and through fair value changes of bonds and derivatives. In accordance with the treasury policy, the Group's interest rate risk is measured with the duration which describes average repricing moment of the loan portfolio. The duration must be in the range of 6–60 months. The Kemira Group Treasury manages duration by borrowing with fixed and floating rate loans in addition to the interest rate derivatives.

The duration of the Group's interest-bearing loan portfolio was 31 months at the end of 2018 (33 months). Excluding the interest rate derivatives, the duration was 29 months (30 months). At the end of 2018, 79% of the Group's entire net debt portfolio, including derivatives, was fixed (75%). The net financing cost of the Group was 3.4% (3.1%). This figure is attained by dividing yearly net interest and other financing expenses, excluding exchange rate differences and dividends by the average interest bearing net debt figure for the corresponding period. The most significant impact on the net financing cost arises from variation in the interest rate levels of the euro, the U.S. dollar and the Chinese renminbi.

The table below shows the time for interest rate fixing of the loan portfolio.

2018 Time to interest rate fixing, EUR million	<1 year	1–5 years	>5 year	Total
Floating net liabilities	156.4	-	-	156.4
Fixed net liabilities	15.0	280.0	290.0	585.0
Total	171.4	280.0	290.0	741.4

2017 Time to interest rate fixing, EUR million	<1 year	1–5 years	>5 year	Total
Floating net liabilities	174.4	-	-	174.4
Fixed net liabilities	25.0	295.0	200.0	520.0
Total	199.4	295.0	200.0	694.4

On the balance sheet date, the average interest rate of the loan portfolio excluding interest rate hedges was approximately 1.9% (2.0%). If interest rates had risen by one percentage point on January 1, 2019, the resulting interest expenses before taxes incurred by the Group over the next 12 months would increase by approximately EUR 1.2 million (1.7). During 2019, Kemira will reprice 32% (28%) of the Group's net debt portfolio, including derivatives.

On the balance sheet date, the Group had outstanding interest rate derivatives related to cash flow hedging with a market value of EUR -1.3 million (-1.6) and fair value hedging with a market value of EUR 1.7 million (2.7). All interest rate swaps are used to hedge the Group's loan portfolio, and are accounted for in accordance with the principles of hedge accounting set out in IFRS 9. One percentage point increase in interest rates would positively affect market valuation of interest rate swaps of EUR 0.5 million (0.5) in equity.

Electricity price risk

The price of electricity varies greatly according to the market situation. Kemira Group takes hedging measures with respect to its electricity purchases in order to even out the raw material costs. In line with its hedging policy, the Group hedges its existing sales agreements in such a way that the hedges cover the commitments made. The company primarily uses electricity derivatives on the power exchange as hedging instruments. Currency and regional price risks connected with hedges are hedged by making agreements in Finland, mainly in HELEUR amounts and, in Sweden, mainly in MALSEK amounts. The outstanding electricity derivatives are treated in accordance with cash flow hedge accounting, as discussed above. The forecast for physical deliveries of the underlying assets, or purchases, are not recorded until the delivery period. A +/- 10% change in the market price of electricity hedging contracts would impact the valuation of these contracts EUR +/- 8.3 million (+/- 5.9). This impact would be mainly in equity.

Credit risk

The Group is exposed to credit risks through commercial accounts receivables, as bank account balances, deposits, short-term investments and derivatives.

The Group's treasury policy defines the credit rating requirements for counterparties of investment activities and derivative agreements as well as the related investment policy. The Group seeks to minimize its counterparty risk by dealing solely with counterparties that are financial institutions with a solid credit rating, as well as by decentralizing agreements among them.

The counterparty risk in treasury operations is due to the fact that a contractual party to a financing transaction is not necessarily able to fulfill its contractual obligations. Risks are mainly related to investment activities and the counterparty risks associated with derivative contracts.

The Group Treasury approves the new banking relationships of subsidiaries. Financial institution counterparties, used by the Group Treasury, have a credit rating of at least an investment grade based on Standard & Poor's credit rating information. The maximum risk assignable to the Group's financial institution counterparties on the balance sheet date amounted to EUR 174.4 million (172.2). Kemira monitors its counterparty risk on a monthly basis by defining the maximum risk associated with each counterparty based on the market value of receivables. Kemira has defined an approved limit for each financial institution. Credit risks associated with financing transactions did not result in credit losses during the financial year.

Kemira has a Group wide credit policy related to commercial activities. According to the policy, each customer has a pre-defined risk category and credit limit. These are constantly monitored. Based on the customer evaluation, Kemira decides the applicable payment terms to minimize credit risks. Pre-approved payment terms have been defined on the Group level. If necessary, also securities and documentary credit, like letters of credit, are applied. The Group does not have any significant credit risk concentrations due to its extensive customer base across the world.

In the U.S., Kemira has an accounts receivable purchase facility worth USD 60 million, enabling Group companies in the USA to sell certain account receivables to the counterparty. The credit risk of the accounts receivables is transferred to the financial institutions and 96.2% of the receivables transferred are derecognized from the balance sheet. The amount of outstanding receivables transferred, which also reflects the fair value of the receivables before the transfer was EUR 44.4 million (28.1) on December 31, 2018. The amounts recognized in the balance sheet are EUR 1.7 million (1.8) in assets and EUR 0.8 million (0.5) in liabilities.

Liquidity and refinancing risks

Kemira's liquidity is secured with cash and cash equivalents, account overdrafts and revolving credit facility. At the end of 2018, the Group's cash and cash equivalents stood at EUR 144.9 million (166.1), of which cash in bank accounts accounted for EUR 135.6 million (124.6) and bank deposits EUR 9.3 million (41.6). In addition, the Group has a revolving credit facility of EUR 400 million which will mature on August 29, 2020. At the turn of the year 2018/2019, the revolving credit facility was undrawn. Other committed undrawn loan facilities amounted to EUR 40 million.

The Group has a EUR 600 million domestic commercial paper program enabling it to issue commercial papers with a maximum maturity of one year. At the end of 2018, there were no commercial papers outstanding on the market.

Kemira manages its refinancing risk with a diversified loan portfolio. Long-term financing consists of bonds and bilateral loan agreements with several financial institutions.

According to Group Treasury policy the average maturity of outstanding loans is targeted to be at least 3 years. In addition, the Group must have committed credit facilities to cover planned funding needs, the current portion of long term-debt, commercial paper borrowings, and other uncommitted short-term loans in the next 12 months. The average maturity of debt at the end of 2018 was 3.9 years.

LOAN STRUCTURE DIVIDED BY TYPE AND MATURITY

2018	Loan type, EUR million	Undrawn	2019	2020	2020	2022	2023	2024–	Total drawn
Loans from financial institutions		40.0	10.4	55.4	-	-	150.0	90.0	305.9
Bonds		-	100.0	-	-	150.0	-	200.0	450.0
Revolving credit facility		400.0	-	-	-	-	-	-	0.0
Finance lease liabilities		-	0.0	0.0	-	-	-	-	0.1
Commercial paper program		600.0	-	-	-	-	-	-	0.0
Other interest-bearing non-current liabilities		-	-	1.8	-	-	6.1	-	7.9
Other interest-bearing current liabilities		-	129.5	-	-	-	-	-	129.5
Total interest-bearing liabilities		1,040.0	240.0	57.2	0.0	150.0	156.1	290.0	893.4
2017	Loan type, EUR million	Undrawn	2018	2019	2020	2021	2022	2023–	Total drawn
Loans from financial institutions		-	71.0	11.9	207.3	-	-	-	290.1
Bonds		-	-	100.0	-	-	150.0	200.0	450.0
Revolving credit facility		400.0	-	-	-	-	-	-	0.0
Finance lease liabilities		-	0.0	0.0	-	-	-	-	0.1
Commercial paper program		600.0	-	-	-	-	-	-	0.0
Other interest-bearing current liabilities		-	120.4	-	-	-	-	-	120.4
Total interest-bearing liabilities		1,000.0	191.4	111.9	207.3	0.0	150.0	200.0	860.5

5.6. DERIVATIVE INSTRUMENTS

Nominal values, EUR million	Maturity structure						2018 Total	2017 Total
	2019	2020	2021	2022	2023	2024–		
Currency derivatives								
Forward contracts	358.1	-	-	-	-	-	358.1	341.4
Inflow	224.8	-	-	-	-	-	224.8	166.8
of which cash flow hedges	11.3	-	-	-	-	-	11.3	43.5
Outflow	133.3	-	-	-	-	-	133.3	174.7
of which cash flow hedges	6.8	-	-	-	-	-	6.8	-
Interest rate derivatives								
Interest rate swaps	115.0	130.0	-	-	-	-	245.0	270.0
of which cash flow hedges	15.0	130.0	-	-	-	-	145.0	170.0
of which fair value hedges	100.0	-	-	-	-	-	100.0	100.0
Other derivatives								
Electricity contracts, bought (GWh)	1,049.9	632.4	403.0	175.2	17.5	-	2,278.0	1,862.1
Electricity forward contracts	1,049.9	632.4	403.0	175.2	17.5	-	2,278.0	1,704.5
of which cash flow hedges	1,049.9	632.4	403.0	175.2	17.5	-	2,278.0	1,704.5
Electricity future contracts	-	-	-	-	-	-	0.0	157.6
of which cash flow hedges	-	-	-	-	-	-	0.0	157.6

Nominal values of the financial instruments do not necessarily correspond to the actual cash flows between the counterparties, and therefore individual items do not give a fair view of the Group's risk position.

Fair values, EUR million	2018			2017		
	Positive	Negative	Net	Positive	Negative	Net
Currency derivatives						
Forward contracts	2.3	-2.2	0.2	4.7	-3.7	1.0
of which cash flow hedges	0.2	-	0.2	0.8	-	0.8
Interest rate derivatives						
Interest rate swaps	1.7	-1.3	0.4	2.7	-1.6	1.1
of which cash flow hedges	-	-1.3	-1.3	-	-1.6	-1.6
of which fair value hedges	1.7	-	1.7	2.7	-	2.7
Other derivatives						
Electricity forward contracts, bought	27.6	-	27.6	6.2	-	6.2
of which cash flow hedges	27.6	-	27.6	6.2	-	6.2
Electricity future contracts, bought	-	-	-	-	-0.1	-0.1
of which cash flow hedges	-	-	-	-	-0.1	-0.1

The Group's accounting policies

Derivatives

The fair values of currency, interest rate and commodity derivatives, as well as publicly traded shares are based on prices quoted in active markets on the balance sheet date. The value of other financial instruments measured at fair value is determined on the basis of valuation models using information available in the financial market.

All of the derivatives are measured at their fair values on the balance sheet date. Changes in the value of forward contracts are calculated by measuring the contracts against the forward exchange rates on the balance sheet date and comparing them with the counter values calculated through the forward exchange rates on the date of entry into the forward contracts. The fair value of interest rate derivatives is determined using the market value of similar instruments on the balance sheet date. Other derivatives are measured at the market price on the balance sheet date.

Derivative assets are presented in the balance sheet as part of line item Trade receivables and other receivables. Derivative liabilities are presented in the balance sheet as part of line item Trade payables and other liabilities.

Hedge accounting

Hedge accounting is applied according to IFRS 9. This refers to a method of accounting aimed at allocating one or more hedging instruments in such a way that their fair value offsets, in full or in part, the changes in the fair value or cash flows of the hedged item. Hedged items must be highly probable. Hedge accounting is applied to hedging interest rate risk, currency risk, commodity risk and fair value. Part of currency forwards and all interest rate swaps, electricity forwards as well as electricity futures come under hedge accounting treatment.

Hedge effectiveness is monitored as required by IFRS 9. Effectiveness refers to the capacity of a hedging instrument to offset changes in the fair value of the hedged item or cash flows from a hedged transaction, which are due to the realization of the risk being hedged. A hedging relationship is considered to be highly effective when the change in the fair value of the hedging instrument offsets changes in the cash flows attributable to the hedged items. Hedge effectiveness is assessed prospectively. Hedge effectiveness testing is repeated on each balance sheet date.

Hedge accounting is discontinued when the criteria for hedge accounting are no longer fulfilled. Gains or losses recognized in other comprehensive income and presented under

equity are derecognized and transferred immediately in the income statement, if the hedged item is sold or falls due. However, gains or losses arising from changes in the fair value of those derivatives not fulfilling the hedge accounting criteria are recognized directly in the income statement.

At the inception of a hedge, the Group documents the existence of the economic relationship of the hedged item and hedging instrument, including the identification of the hedging instrument, the hedged item or transaction, the nature of the risk being hedged, the objectives of risk management and the strategy for undertaking hedging, as well as the description of how the hedge effectiveness is assessed.

Cash flow hedging

Cash flow hedging is used to hedge against variability in cash flows attributable to a particular risk associated with a recognized asset or liability in the balance sheet or a highly probable forecast transaction. Currency, interest rate and commodity derivatives are used as hedging instruments in cash flow hedging. Cash flow hedge accounting, specified in IFRS 9, is applied by the Group to only selected hedging items. Changes in the fair value of derivative instruments associated with cash flow hedge are recognized in other comprehensive income (including the tax effect) and presented under equity, providing that they fulfill the criteria set for hedge accounting and are based on effective hedging. The ineffective portion of the gain or loss on the hedging instrument is recognized under financial items in the income statement. Derivatives not fulfilling the hedge accounting criteria are recognized in financial items through profit or loss.

Fair value hedging

Fair value hedges are related to a fixed rate bond loan. Interest rate derivatives are used as instruments in fair value hedging. Change in fair value of the hedging derivative contracts are recognized in the income statement and the hedged item's book value is adjusted through profit or loss to the extent that the hedge is effective.

6. GROUP STRUCTURE

6.1. RELATED PARTIES

Parties are considered to be related if one party has the ability to control the other party or exercise significant influence, or if the parties exercise joint control in making financial and operating decisions. The Group's related parties include the parent company, subsidiaries, associates, joint-ventures and the Pension Fund Neliapila. Related parties also include the members of the Board of Directors and the Group's Management Boards, the CEO and his Deputy, and their immediate family members.

EMPLOYEE BENEFITS OF CEO, DEPUTY CEO AND MEMBERS OF MANAGEMENT BOARD

	Salaries and other benefits, EUR	Bonuses, EUR	Share-based payments, EUR ¹⁾	2018 Total, EUR	2017 Total, EUR
CEO Jari Rosendal	567,000	109,080	345,440	1,021,520	891,000
Deputy CEO Jukka Hakkila ²⁾	181,702	27,334	120,904	329,940	268,155
Other members of Management Board ³⁾	1,766,416	265,561	803,147	2,835,124	2,796,597
Total	2,515,118	401,975	1,269,491	4,186,584	3,955,752

1) Share-based incentive plans for the management and key personnel are disclosed in Note 2.3. Share-based payments.

2) Jukka Hakkila is not a member of the Management Board.

3) Members of the Management Board who are employed by a Finnish Kemira company do not have any supplementary pension arrangements in addition to the statutory pensions. The members of the Management Board who are employed by a foreign Kemira company participate in the pension systems based on statutory pension arrangements and market practices in their local countries. The Kemira policy is that all new supplementary pension arrangements are defined contribution plans.

Employment terms and conditions of the CEO

Remuneration of the CEO comprises a monthly salary including a car benefit and a mobile phone benefit, and performance-based incentives. The performance-based incentives consist of an annual short-term bonus plan and a long-term share incentive plan. The annual short-term bonus plan is based on terms approved by the Board of Directors and the maximum bonus is 70% of the annual base salary. The long-term share incentive plan is based on the terms of the plan. The maximum reward is determined as a number of shares and a cash portion intended to cover taxes and the tax-related costs arising from the reward.

The CEO belongs to the Finnish Employees' Pension Act (TyEL) scheme, which provides pension security based on the years of service and earnings as stipulated by law. The CEO's retirement age is determined by TyEL. The CEO does not have a separate supplementary pension arrangement.

A mutual termination notice period of six months applies to the CEO. The CEO is entitled to an additional severance pay of 12 months' salary, in case the company will terminate his service.

The board of directors' emoluments

On March 21, 2018, the Annual General Meeting decided that the Board of Directors' annual fee shall be paid as a combination of the company's shares and cash in such a manner that 40% of the annual fee is paid with the Kemira shares owned by the company or, if this is not possible, then with Kemira shares acquired from the securities market, and 60% is paid in cash. In May 2018, the 10,710 shares owned by the company were distributed to the members of the Board of Directors.

There are no special terms or conditions associated with owning the shares received as the annual fee. The members of the Board of Directors are not eligible for any short-term bonus plans, long-term share incentive plans or supplementary pension plans of Kemira Oyj.

The meeting fees are paid in cash and travel expenses are paid according to Kemira's travel policy.

MEMBERS OF THE BOARD OF DIRECTORS

	Number of shares	Share value, compensation, EUR	Cash EUR ⁴⁾	2018 Total, EUR	2017 Total, EUR
Jari Paasikivi, Chairman	2,904	31,956	59,533	91,489	90,885
Kerttu Tuomas, Vice Chairman	1,779	19,576	37,511	57,087	57,085
Wolfgang Büchele	1,416	15,582	32,769	48,351	49,549
Winnie Fok (until March 24, 2017)	-	-	-	-	4,800
Shirley Cunningham (since March 24, 2017)	1,416	15,582	42,369	57,951	57,949
Juha Laaksonen (until March 24, 2017)	-	-	-	-	2,400
Timo Lappalainen	1,779	19,576	41,111	60,687	59,485
Kaisa Hietala	1,416	15,582	31,569	47,151	47,749
Total	10,710	118,453	244,862	362,716	369,902

4) Includes the annual fees and the meeting fees.

TRANSACTIONS CARRIED OUT WITH RELATED PARTIES

EUR million	2018	2017
Revenue		
Associated companies	1.4	1.7
Purchases		
Associated companies	0.0	3.3
Pension Fund Neliapila	1.2	1.2
Total	1.2	4.5
Receivables		
Associated companies	0.1	0.2
Liabilities		
Associated companies	-	0.3

The amount of contingent liabilities on behalf of the associates are presented in Note 7.1. Commitments and contingent liabilities.

Related parties include Pension Fund Neliapila, which is a separate legal entity. Pension Fund Neliapila manages Kemira's voluntarily organized additional pension fund. Pension Fund Neliapila manages part of the pension assets of the Group's personnel in Finland. The assets include Kemira shares representing 0.07% of the company's outstanding shares. Supplementary benefit in Pension Fund Neliapila and the surplus return during 2019 are disclosed in more detail in Note 4.5. Defined benefit pension plans and employee benefits.

No loans had been granted to the key persons of the management at year-end of 2017 and 2018, nor were there contingency items or commitments on behalf of key management personnel. Persons close to key management personnel with the related parties do not have any significant business relationship with the Group.

6.2. THE GROUP'S SUBSIDIARIES AND INVESTMENT IN ASSOCIATES

SUBSIDIARIES

	City	Country	Kemira Group's holding, %	Kemira Oyj's holding, %	Non-controlling interest's holding, %
Kemira Oyj (parent company)	Helsinki	Finland			
Aliada Quimica de Portugal Lda.	Estarreja	Portugal	50.1		49.9
AS Kemivesi	Lehmja Küla	Estonia	100.0	100.0	
JSC "Kemira HIM"	St. Petersburg	Russia	100.0		
Corporación Kemira Chemicals de Venezuela, C.A.	Caracas	Venezuela	100.0		
Industry Park i Helsingborg Förvaltning AB	Helsingborg	Sweden	100.0		
Kemifloc a.s.	Přerov	Czech Republic	51.0		49.0
Kemifloc Slovakia s.r.o.	Prešov	Slovakia	51.0		49.0
Kemipol Sp. z o.o.	Police	Poland	51.0		49.0
Kemira (Asia) Co., Ltd.	Shanghai	China	100.0		
Kemira Argentina S.A.	Buenos Aires	Argentina	100.0	15.8	
Kemira Australia Pty Ltd	Hallam	Australia	100.0		
Kemira Cell Sp. z.o.o.	Ostroleka	Poland	55.0	55.0	45.0
Kemira Chemicals (Nanjing) Co., Ltd.	Nanjing	China	100.0	100.0	
Kemira Chemicals (Shanghai) Co., Ltd.	Shanghai	China	100.0	100.0	
Kemira Chemicals (UK) Ltd.	Bradford	United Kingdom	100.0	100.0	
Kemira Chemicals (Yanzhou) Co., Ltd.	Yanzhou City	China	100.0	100.0	
Kemira Chemicals AS	Gamle Fredrikstad	Norway	100.0		
Kemira Chemicals Brasil Ltda.	São Paulo	Brazil	100.0	99.9	
Kemira Chemicals Canada Inc.	St. Catharines	Canada	100.0	100.0	
Kemira Chemicals Germany GmbH	Frankfurt am Main	Germany	100.0		

	City	Country	Kemira Group's holding, %	Kemira Oyj's holding, %	Non-controlling interest's holding, %
Kemira Chemicals Korea Corporation	Gunsan-City	South Korea	100.0	100.0	
Kemira Chemicals NV	Aartselaar	Belgium	100.0		
Kemira Chemicals Oy	Helsinki	Finland	100.0		
Kemira Chemicals, Inc.	Atlanta, GA	United States	100.0		
Kemira Chemie Ges.mbH	Krems	Austria	100.0	100.0	
Kemira Chile Comercial Limitada	Santiago	Chile	100.0	99.0	
Kemira Chimie S.A.S.U.	Strasbourg	France	100.0		
Kemira Europe Oy	Helsinki	Finland	100.0	100.0	
Kemira Gdańsk Sp. z o.o.	Gdańsk	Poland	100.0		
Kemira Germany GmbH	Frankfurt am Main	Germany	100.0	100.0	
Kemira GrowHow A/S	Copenhagen	Denmark	100.0	100.0	
Kemira Hong Kong Company Limited	Hong Kong	China	100.0	100.0	
Kemira Ibérica S.A.	Barcelona	Spain	100.0		
Kemira International Finance B.V.	Rotterdam	Netherlands	100.0	100.0	
Kemira Italy S.p.A.	San Giorgio di Nogaro	Italy	100.0		
Kemira Japan Co., Ltd.	Tokyo	Japan	100.0		
Kemira Kemi AB	Helsingborg	Sweden	100.0		
Kemira Kopparverket KB	Helsingborg	Sweden	100.0		
Kemira KTM d.o.o.	Ljubljana	Slovenia	100.0	100.0	
Kemira Operon Oy	Helsinki	Finland	100.0	100.0	
Kemira Research Center Shanghai Co., Ltd.	Shanghai	China	100.0	100.0	

			Kemira Group's holding, %	Kemira Oyj's holding, %	Non-controlling interest's holding, %
	City	Country			
Kemira Rotterdam B.V.	Rotterdam	Netherlands	100.0		
Kemira South Africa (Pty) Ltd.	Weltevredenpark	South Africa	100.0		
Kemira Świecie Sp. z.o.o.	Świecie	Poland	100.0	100.0	
Kemira Taiwan Corporation	Taipei	Taiwan	100.0		
Kemira TC Wanfeng Chemicals (Yanzhou) Co., Ltd.	Yanzhou City	China	80.0		20.0
Kemira (Thailand) Co., Ltd.	Bangkok	Thailand	100.0		
Kemira Uruguay S.A.	Fray Bentos	Uruguay	100.0		
Kemira (Vietnam) Company Limited	Long Thanh	Vietnam	100.0		
Kemira Water Danmark A/S	Copenhagen	Denmark	100.0	100.0	
Kemira Water Solutions Brasil - Produtos para Tratamento de Água Ltda.	São Paulo	Brazil	100.0	100.0	
Kemira Water Solutions Canada Inc.	Varennes	Canada	100.0		
Kemira Water Solutions, Inc.	Atlanta, GA	United States	100.0		
Kemwater Brasil Ltda.	Camaçari	Brazil	100.0		
Kemwater ProChemie s.r.o.	Bradlec	Czech Republic	95.1		4.9
PT Kemira Indonesia	Surabaya	Indonesia	100.0	74.8	
PT Kemira Chemicals Indonesia	Pasuruan	Indonesia	99.8	99.8	0.2
Scandinavian Tanking System A/S	Copenhagen	Denmark	100.0		

ASSOCIATES

			Kemira Group's holding, %	Kemira Oyj's holding, %
	City	Country		
Haapaveden Ympäristöpalvelut Oy	Haapavesi	Finland	40.5	-
Honkalahden Teollisuuslaituri Oy	Lappeenranta	Finland	50.0	-

INVESTMENTS IN ASSOCIATES

EUR million	2018	2017
Net book value at 1 Jan	0.7	1.2
Dividends received	0.0	-0.1
Share of the results of associates	0.0	0.1
Transferred to non-current assets classified as held-for-sale ¹⁾	-	-0.6
Net book value at 31 Dec	0.7	0.7

1) In the financial statements for 2017 the shares of FC Energia Oy and FC Power Oy were transferred to non-current assets classified as held-for-sale. Kemira Chemicals Oy and Leppäkosken Sähkö Oy signed a contract on January 10, 2018, with Adven Oy for the sale of the shares for FC Energia Oy and FC Power Oy. The deal was conditional and the timing was uncertain. FC Energia Oy and FC Power Oy were energy production companies that have been co-owned by Kemira (34% of shares) and Leppäkosken Sähkö (66% of shares). The share deal of FC Energia Oy and FC Power Oy fulfilled in Q1/2018.

A summary of the associates financial information is presented in the following table. The presented figures equal the figures in the financial statements of each associate, not the portion of Kemira Group. In 2017, figures also include FC Energia Oy and FC Power Oy transferred to assets classified as held-for-sale.

EUR million	2018	2017
Assets	9.8	18.1
Liabilities	9.7	15.6
Revenue	2.8	6.7
Profit (+) / loss (-) for the period	0.0	0.5

Related party transactions carried out with associates are disclosed in Note 6.1. Related parties.

NON-CONTROLLING INTERESTS

EUR million	2018	2017
Net book value at 1 Jan	13.8	12.9
Dividends	-6.5	-6.2
Share of the profit for the period	6.1	6.6
Exchange rate differences	-0.4	0.5
Net book value at 31 Dec	12.9	13.8

Changes in the group structure**New subsidiaries established**

- Kemira established a new company, Kemira Research Center Shanghai Co., Ltd., in China on September 21, 2018.

Divestments of group companies

- ZAO Avers was sold on May 25, 2018.

Changes in the holdings of group companies within the Group

- Kemira Nederland Holding B.V. merged with and into Kemira International Finance B.V. on January 1, 2018.
 - Kemira Finance Solutions B.V. merged with and into Kemira International Finance B.V. on January 1, 2018.

The Group's accounting policies**Non-current assets held for sale**

Non-current assets are classified as assets held for sale when their carrying amount is to be recovered principally through a sale transaction and a sale transaction and a sale is considered highly probable. Since the time of classification, the assets are valued at the lower of carrying amount and fair value less costs to sell. Non-current assets classified as held for sale are disclosed separately in the balance sheet.

7. OFF-BALANCE SHEET ITEMS**7.1. COMMITMENTS AND CONTINGENT LIABILITIES****COMMITMENTS**

EUR million	2018	2017
Assets pledged		
On behalf of own commitments	5.5	5.7
Guarantees		
On behalf of own commitments	54.7	50.2
On behalf of others	2.8	3.9
Operating lease commitments - the Group as lessee		
Minimum lease payments under operating leases are as follows:		
No later than 1 year	34.7	32.2
Later than 1 year and no later than 5 years	82.5	84.5
Later than 5 years	87.9	80.9
Total	205.2	197.6
Other obligations		
On behalf of own commitments	0.9	1.0
On behalf of others	6.1	-
On behalf of associates	-	0.2

The most significant off-balance sheet investments commitments

On December 31, 2018, major amounts of contractual commitments for the acquisition of property, plant and equipment were about EUR 16.4 million (18.7) for plant investments.

Litigation

On May 19, 2014, Kemira announced that it had signed an agreement with Cartel Damage Claims Hydrogen Peroxide SA and CDC Holding SA (together "CDC") to settle the lawsuit in Helsinki, Finland, relating to alleged old violations of competition law applicable to the hydrogen peroxide business. Based on the settlement CDC withdrew the damages claims and Kemira paid to CDC a compensation of EUR 18.5 million and compensated CDC for its legal costs. The settlement also included significant limitations of liabilities for Kemira regarding the then pending legal actions filed by CDC entities in Dortmund, Germany (mentioned and settled as below), and in Amsterdam, the Netherlands (mentioned and pending as below).

On October 16, 2017, Kemira entered into a settlement with Cartel Damage Claims Hydrogen Peroxide SA settling – for its part – fully and finally the Dortmund lawsuit filed by Cartel Damage Claims Hydrogen Peroxide SA in 2009 against six hydrogen peroxide manufacturers, including Kemira, for alleged old violations of competition law in the hydrogen peroxide business. Based on the settlement Cartel Damage Claims Hydrogen Peroxide SA withdrew the damages claims against Kemira and Kemira paid to Cartel Damage Claims Hydrogen Peroxide SA as compensation and costs an amount of EUR 12.7 million.

On June 9, 2011, Kemira Oyj's subsidiary Kemira Chemicals Oy (former Finnish Chemicals Oy) has received documents where it was stated that CDC Project 13 SA has filed an action against four companies in municipal court of Amsterdam, including Kemira, asking damages for violations of competition law applicable to the old sodium chlorate business. The European Commission set on June 2008 a fine of EUR 10.15 million on Finnish Chemicals Oy for antitrust activity in the company's sodium chlorate business during 1994–2000. Kemira Oyj acquired Finnish Chemicals in 2005. The municipal court of Amsterdam decided on June 4, 2014, to have jurisdiction over the case. The said decision on jurisdiction was appealed by Kemira to the court of appeal of Amsterdam. According to the decision by the court of appeal on July 21, 2015, the municipal court of Amsterdam has jurisdiction over the case. The proceedings now continue at the municipal court of Amsterdam where Kemira is the only defendant after the other defendants have settled the claim with CDC Project 13 SA. CDC Project 13 SA claims from Kemira in its brief filed to the municipal court of Amsterdam EUR 61.1 million as damages and interests calculated until December 2, 2015, from which amount

CDC Project 13 SA asks the court to deduct the share of the earlier other defendants for other sales than made by them directly, and statutory interest on so defined amount starting from December 2, 2015. Kemira defends against the claim of CDC Project 13 SA. On May 10, 2017, the municipal court of Amsterdam rendered an interim decision on certain legal aspects relating to the claims of CDC Project 13 SA. The interim decision was favorable to Kemira on matters as to applicable statute of limitations, though not supporting Kemira's view that assignments made to CDC (allegedly giving CDC rights to present damage claims against the defendants) were invalid. CDC Project 13 SA has appealed against said interim decision and likewise Kemira has decided to file a cross-appeal accordingly.

As mentioned above the settlement between Kemira and CDC relating to the Helsinki litigation also includes significant limitations of liabilities for Kemira regarding the remaining pending legal action filed by CDC Project 13 SA in Amsterdam, the Netherlands. However, regardless of such limitations of liabilities, Kemira is currently not in a position to make any estimate regarding the duration or the likely outcome of the said process. No assurance can be given as to the outcome of the process, and unfavorable judgments against Kemira could have an adverse effect on Kemira's business, financial condition or results of operations. Due to its extensive international operations, the Group, in addition to the above referred claims, is involved in a number of other legal proceedings incidental to these operations and it does not expect the outcome of these other currently pending legal proceedings to have a materially adverse effect upon its consolidated results or financial position.

The Group's accounting policies

Contingent liabilities

A contingent liability is a possible obligation that arises from past events and whose existence will be confirmed by the occurrence of uncertain future events not wholly within the control of the Group, or concerns a present obligation which will most probably not require an outflow of resources embodying economic benefits to settle the obligation; or when the amount of the obligation cannot be measured with sufficient reliability. Contingent liability is disclosed in the notes.

7.2. EVENTS AFTER THE BALANCE SHEET DATE

January 14, 2019 Kemira signed an agreement to establish a joint venture – Kemira Yongsan Chemicals Co., Ltd, with Yongsan Chemicals, a privately-owned chemicals company in South Korea. Kemira will make a several million investment in the joint venture and will have 35% minority share of the established company.

The Group has no other significant events after the balance sheet date.

Kemira Oyj income statement

EUR million	Note	Year ended 31 December	
		2018	2017
Revenue	2	1,489.7	1,397.2
Change in inventories of finished goods	4	22.0	-0.6
Other operating income	3	7.8	7.8
Materials and services	4	-1,036.0	-898.0
Personnel expenses	5	-45.4	-45.1
Depreciation, amortization and impairments	6	-29.7	-37.3
Other operating expenses	4	-389.0	-379.2
Operating profit/loss		19.4	44.8
Financial income and expenses	7	119.6	4.6
Profit/loss before appropriations and taxes		139.1	49.3
Appropriations	8	-8.3	-2.9
Income taxes	9	1.7	-5.1
Net profit for the period		132.5	41.3

Kemira Oyj balance sheet

EUR million	Note	As at 31 December	
		2018	2017
ASSETS			
NON-CURRENT ASSETS			
Intangible assets	10	60.7	66.2
Property, plant and equipment	11	35.3	33.3
Investments	12		
Shares in subsidiaries		2,093.0	2,123.9
Receivables from Group companies		445.7	289.5
Other shares and holdings		100.4	121.9
Total investments		2,639.2	2,535.3
Total non-current assets		2,735.2	2,634.8

EUR million	Note	As at 31 December	
		2018	2017
CURRENT ASSETS			
Inventories	13	124.2	89.0
Non-current receivables	14	4.5	4.8
Current receivables	14	457.5	372.5
Money-market investments	15	0.0	25.0
Cash and cash equivalents		97.1	92.1
Total current assets		683.4	583.3
Total assets		3,418.5	3,218.2
EQUITY AND LIABILITIES			
EQUITY	16		
Share capital		221.8	221.8
Share premium		257.9	257.9
Fair value reserve		19.7	4.4
Unrestricted equity reserve		200.0	200.0
Retained earnings		502.9	541.3
Net profit/ loss for the financial year		132.5	41.3
Total equity		1,334.7	1,266.6
Appropriations	17	5.2	5.8
Obligatory provisions	18	20.1	22.2
LIABILITIES			
Non-current liabilities	19	666.9	687.9
Current liabilities	20	1,391.7	1,235.6
Total liabilities		2,058.6	1,923.5
Total equity and liabilities		3,418.5	3,218.2

Kemira Oyj cash flow statement

EUR million	2018	2017
CASH FLOW FROM OPERATING ACTIVITIES		
Net profit for the period	132.5	41.3
Adjustments for		
Depreciation, amortization and impairments	29.7	37.3
Income taxes	-1.7	5.1
Finance expenses, net	-119.6	-4.6
Other non-cash income and expenses not involving cash flow	84.4	-13.8
Operating profit before change in net working capital	125.2	65.4
Change in net working capital		
Increase (-) / decrease (+) in inventories	-35.3	-5.6
Increase (-) / decrease (+) in trade and other receivables	-71.4	-80.6
Increase (+) / decrease (-) in trade payables and other liabilities	6.1	20.6
Change in net working capital	-100.6	-65.6
Cash generated from operations before financing items and taxes		
	24.6	-0.2
Interest and other finance cost paid	-73.7	-41.4
Interest and other finance income received	2.6	18.1
Realized exchange gains and losses	-1.3	14.2
Dividends received	167.3	38.2
Income taxes paid	1.2	-8.8
Net cash generated from operating activities	120.7	20.0

EUR million	2018	2017
CASH FLOW FROM INVESTING ACTIVITIES		
Acquisitions of subsidiaries and increases in subsidiary shares	-0.2	-33.4
Acquisitions of associated companies and other shares	0.0	-3.6
Purchases of intangible assets	-15.2	-13.3
Purchases of property, plant and equipment	-11.0	-10.2
Proceeds from sale of subsidiaries and other shares	0.0	0.2
Proceeds from sale of property, plant and equipment and intangible assets	0.1	0.0
Change in loan receivables, net increase (-) / decrease (+)	-156.0	16.6
Net cash used in investing activities	-182.3	-43.7
Cash flow before financing		
CASH FLOW FROM FINANCING ACTIVITIES		
Proceeds from non-current interest-bearing liabilities (+)	90.0	200.0
Repayment from non-current interest-bearing liabilities (-)	-111.0	-122.9
Short-term financing, net increase (+) / decrease (-)	144.3	14.3
Dividends paid	-80.8	-80.7
Net cash used in financing activities	42.5	10.6
Net increase (+) / decrease (-) in cash and cash equivalents	-19.1	-13.0
Cash and cash equivalents at 31 Dec	97.1	117.1
Exchange gains (+) / losses (-) on cash and cash equivalents	-0.8	2.3
Cash and cash equivalents at 1 Jan	117.1	127.8
Net increase (+) / decrease (-) in cash and cash equivalents	-19.1	-13.0

1. THE PARENT COMPANY'S ACCOUNTING POLICIES FOR THE FINANCIAL STATEMENTS

BASIS OF PREPARATION

The parent company's financial statements have been prepared in compliance with the relevant acts and regulations in force in Finland (FAS). Kemira Group's financial statements have been prepared in accordance with the International Financial Reporting Standards (IFRS), and the parent company applies the Group's accounting policies whenever it has been possible according to FAS. The accounting policies that differ from the Group's accounting policies are presented below. In other respects the Group's accounting policies are applied.

REVENUE

Kemira Oyj's revenue consists of mainly revenues from the sale of goods and services. Revenue also includes also intercompany service charges due to change in definition of Accounting Act effective 2016.

OTHER OPERATING INCOME

The insurance compensation received has been included in other operating income.

PENSION ARRANGEMENTS

The company's statutory pensions are handled by pension insurance companies and supplemental pensions mainly by Kemira's own pension fund. Pension costs consist of payments to pension insurance companies and possible contributions to the pension fund and are recognized in the income statement.

SHARE-BASED INCENTIVE PLANS

The treatment of share-based plans is described in the Group's accounting policies. In the parent company, the cash proportion of share-based incentive plans is recognized as an expense in the performance year, and the share proportion is recognized in the year the shares are given using the average share price.

INCOME TAXES

The Group's accounting policies are applied to income taxes and deferred tax assets and liabilities as permitted under Finnish GAAP. Deferred tax liability for the appropriations is stated in the notes to financial statements.

LEASE

Lease payments are treated as rental expenses.

FINANCIAL ASSETS, FINANCIAL LIABILITIES AND DERIVATIVE CONTRACTS

Reductions in the capital of other non-current loans as well as loan transaction costs have been capitalized in a manner allowed by the Finnish Accounting Act. The non-expensed portion of these expenses, EUR 1.8 million (EUR 2.6 million), is included in Accrued income from others in the balance sheet.

All financial assets (including shares) and liabilities are recognized at their acquisition value or their acquisition value less write-downs, with the exception of derivative instruments, which are measured at their fair value.

Changes in the value of the financial assets and liabilities, including derivatives, are booked as a credit or charge into income statement under financial income and expenses, with the exception of derivative instruments qualifying for the hedge accounting. When qualifying for hedge accounting the efficient part is booked as a fair value reserve and the inefficient part is booked as a profit or loss in the income statement.

The valuation methods of derivative instruments are described in the Group's accounting policies and in Note 5.6 in the Consolidated Financial Statements.

CASH FLOW STATEMENT

The parent company's cash flow statement has been prepared in accordance with the general guidelines on cash flow by the Finnish Board of Accounting.

2. REVENUE

EUR million	2018	2017
Revenue by segments		
Pulp & Paper	797.8	742.9
Industry & Water	429.1	400.5
Intercompany revenue	262.9	253.8
Total	1,489.7	1,397.2
 Distribution of revenue by geographical area as a percentage of total revenue		
Finland, domicile of the parent company	30	28
Other Europe, Middle East and Africa	57	59
Americas	8	7
Asia Pacific	5	6
Total	100	100

3. OTHER OPERATING INCOME

EUR million	2018	2017
Gains on the sale of property, plant and equipment	0.0	0.1
Rent income	0.8	0.7
Insurance compensation received	4.6	5.6
Other income from operations	2.3	1.4
Total	7.8	7.8

4. OPERATING EXPENSES

EUR million	2018	2017
Change in inventories of finished goods	-22.0	0.6
 Materials and services		
Materials and supplies		
Purchases during the financial year	1,024.5	891.6
Change in inventories of materials and supplies	-2.5	-6.8
External services	14.0	13.3
Total materials and services	1,036.0	898.0
 Personnel expenses		
	45.4	45.1
 Other operating expenses		
Rents	8.4	7.0
Intercompany tolling manufacturing charges	196.7	189.1
Other intercompany charges	131.0	117.1
Other expenses	52.9	66.0
Total other operating expenses	389.0	379.2
 Total operating expenses	1,448.4	1,322.9

In 2018, the operating expenses included a net decrease in the obligatory provisions of EUR -2.1 million (personnel expenses EUR -0.1 million, rents EUR -3.5 million and other expenses EUR +1.6 million), and in 2017, the operating expenses included a net increase in the obligatory provisions of EUR +0.7 million (personnel expenses EUR -0.5 million, rents EUR +0.0 million and other expenses EUR +1.2 million).

DELOITTE NETWORK'S FEES AND SERVICES

EUR million	2018	2017
Audit fees	0.4	0.5
Tax services	0.2	0.1
Other services ¹⁾	0.6	0.6

1) In 2018, other services included fees mainly related to internal rationalization projects, similarly as in 2017.

5. PERSONNEL EXPENSES AND NUMBER OF PERSONNEL

EUR million	2018	2017
Emoluments of the Board of Directors, the CEOs and his Deputy ¹⁾	1.7	1.5
Other wages and salaries	36.1	35.7
Pension expenses	6.6	6.7
Other personnel expenses	1.0	1.2
Total	45.4	45.1

1) The emolument of the Kemira Oyj's CEO was EUR 1,021,520 (891,000) including bonuses and share-based payments of EUR 454,520 (324,000). The emolument of the Kemira Oyj's Deputy CEO was EUR 329,940 (268,155) including bonuses and share-based payments of EUR 148,238 (86,502).

Other transactions between related parties are presented in Note 6.1 in the Notes to the Consolidated Financial Statements.

Personnel at 31 Dec	2018	2017
Pulp & Paper	108	107
Industry & Water	36	35
Other, of which	365	356
R&D and Technology	167	167
Total	509	498
Personnel, average	507	499

6. DEPRECIATION, AMORTIZATION AND IMPAIRMENTS

EUR million	2018	2017
Depreciation according to plan and impairments		
Intangible assets		
Intangible rights	14.2	12.7
Other intangible assets	6.5	17.4
Tangible assets		
Buildings and constructions	0.5	0.4
Machinery and equipment	8.5	6.8
Other property, plant and equipment	0.0	0.0
Total	29.7	37.3

7. FINANCE INCOME AND EXPENSES

EUR million	2018	2017
Dividend income		
From the Group companies	167.2	37.3
From others	0.1	0.8
Total	167.3	38.2
Interest income		
From the Group companies	16.6	13.8
From others	1.7	2.6
Total	18.3	16.3

EUR million	2018	2017
Interest expenses		
To the Group companies	-1.3	-0.9
To others	-19.6	-17.3
Total	-20.9	-18.2
Other finance income		
From the Group companies	0.6	0.4
From others	0.0	0.2
Total	0.6	0.6
Other finance expenses		
To the Group companies ¹⁾	-28.2	-13.0
To others ²⁾	-24.9	-7.3
Total	-53.1	-20.3
Exchange gains and losses		
From the Group companies	9.9	-30.2
From others	-2.4	18.1
Total	7.5	-12.1
Total finance income and expenses	119.6	4.6
Exchange gains and losses		
Realized	-1.3	14.2
Unrealized	8.8	-26.3
Total	7.5	-12.1

1) In 2018, other finance expenses to the Group companies included the impairment of subsidiary shares of EUR 28.2 million (13.0).

2) In 2018, other finance expenses to others included the impairment of other shares of EUR 21.5 million. In 2017, other finance expenses to others included one-time set-up and issuance costs of EUR 5.0 million of a bond issued in 2017.

8. APPROPRIATIONS

EUR million	2018	2017
Change in difference between planned and actual depreciation (- increase/ + decrease)		
Intangible rights	-0.7	0.0
Other intangible assets	0.6	-0.2
Buildings and constructions	0.1	0.0
Machinery and equipment	0.6	1.2
Other property, plant and equipment	0.0	0.0
Total	0.7	1.1
Group contribution		
Group contributions given	-9.0	-4.0
Total	-9.0	-4.0
Total appropriations	-8.3	-2.9

9. INCOME TAXES

(income +, expense -) EUR million	2018	2017
Income taxes, current year	-0.4	0.0
Income taxes, previous years	0.0	-1.9
Deferred taxes	3.5	-3.4
Other taxes	-1.4	0.2
Total	1.7	-5.1

10. INTANGIBLE ASSETS

2018, EUR million	Intangible rights	Goodwill	Prepayments and non-current assets under constructions	Other intangible assets	Total
Acquisition cost at 1 Jan	93.3	6.2	10.0	187.0	296.5
Additions	6.1		1.7	6.8	14.7
Decreases	-6.1			-3.8	-9.9
Transfers	4.0		-8.6	5.1	0.5
Acquisition cost at 31 Dec	97.3	6.2	3.1	195.1	301.7
 Accumulated amortization at 1 Jan	-50.2	-6.2	0.0	-173.8	-230.2
Accumulated amortization relating to decreases and transfers	6.1			3.8	9.9
Amortization and impairments during the financial year	-14.2			-6.5	-20.7
Accumulated amortization at 31 Dec	-58.3	-6.2	0.0	-176.5	-241.0
 Net book value at 31 Dec	39.0	0.0	3.1	18.6	60.7

2017, EUR million	Intangible rights	Goodwill	Prepayments and non-current assets under constructions	Other intangible assets	Total
Acquisition cost at 1 Jan	87.4	6.2	3.9	190.0	287.5
Additions	5.5		7.5	0.2	13.3
Decreases	-0.4			-4.0	-4.4
Transfers	0.8		-1.5	0.7	0.0
Acquisition cost at 31 Dec	93.3	6.2	10.0	187.0	296.5
 Accumulated amortization at 1 Jan	-38.0	-6.2	0.0	-160.4	-204.6
Accumulated amortization relating to decreases and transfers	0.4			4.0	4.4
Amortization and impairments during the financial year	-12.7			-17.4	-30.1
Accumulated amortization at 31 Dec	-50.2	-6.2	0.0	-173.8	-230.2
 Net book value at 31 Dec	43.1	0.0	10.0	13.2	66.2

11. PROPERTY, PLANT AND EQUIPMENT

2018, EUR million	Land and water areas	Buildings and constructions	Machinery and equipment	Other property, plant and equipment	Prepayments and non-current assets under construction	Total
Acquisition cost at 1 Jan	1.1	18.6	102.0	0.6	9.1	131.3
Additions		0.2	6.4		5.0	11.6
Decreases		-0.3	-5.9			-6.2
Transfers		0.4	6.9		-7.9	-0.5
Acquisition cost at 31 Dec	1.1	18.9	109.5	0.6	6.2	136.2
Accumulated depreciation at 1 Jan	-0.1	-13.8	-83.5	-0.5	0.0	-98.0
Accumulated depreciation relating to decreases and transfers		0.3	5.8			6.1
Depreciation and impairments during the financial year		-0.5	-8.5	0.0		-9.0
Accumulated depreciation at 31 Dec	-0.1	-14.0	-86.3	-0.5	0.0	-100.9
Net book value at 31 Dec	1.0	4.9	23.2	0.0	6.2	35.3
2017, EUR million	Land and water areas	Buildings and constructions	Machinery and equipment	Other property, plant and equipment	Prepayments and non-current assets under construction	Total
Acquisition cost at 1 Jan	1.1	17.4	102.7	0.6	5.3	127.1
Additions	0.0	0.4	2.7		7.1	10.2
Decreases		-0.1	-5.9			-6.0
Transfers		0.8	2.5		-3.3	0.0
Acquisition cost at 31 Dec	1.1	18.6	102.0	0.6	9.1	131.3
Accumulated depreciation at 1 Jan	-0.1	-13.5	-82.6	-0.5	0.0	-96.7
Accumulated depreciation relating to decreases and transfers		0.1	5.9			6.0
Depreciation and impairments during the financial year		-0.4	-6.8	0.0		-7.3
Accumulated depreciation at 31 Dec	-0.1	-13.8	-83.5	-0.5	0.0	-98.0
Net book value at 31 Dec	1.0	4.7	18.5	0.1	9.1	33.3

12. INVESTMENTS

2018, EUR million	Shares in Group companies	Receivables from Group companies	Other shares and holdings	Total
Net book value at 1 Jan	2,123.9	289.5	121.9	2,535.3
Additions	0.2	156.3		156.5
Decreases and transfers	-31.2		-21.5	-52.6
Net book value at 31 Dec	2,093.0	445.7	100.4	2,639.2

2017, EUR million	Shares in Group companies	Receivables from Group companies	Other shares and holdings	Total
Net book value at 1 Jan	2,103.5	302.2	118.6	2,524.3
Additions	33.4		3.6	37.0
Decreases and transfers	-13.0	-12.7	-0.3	-26.0
Net book value at 31 Dec	2,123.9	289.5	121.9	2,535.3

13. INVENTORIES

EUR million	2018	2017
Raw materials and supplies	31.0	28.4
Finished goods	78.8	56.8
Prepayments	14.5	3.7
Total	124.2	89.0

14. RECEIVABLES

NON-CURRENT RECEIVABLES

EUR million	2018	2017
Interest-free non-current receivables		
Deferred tax assets	4.5	4.8
Total interest-free non-current receivables	4.5	4.8
Total non-current receivables	4.5	4.8

CURRENT RECEIVABLES

EUR million	2018	2017
Interest-bearing current receivables		
From the Group companies	209.1	105.2
Total interest-bearing current receivables	209.1	105.2
Interest-free current receivables		
Advances paid		
To the Group companies	18.8	18.8
To others	0.0	0.0
Total	18.8	18.8
Trade receivables		
From the Group companies	36.1	40.9
From others	136.7	132.9
Total	172.8	173.8
Accrued income		
From the Group companies	5.5	33.6
From others	38.2	25.9
Total	43.7	59.5

Other current interest-free receivables

From the Group companies	0.0	0.0
From others	13.0	15.1
Total	13.0	15.1
Total interest-free current receivables	248.4	267.3
Total current receivables	457.5	372.5
Total receivables	462.0	377.3

ACCRUED INCOME

EUR million	2018	2017
Interests	6.2	6.0
Taxes	2.1	4.7
Exchange rate differences	27.4	11.4
Dividends	0.0	30.0
Other	8.0	7.5
Total	43.7	59.5

15. MONEY-MARKET INVESTMENTS

EUR million	2018	2017
Money-market investments		
Book value	0.0	25.0
Fair value	0.0	25.0
Difference	0.0	0.0

Money-market investments include company's short-term investments.

16. EQUITY

EUR million	2018	2017
Restricted equity		
Share capital at 1 Jan	221.8	221.8
Share capital at 31 Dec	221.8	221.8
Share premium account at Jan 1	257.9	257.9
Share premium account at 31 Dec	257.9	257.9
Fair value reserve at 1 Jan	4.4	2.7
Cash flow hedges	15.3	1.7
Fair value reserve at 31 Dec	19.7	4.4
Total restricted equity at 31 Dec	499.4	484.0
Unrestricted equity reserve		
Unrestricted equity reserve at 1 Jan	200.0	200.0
Unrestricted equity reserve at 31 Dec	200.0	200.0
Retained earnings at 1 Jan	582.6	622.1
Net profit for the period	132.5	41.3
Dividends paid	-80.8	-80.7
Share-based incentive plan		
Shares given	1.1	0.1
Shares returned	0.0	-0.2
Retained earnings and net profit for the period ending at 31 Dec	635.4	582.6

EUR million	2018	2017
Total unrestricted equity at 31 Dec	835.3	782.6
Total equity at 31 Dec	1,334.7	1,266.6
Total distributable funds at 31 Dec	835.3	782.6
CHANGE IN TREASURY SHARES		
	EUR million	Number of shares
Acquisition value / number at Jan 1, 2018	20.1	2,988,935
Change	-1.1	-156,638
Acquisition value/number at Dec 31, 2018	19.1	2 832,297

17. ACCUMULATED APPROPRIATIONS

EUR million	2018	2017
Appropriations		
Appropriations in the property, plant and equipment by asset class are as follows		
Buildings and constructions	0.7	0.8
Machinery and equipment	0.9	1.5
Other property, plant and equipment	0.0	0.0
Intangible rights	1.1	0.5
Other intangible assets	2.4	3.0
Total	5.2	5.8
Change in appropriations		
Appropriations at 1 Jan	5.8	6.9
Change in untaxed reserves in income statement	-0.7	-1.1
Appropriations at 31 Dec	5.2	5.8

On December 31, 2018, deferred tax liabilities on accumulated appropriations were EUR 1.0 million (1.2).

18. OBLIGATORY PROVISIONS

EUR million	2018	2017
Non-current provisions		
Pension provisions		
	5.8	5.9
Other obligatory provisions		
Environmental provisions	13.0	11.4
Total other obligatory provisions	13.0	11.4
Total non-current provisions	18.8	17.3
Current provisions		
Other obligatory provisions		
Personnel related provisions	0.4	0.4
Restructuring provisions	1.0	4.5
Total current provisions	1.4	4.9
Total provisions	20.1	22.2
Change in obligatory provisions		
Obligatory provisions at 1 Jan	22.2	21.5
Used during the financial year	-3.7	-1.2
Unused amounts reversed	0.0	-0.3
Increase during the financial year	1.7	2.1
Obligatory provisions at 31 Dec	20.1	22.2

Environmental risks and liabilities are disclosed in Note 4.6 in the Notes to the Consolidated Financial Statements.

19. NON-CURRENT LIABILITIES

EUR million	2018	2017
Loans from financial institutions	295.0	215.0
Other non-current liabilities	371.9	472.9
Total	666.9	687.9
Long-term liabilities maturing in		
2020 (2019)	55.4	110.0
2021 (2020)	0.0	205.0
2022 (2021)	150.0	0.0
2023 (2022) or later	461.4	372.9
Total	666.9	687.9
Liabilities maturing in 5 years or more		
Loans from financial institutions	90.0	0.0
Other non-current liabilities	371.4	372.9
Total	461.4	372.9

Other non-current liabilities include a bond of EUR 150 million, which matures on May 13, 2022 and a bond of EUR 200 million, which matures on May 30, 2024.

20. CURRENT LIABILITIES

EUR million	2018	2017
Interest-bearing current liabilities		
Loans from financial institutions	10.0	20.6
Current portion of other non-current loans to others	100.0	0.0
Other interest-bearing current liabilities		
To the Group companies	1,041.9	987.5
To others	20.9	20.4
Total interest-bearing current liabilities	1,172.9	1,028.6

The current portion of other non-current loans to others includes a bond of EUR 100 million, which matures on May 27, 2019.

EUR million	2018	2017
Interest-free current liabilities		
Prepayments received		
From others	1.6	0.5
Total	1.6	0.5
Trade payables		
To the Group companies	47.9	37.7
To others	78.1	91.8
Total	126.0	129.5
Accrued expenses		
To the Group companies	11.9	8.2
To others	69.8	59.8
Total	81.8	68.0
Other interest-free liabilities		
Total interest-free current liabilities	218.8	207.1
Total current liabilities	1,391.7	1,235.6
Accrued expenses		
Salaries	11.4	12.3
Interests and exchange rate differences	10.1	9.8
Other	60.3	45.9
Total	81.8	68.0

21. DERIVATIVES

NOMINAL VALUES

EUR million	2018 Total	2017 Total
Currency derivatives		
Forward contracts	358.1	287.1
of which cash flow hedges	14.1	
Interest rate derivatives		
Interest rate swaps	245.0	270.0
of which cash flow hedges	145.0	170.0
of which fair value hedges	100.0	100.0
Other derivatives		
Electricity contracts, bought (GWh)	2,107.0	1,651.0
Electricity forward contracts	2,107.0	1,494.0
of which cash flow hedges	2,107.0	1,494.0
Electricity future contracts		158.0
of which cash flow hedges		158.0

FAIR VALUES

2018, EUR million	Positive	Negative	Net
Currency derivatives			
Forward contracts	2.3	2.2	0.2
of which cash flow hedges	0.1		0.1
Interest rate derivatives			
Interest rate swaps	1.7	1.3	0.4
of which cash flow hedges		1.3	-1.3
of which fair value hedges	1.7		1.7
Other derivatives			
Electricity forward contracts, bought	24.5		24.5
of which cash flow hedges	24.5		24.5

FAIR VALUES

2017, EUR million	Positive	Negative	Net
Currency derivatives			
Forward contracts	4.7	1.3	3.4
of which cash flow hedges			
Interest rate derivatives			
Interest rate swaps	2.7	1.6	1.0
of which cash flow hedges		1.6	-1.6
of which fair value hedges	2.7		2.7
Other derivatives			
Electricity forward contracts, bought	6.1		6.1
of which cash flow hedges	6.1		6.1
Electricity future contracts, bought		0.1	-0.1
of which cash flow hedges	0.1		-0.1

22. COLLATERAL AND CONTINGENT LIABILITIES

EUR million	2018	2017
Guarantees		
On behalf of the Group companies		
For loans	363,7	410,4
For other obligations	54,7	50,2
On behalf of others	2,5	3,5
Total	420,9	464,1
Other obligations		
On behalf of others	6,1	0,0
Leasing liabilities		
Maturity within one year	4,1	4,1
Maturity after one year and no later than 5 years	9,0	9,0
Maturity after 5 years	5,8	5,4
Total	18,9	18,5

23. SHARES AND HOLDINGS OWNED BY KEMIRA OYJ

SHARES IN GROUP COMPANIES

	Group holding, %	Kemira Oyj holding, %
AS Kemivesi	100.00	100.00
Kemira Argentina S.A.	100.00	15.80
Kemira Cell Sp. z.o.o.	55.00	55.00
Kemira Chemicals (Nanjing) Co.,Ltd.	100.00	100.00
Kemira Chemicals (Shanghai) Co.,Ltd.	100.00	100.00
Kemira Chemicals (UK) Ltd.	100.00	100.00
Kemira Chemicals (Yanzhou) Co.,Ltd.	100.00	100.00
Kemira Chemicals Brasil Ltda.	100.00	99.87
Kemira Chemicals Canada Inc.	100.00	100.00
Kemira Chemicals Korea Corporation	100.00	100.00
Kemira Chemie Ges.mbH	100.00	100.00
Kemira Chile Comercial Limitada	100.00	99.00
Kemira Europe Oy	100.00	100.00
Kemira Germany GmbH	100.00	100.00
Kemira GrowHow A/S	100.00	100.00
Kemira Hong Kong Company Limited	100.00	100.00
Kemira International Finance B.V.	100.00	100.00
Kemira KTM d.o.o.	100.00	100.00
Kemira Operon Oy	100.00	100.00
Kemira Świecie Sp. z o.o.	100.00	100.00
Kemira Water Danmark A/S	100.00	100.00
Kemira Water Solutions Brasil	100.00	100.00
PT Kemira Indonesia	100.00	74.80
PT Kemira Chemicals Indonesia	99.77	99.77

KEMIRA OYJ'S BOARD OF DIRECTORS' PROPOSAL TO THE ANNUAL GENERAL MEETING FOR THE DISTRIBUTION OF DISTRIBUTABLE FUNDS AND SIGNING OF THE FINANCIAL STATEMENTS AND BOARD OF DIRECTORS' REVIEW

On December 31, 2018, Kemira Oyj's distributable funds are EUR 835,333,094 of which the net profit for the period amounts to EUR 132,458,292.

The Board of Directors proposes to the Annual General Meeting to be held on March 21, 2019 that a dividend of EUR 0.53 per share will be distributed. No dividend will be paid on own shares held by the company as treasury shares on the dividend record date.

On the date of this proposal for the distribution of profits, a total of 152,510,260 shares are held outside the company, the total dividends paid would amount to EUR 80,830,438. The distributable funds of EUR 754,502,657 to be retained as equity.

There have been no material changes in the company's financial position since December 31, 2018. The liquidity of the company remains good, and the proposed dividend payment does not risk the solvency of the company.

Helsinki, February 7, 2019

Jari Paasikivi
Chairman

Kerttu Tuomas
Vice Chairman

Wolfgang Büchel

Shirley Cunningham

Kaisa Hietala

Timo Lappalainen

Jari Rosendal
CEO

Auditor's report

(Translation from the Finnish original)

To the Annual General Meeting of Kemira Oyj

REPORT ON THE AUDIT OF FINANCIAL STATEMENTS

OPINION

We have audited the financial statements of Kemira Oyj (business identity code 0109823-0) for the year ended 31 December, 2018. The financial statements comprise the consolidated statement of financial position, income statement, statement of comprehensive income, statement of changes in equity, statement of cash flows and notes, including a summary of significant accounting policies, as well as the parent company's balance sheet, income statement, cash flow statement and notes to the financial statements.

In our opinion

- the consolidated financial statements give a true and fair view of the Group's financial performance and financial position in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU; and
- the financial statements give a true and fair view of the parent company's financial performance and financial position in accordance with the laws and regulations governing the preparation of financial statements in Finland and comply with statutory requirements.

Our opinion is consistent with the additional report submitted to the Audit Committee.

BASIS FOR OPINION

We conducted our audit in accordance with good auditing practice in Finland. Our responsibilities under good auditing practice are further described in the Auditor's Responsibilities for the Audit of Financial Statements section of our report.

We are independent of the parent company and of the group companies in accordance with the ethical requirements that are applicable in Finland and are relevant to our audit, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

According to our best knowledge and understanding all services other than the statutory audit we have provided for parent company and group companies comply with regulations governing the services other than the statutory audit in Finland. We have not provided any prohibited non-audit services re-ferred to in Article 5(1) of regulation (EU) 537/2014. All services other than the statutory audit which we have provided have been disclosed in note 2.2. to the consolidated financial statements and in note 4 to the parent company's financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

KEY AUDIT MATTERS

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements of the current period. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

We have also addressed the risk of management override of internal controls. This includes consideration of whether there was evidence of management bias that represented a risk of material misstatement due to fraud.

Key audit matter	How our audit addressed the key audit matter	Key audit matter	How our audit addressed the key audit matter
Goodwill impairment testing	<p>Consolidated financial statements as of 31.12.2018 includes Goodwill amounting to EUR 512,5 million.</p> <p>Management has conducted goodwill impairment testing and as a result of the testing conducted, Kemira has not accounted for any impairments over goodwill as at 31.12.2018.</p> <p>Goodwill impairment testing requires substantial management judgment over the recoverable amounts over:</p> <ul style="list-style-type: none"> estimations over the projected future cash flow; long term growth assumptions; and applied discount rate. <p>For further details over the goodwill impairment testing conducted by the management is presented in the note 3.1. within the consolidated financial statements.</p>	<p>As part of our audit procedures we have evaluated the estimates over the future recoverable cash flows and we have compared, that the forecasts used in the impairment tests are based on approved long term forecast and budgets approved.</p> <p>We have assessed the impairment testing by:</p> <ul style="list-style-type: none"> evaluating the key assumptions applied per segment applied assessing the growth estimates and comparing them to historical performance comparing applied discount rates to independent third party sources assessing the sensitivity analysis over the long term assumptions and discount rate. <p>We have also assessed the sensitivity analysis, which is disclosed in the consolidated financial statements note 3.1.</p> <p>In particular we considered the completeness of the disclosures regarding those Cash Generating Units with material goodwill balances and where a reasonably possible change in certain variables could lead to impairment.</p>	<p>Fair value measurement of other shares</p> <p>Consolidated financial statements as of 31.12.2018 include other shares amounting to EUR 228,4 million. This item consists mainly from shares of Pohjolan Voima Oy (PVO) and Teollisuuden Voima Oyj (TVO) for which fair value is EUR 226,9 million.</p> <p>Fair value measurement of these shares require substantial management judgment relating to the following estimates:</p> <ul style="list-style-type: none"> future electricity market prices in Finland; future electricity production costs; and applied discount rate. <p>For further details over the fair value measurement of conducted by the management is presented in the note 3.4. within the consolidated financial statements.</p> <p>This matter is regarded as significant risk of material misstatement in accordance with EU Audit Regulation (537/2014) Article 10 paragraph 2 c.</p>

We have not identified significant risks of material misstatement in accordance with EU Audit Regulation (537/2014) Article 10 paragraph 2 c in the parent company's financial statements.

RESPONSIBILITIES OF THE BOARD OF DIRECTORS AND THE CHIEF EXECUTIVE OFFICER FOR THE FINANCIAL STATEMENTS

The Board of Directors and the Chief Executive Officer are responsible for the preparation of consolidated financial statements that give a true and fair view in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU, and of financial statements that give a true and fair view in accordance with the laws and regulations governing the preparation of financial statements in Finland and comply with statutory requirements. The Board of Directors and the Chief Executive Officer are also responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Board of Directors and the Chief Executive Officer are responsible for assessing the parent company's and the group's ability to continue as going concern, disclosing, as applicable, matters relating to going concern and using the going concern basis of accounting. The financial statements are prepared using the going concern basis of accounting unless there is an intention to liquidate the parent company or the group or cease operations, or there is no realistic alternative but to do so.

AUDITOR'S RESPONSIBILITIES IN THE AUDIT OF FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance on whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with good auditing practice will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

As part of an audit in accordance with good auditing practice, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the parent company's or the group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of the Board of Directors' and the Chief Executive Officer use of the going concern basis of accounting and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the parent company's or the group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events so that the financial statements give a true and fair view.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit. We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

OTHER REPORTING REQUIREMENTS

INFORMATION ON OUR AUDIT ENGAGEMENT

We were first appointed as auditors by the Annual General Meeting of Kemira Oyj on 21 March 2012, and our appointment represents a total period of uninterrupted engagement of 7 years.

OTHER INFORMATION

The Board of Directors and the Chief Executive Officer are responsible for the other information. The other information comprises information included in the Board of Directors Review and in the Annual Report, but does not include the financial statements and our report thereon. We obtained the Board of Directors Review prior to the date of the auditor's report, and the Annual Report is expected to be made available to us after the date of the auditor's report.

Our opinion on the financial statements does not cover the other information.

In connection with our audit of the financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. With respect to Board of Directors Review, our responsibility also includes considering whether the Board of Directors Review has been prepared in accordance with the applicable laws and regulations.

In our opinion, the information in the Board of Directors Review is consistent with the information in the information in the financial statements and the Board of Directors Review has been prepared in accordance with the applicable laws and regulations.

If, based on the work we have performed, we conclude that there is a material misstatement in the information included in the Board of Directors Review, we are required to report this fact. We have nothing to report in this regard.

OTHER OPINIONS

We support that the financial statements should be adopted. The proposal by the Board of Directors regarding the use of the profit shown on the balance sheet is in compliance with the Limited Liability Companies Act. We support that the Board of Directors of the parent company and the Chief Executive Officer should be discharged from liability for the financial period audited by us.

Helsinki, 7 February 2019

Deloitte Oy

Audit Firm

Jukka Vattulainen

Authorised Public Accountant (KHT)

Quarterly earnings performance

EUR million	1–3	4–6	7–9	10–12	2018 Total	1–3	4–6	7–9	10–12	2017 Total
Revenue										
Pulp & Paper	368.7	376.0	385.2	390.4	1,520.2	372.2	368.9	363.0	372.8	1,476.9
Industry & Water	245.0	271.7	284.4	271.5	1,072.6	237.8	248.3	259.2	263.8	1,009.1
Total	613.7	647.6	669.6	661.8	2,592.8	610.0	617.2	622.2	636.6	2,486.0
EBITDA¹⁾										
Pulp & Paper	42.1	44.6	48.2	53.0	187.8	45.1	45.1	34.6	55.1	179.9
Industry & Water	26.1	38.0	34.6	28.3	127.0	21.5	22.0	35.7	23.4	102.5
Total	68.2	82.5	82.8	81.3	314.8	66.7	67.0	70.2	78.4	282.4
EBIT¹⁾										
Pulp & Paper	18.2	21.1	14.6	25.8	79.8	22.9	23.0	10.4	30.6	86.9
Industry & Water	14.5	17.4	21.3	15.3	68.5	9.7	10.5	23.0	11.2	54.4
Total	32.7	38.5	35.9	41.1	148.2	32.6	33.5	33.4	41.8	141.4
Finance costs, net	-3.9	-7.4	-7.9	-5.8	-25.0	-6.7	-7.7	-7.4	-7.1	-28.9
Share of the results of associates	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	-0.1	0.2
Profit before tax	28.8	31.1	28.1	35.4	123.3	26.1	25.9	26.1	34.6	112.6
Income taxes	-5.8	-7.5	-5.9	-8.9	-28.1	-6.3	-6.2	-6.1	-8.8	-27.4
Net profit for the period	23.0	23.5	22.1	26.5	95.2	19.8	19.6	20.0	25.8	85.2
Net profit attributable to										
Equity owners of the parent	21.3	21.8	20.6	25.5	89.1	18.3	17.7	18.4	24.3	78.6
Non-controlling interests	1.7	1.8	1.5	1.0	6.1	1.6	1.9	1.7	1.5	6.6
Net profit for the period	23.0	23.5	22.1	26.5	95.2	19.8	19.6	20.0	25.8	85.2
Earning per share, basic and diluted, EUR	0.14	0.14	0.14	0.17	0.58	0.12	0.12	0.12	0.16	0.52

1) Includes items affecting comparability.

Reconciliation of IFRS figures

EUR million	1–3	4–6	7–9	10–12	2018 Total	1–3	4–6	7–9	10–12	2017 Total
ITEMS AFFECTING COMPARABILITY IN EBITDA AND EBIT										
Operative EBITDA										
Pulp & Paper	42.7	45.4	52.3	51.2	191.7	46.0	47.8	48.5	55.4	197.7
Industry & Water	26.6	34.8	36.7	33.3	131.5	22.9	29.3	36.0	25.3	113.6
Total	69.4	80.2	89.0	84.5	323.1	69.0	77.1	84.5	80.7	311.3
Total items affecting comparability	-1.2	2.3	-6.2	-3.2	-8.3	-2.3	-10.1	-14.3	-2.2	-28.9
EBITDA	68.2	82.5	82.8	81.3	314.8	66.7	67.0	70.2	78.4	282.4
Operative EBIT										
Pulp & Paper	18.9	22.0	26.6	24.1	91.6	23.8	25.7	24.4	30.9	104.8
Industry & Water	15.0	23.0	23.4	20.8	82.2	11.1	17.9	23.4	13.1	65.5
Total	33.9	45.1	50.0	44.8	173.8	34.9	43.6	47.7	44.0	170.3
Total items affecting comparability	-1.2	-6.6	-14.1	-3.7	-25.6	-2.3	-10.1	-14.3	-2.2	-28.9
EBIT	32.7	38.5	35.9	41.1	148.2	32.6	33.5	33.4	41.8	141.4
Operative EBITDA	69.4	80.2	89.0	84.5	323.1	69.0	77.1	84.5	80.7	311.3
Restructuring and streamlining programs	0.0	-0.8	-5.5	-2.7	-8.9	-1.9	-7.5	-1.2	-2.4	-13.1
Transaction and integration expenses in acquisition	-0.2	0.0	0.0	3.1	2.8	0.1	0.2	0.3	-0.2	0.3
Divestment of businesses and other disposals	0.0	5.7	0.0	0.0	5.7	0.0	-2.6	0.0	0.8	-1.9
Other items	-1.0	-2.6	-0.8	-3.6	-7.9	-0.5	-0.1	-13.4	-0.3	-14.4
Total items affecting comparability	-1.2	2.3	-6.2	-3.2	-8.3	-2.3	-10.1	-14.3	-2.2	-28.9
EBITDA	68.2	82.5	82.8	81.3	314.8	66.7	67.0	70.2	78.4	282.4

EUR million	1–3	4–6	7–9	10–12	2018 Total	1–3	4–6	7–9	10–12	2017 Total
Operative EBIT	33.9	45.1	50.0	44.8	173.8	34.9	43.6	47.7	44.0	170.3
Total items affecting comparability in EBITDA	-1.2	2.3	-6.2	-3.2	-8.3	-2.3	-10.1	-14.3	-2.2	-28.9
Items affecting comparability in depreciation, amortization and impairments	0.0	-8.9	-7.9	-0.5	-17.3	0.0	0.0	0.0	0.0	0.0
Operating profit (EBIT)	32.7	38.5	35.9	41.1	148.2	32.6	33.5	33.4	41.8	141.4
ROCE AND OPERATIVE ROCE										
Operative EBIT	33.9	45.1	50.0	44.8	173.8	34.9	43.6	47.7	44.0	170.3
Operating profit (EBIT)	32.7	38.5	35.9	41.1	148.2	32.6	33.5	33.4	41.8	141.4
Share of the results of associates	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	-0.1	0.2
Capital employed	1,753.9	1,754.6	1,759.5	1,781.4	1,781.4	1,736.8	1,749.7	1,759.9	1,763.2	1,763.2
Operative ROCE, %	9.7	9.7	9.8	9.8	9.8	9.5	9.2	9.2	9.7	9.7
ROCE, %	8.1	8.3	8.5	8.3	8.3	8.1	8.0	7.3	8.0	8.0
NET WORKING CAPITAL										
Inventories	237.1	254.9	268.6	283.8	283.8	230.2	227.1	224.4	223.8	223.8
Trade receivables and other receivables	423.7	449.2	457.3	420.2	420.2	412.8	419.5	398.6	418.8	418.8
Excluding financing items in other receivables	-22.2	-33.4	-33.1	-32.5	-32.5	-15.1	-21.2	-18.3	-21.4	-21.4
Trade payables and other liabilities	495.2	405.4	421.5	439.1	439.1	490.3	384.2	385.6	422.8	422.8
Excluding financing items in other liabilities	-96.5	-12.3	-9.9	-28.0	-28.0	-98.4	-5.6	-11.1	-12.0	-12.0
Net working capital	240.0	277.6	281.1	260.4	260.4	236.0	246.8	230.3	210.5	210.5
INTEREST-BEARING NET LIABILITIES										
Non-current interest-bearing liabilities	758.8	658.4	653.1	646.3	646.3	592.1	690.9	674.5	669.1	669.1
Current interest-bearing liabilities	148.9	243.5	236.1	240.0	240.0	200.3	180.8	186.6	191.4	191.4
Interest-bearing liabilities	907.7	902.0	889.2	886.3	886.3	792.4	871.7	861.2	860.5	860.5
Cash and cash equivalents	229.9	129.3	144.9	144.9	144.9	131.5	113.7	160.5	166.1	166.1
Interest-bearing net liabilities	677.8	772.6	744.3	741.4	741.4	660.9	758.0	700.7	694.4	694.4

Shares and shareholders

SHARES AND SHARE CAPITAL

On December 31, 2018 Kemira Oyj's share capital amounted to EUR 221.8 million and the number of shares was 155,342,557. Each share entitles to one vote at the general meeting. Kemira Oyj's shares are registered in the book-entry system maintained by Euroclear Finland Ltd.

SHAREHOLDERS

At the end of 2018, Kemira Oyj had 34,378 registered shareholders (35,571). Foreign shareholding of Kemira Oyj shares increased 6% during the year and was 27.4% of the shares (25.8%), including nominee-registered holdings. Households owned 17.1% of the shares (17.9%). At year-end, Kemira held 2,832,297 treasury shares (2,988,935), representing 1.8% (1.9%) of all company shares. A list of Kemira's largest shareholders is updated monthly and can be found on the company website at www.kemira.com > Investors.

LISTING AND TRADING

Kemira Oyj's shares are listed on Nasdaq Helsinki. The trading code for the shares is KEMIRA and the ISIN code is FI0009004824.

Kemira Oyj's share closed at EUR 9.85 at the Nasdaq Helsinki at the end of 2018 (11.50). Shares registered a high of EUR 12.03 (12.44) and a low of EUR 9.34 (10.33). The average share price of Kemira was EUR 11.00 (11.47). The share price decreased 14% during the year while Helsinki Cap index decreased 9%. STOXX Chemicals (Europe), chemical sector benchmark index for Kemira decreased 17% in 2018. Kemira's market capitalization, excluding treasury shares, was EUR 1,502 million at the end of the year 2018 (1,752).

In 2018, Kemira Oyj's share trading volume on Nasdaq Helsinki was 44 million (54) shares. Share turnover value decreased 23% and was EUR 478.9 million (614.9). The average daily trading volume was 175,444 (215,814) shares.

In addition to Nasdaq Helsinki, Kemira shares are traded on several alternative market places or multilateral trading facilities (MTF), for example at BATS, Chi-X and Turquoise. The total share trading in 2018 was 68 million (85) shares, of which 35% (36%) was executed on other trading facilities than on Nasdaq Helsinki. Source: Nasdaq and Kemira.com.

Up-to-date information on Kemira's share price is available on the company's website at www.kemira.com > Investors.

DIVIDEND POLICY AND DIVIDEND DISTRIBUTION

Kemira's dividend policy aims to pay a stable and competitive dividend.

The company's Board of Directors will propose to the Annual General Meeting that a per-share dividend of EUR 0.53 totaling EUR 81 million (81) be paid for the financial year 2018. The Annual General Meeting will be held on March 21, 2019. The dividend ex-date is March 22, 2019, dividend record date March 25, 2019, and payment date April 5, 2019.

In April 2018, a dividend of EUR 0.53 per share was paid for the financial year that ended December 31, 2017. The dividend record date was March 23, 2018, and the payment (EUR 81 million in total) date April 5, 2018.

BOARD AUTHORIZATIONS

The Annual General Meeting on March 21, 2018 authorized the Board of Directors to decide upon repurchase of a maximum of 4,950,000 company's own shares ("Share repurchases authorization"). Shares will be repurchased by using unrestricted equity either through a tender offer with equal terms to all shareholders at a price determined by the Board of Directors or otherwise than in proportion to the existing shareholdings of the company's shareholders in public trading on the Nasdaq Helsinki Ltd (the "Helsinki Stock Exchange") at the market price quoted at the time of the repurchase. The price paid for the shares repurchased through a tender offer under the authorization shall be based on the market price of the company's shares in public trading. The minimum price to be paid would be the lowest market price of the share quoted in public trading during the authorization period and the maximum price the highest market price quoted during the authorization period.

Shares shall be acquired and paid for in accordance with the Rules of the Helsinki Stock Exchange and Euroclear Finland Ltd. Shares may be repurchased to be used in implementing or financing mergers and acquisitions, developing the company's capital structure, improving the liquidity of the company's shares or to be used for the payment of the annual fee payable to the members of the Board of Directors or implementing the company's share-based incentive plans. In order to realize the aforementioned purposes, the shares acquired may be retained, transferred further or cancelled by the company. The Board of Directors will decide upon other terms related to share repurchases. The share repurchase authorization is valid until the end of the next Annual General Meeting. The Board had not exercised its authorization by December 31, 2018.

The AGM authorized the Board of Directors to decide to issue a maximum of 15,600,000 new shares and/or transfer a maximum of 7,800,000 company's own shares held by the company ("Share issue authorization"). The new shares may be issued and the company's own shares held by the company may be transferred either for consideration or without consideration. The new shares may be issued and the company's own shares held by the company may be transferred to the company's shareholders in proportion to their current shareholdings in the company, or by displaying the shareholders' pre-emption right, through a directed share issue, if the company has a weighty financial reason to do so, such as financing or implementing

mergers and acquisitions, developing the capital structure of the company, improving the liquidity of the company's shares or if this is justified for the payment of the annual fee payable to the members of the Board of Directors or implementing the company's share-based incentive plans. The directed share issue may be carried out without consideration only in connection with the implementation of the company's share-based incentive plan. The subscription price of new shares shall be recorded to the invested unrestricted equity reserves. The consideration payable for company's own shares shall be recorded to the invested unrestricted equity reserves. The Board of Directors will decide upon other terms related to the share issues. The share issue authorization is valid until May 31, 2019. The share issue authorization has been used and shares owned by the Group were conveyed to members of the Board and key employees in connection with the remuneration.

MANAGEMENT SHAREHOLDING

The members of the Board of Directors as well as the President and CEO and his Deputy held 511,885 (454,215) Kemira Oyj shares on December 31, 2018 or 0.33% (0.29%) of all outstanding shares and voting rights (including treasury shares and shares held by the related parties and controlled corporations). Jari Rosendal, President and CEO, held 77,200 shares (45,000) on December 31, 2018. Members of the Management Board, excluding the President and CEO and his Deputy, held a total of 107,961 shares on December 31, 2018 (77,641), representing 0.07% (0.05%) of all outstanding shares and voting rights (including treasury shares and shares held by the related parties and controlled corporations). Up-to-date information regarding the shareholdings of the Board of Directors and Management is available on Kemira's website at www.kemira.com > Investors.

LARGEST SHAREHOLDERS DECEMBER 31, 2018

Shareholder	Number of shares	% of shares and votes
1 Oras Invest Ltd	28,278,217	18.2
2 Solidium Oy	25,896,087	16.7
3 Varma Mutual Pension Insurance Company	5,329,836	3.4
4 Ilmarinen Mutual Pension Insurance Company	3,100,000	2.1
5 Nordea funds	1,974,872	1.3
6 OP-Henkivakuutus Ltd.	1,403,278	0.9
7 Veritas Pension Insurance Company Ltd.	1,379,226	0.9
8 The State Pension Fund	700,000	0.5
9 Nordea Life Assurance Finland Ltd.	618,541	0.4
10 Laakkonen Mikko	600,000	0.4
11 Pohjola Fund Management	483,639	0.3
12 Paasikivi Pekka	434,000	0.3
13 Hulkko Juha Olavi	400,000	0.3
14 Valio Pension Fund	379,450	0.3
15 Sigrid Juselius Foundation	365,000	0.2
Kemira Oyj	2,832,297	1.8
Nominee registered and foreign shareholders	42,582,397	27.4
Others, total	38,585,717	24.7
Total	155,342,557	100.0

SHAREHOLDING BY NUMBER OF SHARES HELD DECEMBER 31, 2018

Number of shares	Number of shareholders	% of shareholders	Shares total	% of shares and votes
1–100	8,802	25.6	518,102	0.3
101–500	14,075	40.9	3,873,976	2.5
501–1,000	5,383	15.7	4,178,372	2.7
1,001–5,000	5,124	14.9	10,756,232	6.9
5,001–10,000	549	1.6	4,004,999	2.6
10,001–50,000	337	1.0	6,778,024	4.4
50,001–100,000	41	0.1	3,064,082	2.0
100,001–500,000	47	0.1	9,742,569	6.3
500,001–1,000,000	4	0.0	2,509,365	1.6
1,000,001–	10	0.0	109,916,836	70.8
Total	34,378	100.0	155,342,557	100.0

Information for investors

FINANCIAL REPORTS IN 2019

Kemira will publish three financial reports in 2019.

April 26, 2019: Interim report for January–March

July 19, 2019: Half-year financial report for January–June

October 24, 2019: Interim report for January–September

The financial reports and related presentation material are available on Kemira's website at www.kemira.com > Investors. Furthermore, Kemira's stock exchange and press releases, Annual Reports (incl. Corporate Responsibility Report and Financial Statements) and other investor information are also available on the website. On the site, visitors can register to receive releases by e-mail and order the company's Financial Statements. Financial Statements can also be ordered from Kemira Oyj, Group Communications, tel. +358 10 8611.

INVESTOR COMMUNICATIONS

The purpose of Kemira's investor communications is to provide capital markets with open and reliable information on the company and its operating environment in order to give market participants a factual overview of Kemira as an investment. Kemira's investor communications aims to ensure that everyone operating in the markets has equal access to sufficient and correct information concerning the company, and to ensure that information is disclosed consistently and without delay. Kemira Oyj is domiciled in Helsinki, Finland, and the company's shares are listed on Nasdaq Helsinki. Kemira Oyj complies with the laws of Finland and the regulations of Nasdaq Helsinki and Finland's Financial Supervisory Authority.

SILENT PERIOD

Kemira observes a silent period before issuing financial statements or interim reports. During the period, Kemira's representatives do not comment on Kemira's financial statements or interim reports for the ongoing reporting period the specific silent period relates to. The schedule for the silent period and publication of financial information and closed periods is displayed on Kemira's website under Investors > Investor Calendar. Kemira's Investor Relation function is responsible for keeping the calendar up-to-date.

ANNUAL GENERAL MEETING

Kemira's Annual General Meeting will be held on Friday, March 21, 2019 at 1.00 p.m. in Marina Congress Center, Katajanokanlaituri 6, Helsinki, Finland. A shareholder who on the record date of the Annual General Meeting, March 11, 2019, is registered in the company's shareholders' register maintained by Euroclear Finland Ltd, is entitled to attend and participate in the Annual General Meeting. Registration to the Annual General Meeting has begun on February 8, 2019 and registration instructions has been published on that day as a stock exchange release and at Kemira's web site at www.kemira.com > Investors > Corporate Governance > Annual General Meeting > Annual General Meeting 2019. Kemira will release a stock exchange release on the Annual General Meeting's decisions immediately after the meeting.

DIVIDEND DISTRIBUTION

For dividend proposal, please see page 96.

CHANGE OF ADDRESS

Kemira's shareholders are kindly requested to report any change of address to the bank or brokerage firm in which they have their book-entry account. This will also update information in registers, maintained by Euroclear Finland Ltd, which Kemira uses to send mail to its shareholders.

INVESTOR RELATIONS

Olli Turunen, Vice President, Investor Relations

tel. +358 40 552 8907

e-mail: olli.turunen@kemira.com

BASIC SHARE INFORMATION

Listed on: Nasdaq Helsinki Ltd

Trading code: KEMIRA

ISIN code: FI0009004824

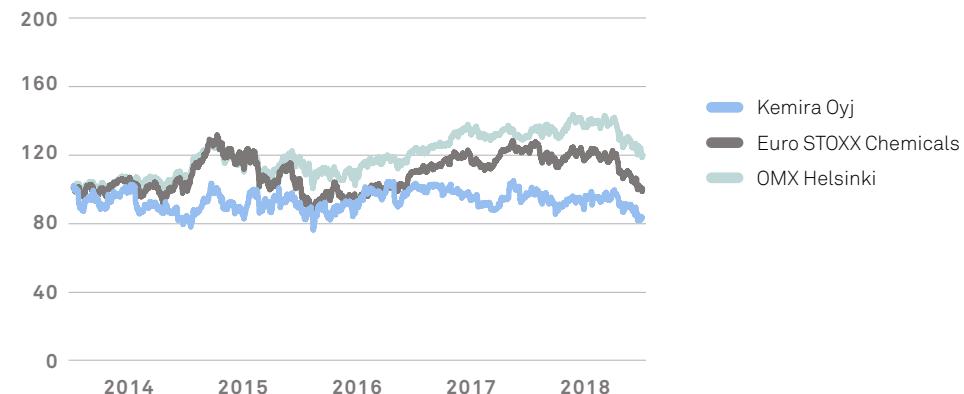
Industry group: Materials

Industry: Chemicals

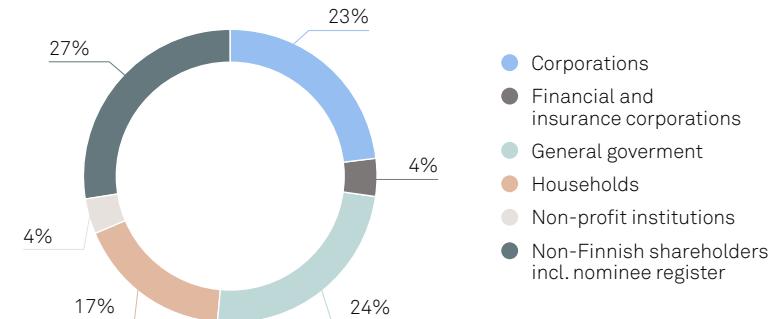
Number of shares on December 31, 2018: 155,342,557

Listing date: November 10, 1994

SHARE PRICE 2014–2018



OWNERSHIP DECEMBER 31, 2018

DIVIDEND PER SHARE, EUR
AND DIVIDEND YIELD, %¹⁾

¹⁾The dividend for 2018 is the Board of Directors' proposal to the Annual General Meeting.

EARNINGS PER SHARE
EUR

KEMIRA is a global chemicals company serving customers in water intensive industries. We provide best suited products and expertise to improve our customers' product quality, process and resource efficiency. Our focus is on pulp & paper, oil & gas and water treatment. In 2018, Kemira had annual revenue of around EUR 2.6 billion and 4,915 employees. Kemira shares are listed on the Nasdaq Helsinki Ltd.

WWW.KEMIRA.COM

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