

**kemira**

Where water  
meets chemistry™

FINANCIAL STATEMENTS

**2016**



## CONTINUED IMPROVEMENT IN PROFITABILITY

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In 2016, we continued to improve our profitability. We have systematically followed our strategic plan, and we are on our way towards our mid-to-long-term financial targets.

Kemira aims for above-the-market revenue growth with operative EBITDA margin of 14–16%. The gearing target is below 60%.

The year 2016 showed that our action plan is delivering continued improvement in profitability despite adverse developments in oil and gas markets. We progressed a step forward towards our profitability target and achieved operative EBITDA margin of 12.8% (2015: 12.1%).

### **Jari Rosendal**

President & CEO

VISIT KEMIRA ANNUAL REPORT  
2016 ONLINE:  
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# FINANCIAL STATEMENTS 2016

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# BOARD OF DIRECTORS' REVIEW 2016

In 2016, Kemira Group's revenue remained at approximately the prior year level and was EUR 2,363.3 million (2,373.1) as growth from acquisitions and increased sales volumes was offset by decline in sales prices and challenging market impacting Oil & Mining segment. Revenue in local currencies, excluding acquisitions and divestments, decreased 2% as volume growth was not able to offset declining sales prices. Operative EBITDA increased 5% to EUR 302.5 million (287.3), mainly due to sales volume growth while lower sales prices were offset by lower variable costs. Operative EBITDA margin improved to 12.8% (12.1%). Earnings per share increased 28% to EUR 0.60 (0.47) due to improved profitability and gain on the sale of electricity assets.

The Board of Directors proposes a cash dividend of EUR 0.53 per share (0.53) to the Annual General Meeting 2017, totaling EUR 81 million (81).

## KEY FIGURES AND RATIOS

EUR million	2016	2015
<b>Revenue</b>	<b>2,363.3</b>	2,373.1
<b>Operative EBITDA</b>	<b>302.5</b>	287.3
Operative EBITDA, %	12.8	12.1
EBITDA	284.2	263.8
EBITDA, %	12.0	11.1
Operative EBIT	170.1	163.1
Operative EBIT, %	7.2	6.9
EBIT	147.0	132.6
EBIT, %	6.2	5.6
Finance costs, net	-19.1	-30.8
Profit before taxes	128.0	102.1
Net profit for the period	97.9	77.2
<b>Earnings per share, EUR</b>	<b>0.60</b>	0.47

EUR million	2016	2015
Capital employed*	1,718.2	1,659.5
Operative ROCE*	9.9	9.8
ROCE*, %	8.6	8.0
<b>Cash flow from operating activities</b>	<b>270.6</b>	247.6
<b>Capital expenditure excl. acquisitions</b>	<b>212.6</b>	181.7
Capital expenditure	210.6	305.1
Cash flow after investing activities	97.8	-53.8
Equity ratio, % at period-end	45	46
Equity per share, EUR	7.68	7.76
Gearing, % at period-end	54	54
Personnel at period-end	4,818	4,685

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

Kemira provides certain financial performance measures (alternative performance measures) on non-GAAP basis. Kemira believes that alternative performance measures, like operative EBITDA and operative EBIT, followed by Kemira management, provide useful and more comparable information of its operative business performance.

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](http://www.kemira.com) > Investors > Financial information.

## FINANCIAL PERFORMANCE, FULL YEAR 2016

Kemira Group's **revenue** remained at approximately the prior year level and was EUR 2,363.3 million (2,373.1) as the growth from acquisitions and sales volumes offset the decline in sales prices and the challenging market impacting our Oil & Mining segment. Currencies had 1% negative impact on revenue. Revenue in local currencies, excluding acquisitions and divestments, decreased 2% as the volume growth was not able to offset the decline in sales prices.

## REVENUE

EUR million	2016	2015	Δ%	Organic growth*, %	Currency impact, %	Acq. & div. impact, %
Pulp & Paper	1,457.3	1,417.3	+3	-1	-1	+4
Oil & Mining	309.5	350.1	-12	-11	-1	0
Municipal & Industrial	596.5	605.7	-2	0	-1	0
<b>Total</b>	<b>2,363.3</b>	<b>2,373.1</b>	<b>0</b>	<b>-2</b>	<b>-1</b>	<b>+3</b>

\* Revenue in local currencies, excluding acquisitions and divestments

Geographically, the revenue split was as follows: EMEA (Europe, Middle East, Africa) 52% (52%), the Americas 38% (40%), and Asia Pacific 10% (8%).

**Operative EBITDA** increased 5% to EUR 302.5 million (287.3), mainly due to sales volume growth, while lower sales prices were offset by lower variable costs. Operative EBITDA margin improved to 12.8% (12.1%).

## VARIANCE ANALYSIS

EUR million	1-12
<b>Operative EBITDA, 2015</b>	<b>287.3</b>
Sales volumes	+12.4
Sales prices	-76.3
Variable costs	+76.6
Fixed costs	-3.8
Currency exchange	-1.9
Others	+8.2
<b>Operative EBITDA, 2016</b>	<b>302.5</b>

## OPERATIVE EBITDA

	2016, EUR million	2015, EUR million	Δ%	2016, %-margin	2015, %-margin
Pulp & Paper	195.3	171.0	+14	13.4	12.1
Oil & Mining	18.4	33.5	-45	5.9	9.6
Municipal & Industrial	88.8	82.8	+7	14.9	13.7
<b>Total</b>	<b>302.5</b>	<b>287.3</b>	<b>+5</b>	<b>12.8</b>	<b>12.1</b>

**EBITDA** increased 8% to EUR 284.2 million (263.8). **Items affecting comparability in EBITDA** were EUR -18.3 million (-23.5) and in both years were mainly related to restructuring programs and integration costs.

**Depreciation, amortization and impairments** increased to EUR 137.2 million (131.2) due to increased investments including EUR 19.2 million (12.6) amortization of purchase price allocation. **Items affecting comparability within depreciation, amortization and impairments** were EUR -4.8 million (-7.0) and were mostly related to write-downs due to restructuring of manufacturing plants.

## ITEMS AFFECTING COMPARABILITY

EUR million	2016	2015
<b>Within EBITDA</b>	<b>-18.3</b>	<b>-23.5</b>
Pulp & Paper	-7.5	-13.9
Oil & Mining	-6.8	-2.7
Municipal & Industrial	-4.0	-6.9
<b>Within depreciation, amortization and impairments</b>	<b>-4.8</b>	<b>-7.0</b>
Pulp & Paper	-2.5	-0.3
Oil & Mining	-1.5	-5.5
Municipal & Industrial	-0.8	-1.2
<b>Total items affecting comparability in EBIT</b>	<b>-23.1</b>	<b>-30.5</b>

**Operative EBIT** increased 4% to EUR 170.1 million (163.1). **Operative EBIT margin** improved to 7.2% (6.9%). **EBIT** increased 11% to EUR 147.0 million (132.6) with a margin of 6.2% (5.6%).

**Finance costs, net** totaled EUR -19.1 million (-30.8) including a EUR 5 million capital gain from the sale of electricity production assets (Pohjolan Voima Oy) recognized in the second quarter of 2016. Changes in fair values of electricity derivatives were EUR 2.2 million (-0.8). The currency exchange differences had EUR -1.1 million (-2.0) impact on the net financial expenses.

**Income taxes** were EUR -30.1 million (-24.9). The change is related to higher profit before taxes.

**Net profit attributable to equity owners of the parent company** increased 29% to EUR 91.8 million (71.0) and earnings per share increased to EUR 0.60 (0.47) driven by lower financing costs and improved profitability.

## FINANCIAL POSITION AND CASH FLOW

Cash flow from the operating activities in 2016 increased to EUR 270.6 million (247.6), mainly due to higher profitability and lower net working capital. Cash flow after investing activities increased to EUR 97.8 million (-53.8). In the

previous year, the acquisition of AkzoNobel's paper chemicals business had a material impact on the figures.

At the end of 2016, interest-bearing liabilities totaled EUR 807 million (794). The average interest rate of the Group's interest-bearing liabilities was 2.1% (2.0%). The duration of the Group's interest-bearing loan portfolio was 26 months (31). On December 31, 2016, cash and cash equivalents totaled EUR 173 million (152). Group's net interest-bearing liabilities were EUR 634 million (642).

Short-term liabilities maturing in the next 12 months amounted to EUR 158 million. The Group has good liquidity and funding options, including an undrawn EUR 400 million revolving credit facility.

At the end of the period, the equity ratio was 45% (46%), while the gearing was 54% (54%). The shareholders' equity was EUR 1,182.9 million (1,193.2).

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 had an equivalent value of approximately EUR 56 million, 68% of which was hedged on an average basis. The U.S. dollar denominated exchange rate risk was approximately EUR 42 million, 51% of which was hedged on an average basis. The Canadian dollar denominated exchange rate risk was approximately EUR 23 million, 64% of which was hedged on an average basis. In addition, Kemira is exposed to smaller transaction risks in relation to the Chinese renminbi, Norwegian krona, and Brazilian real with the total annual exposure in these currencies of approximately EUR 49 million. 49% of NOK's exposure was hedged on an average basis.

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 euro. The most significant translation exposure derives from the U.S. dollar, the Swedish krona, the Canadian dollar, the Chinese renminbi, and the Brazilian real. Strengthening of these currencies against the euro would increase Kemira's revenue and EBITDA through a translation effect. In 2016, currency rates had an EUR 1.9 million negative impact on the operative EBITDA.

## CAPITAL EXPENDITURE

In 2016, capital expenditure decreased to EUR 210.6 million (305.1) including the impact of acquisitions. Capital expenditure, excluding the impact of acquisitions, increased to EUR 212.6 million (181.7) and can be broken down as follows: expansion capex 45% (43%), improvement capex 27% (29%), and maintenance capex 28% (28%). The largest investments during the year were chlorate capacity expansions in Finland and Brazil as well as polymer capacity expansions in the UK and Italy.

## RESEARCH AND DEVELOPMENT

Research and Development expenses totaled EUR 32.1 million (31.9) in 2016, representing 1.4% (1.3%) of the Group's revenue.

Kemira's Research and Development is a critical enabler of the growth and further differentiation. New product launches contribute to the efficiency and sustainability of the customer processes and to the 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.

The Group's target is to increase the revenue from new products and products for new applications. In 2016, the share of innovation revenue (revenue from new products or from products to new applications launched within the past five years) of the Group's revenue increased to 9% (8%).


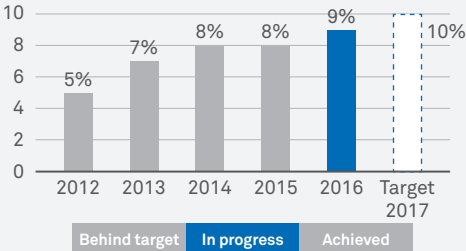
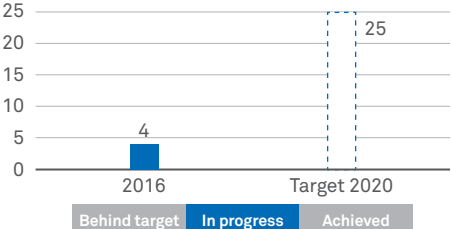

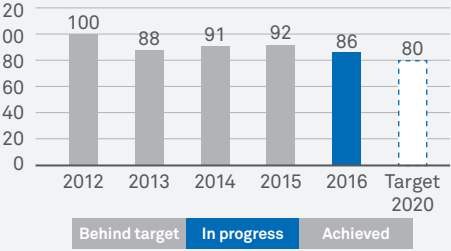
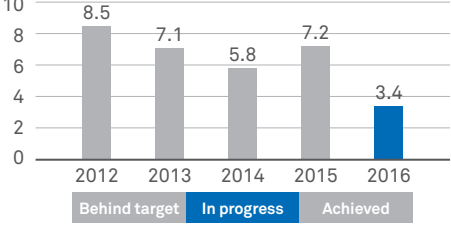

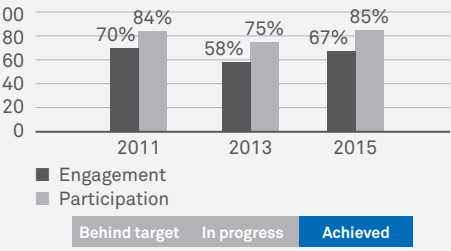
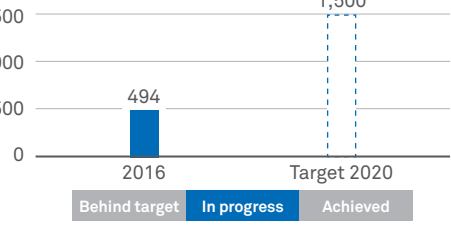
At the end of 2016, Kemira had 348 (345) patent families, 1,236 (1,034) granted patents, and 860 (819) pending applications. A patent family covers one invention and has a number of patents or applications in various countries.

## HUMAN RESOURCES

At the end of the period, Kemira Group had 4,818 employees (December 31, 2015: 4,685). Kemira employed 796 people in Finland (785), 1,813 people elsewhere in EMEA (1,786) 1,558 in the Americas (1,578), and 651 in APAC (536).

## CORPORATE RESPONSIBILITY

In 2017, Kemira will publish its Corporate Responsibility Report in connection with its Annual Report. The corporate responsibility report 2016 will be verified by a third party and prepared in accordance with the GRI G4 (Global Reporting Initiative) framework. It deals with economic, environmental and social aspects defined material for Kemira, and reflects on Kemira's performance in relation to the sustainability targets approved by Kemira's Management Board. The performance targets are displayed in the following table.

FOCUS AREA	TOPIC, KPI, TARGET VALUE	COMMENTS	STATUS
 Sustainable products & solutions	<b>INNOVATION SALES</b> <b>Share of innovation revenue in total revenue, %</b> → 10% by the end of 2017 → KPI reported quarterly	Due to delays in commercialization of NPD projects the innovation sales target was slightly behind the 10% target. However, a record number of new products and new treatment concepts were launched in 2016 (14 versus 3 in 2015). Innovation sales target 10% was extended by one year until 2017.	
	<b>SUPPLIER MANAGEMENT</b> <b>Number of onsite sustainability audits for highest risk suppliers</b> (with lowest sustainability assessment score) <sup>1</sup> → 5 suppliers audited every year during 2016–2020, average → KPI reported annually	The new supplier audit process was initiated, with 4 onsite audits conducted by an external service provider.	
 Responsible manufacturing	<b>CLIMATE CHANGE</b> <b>Carbon index</b> → Kemira Carbon Index ≤ 80 by end of 2020 (2012 = 100) → KPI reported annually	The carbon index <sup>2</sup> improved as a result of purchased electricity sourced from less carbon-intensive sources. This improvement outweighed the negative effect of the sale of part of Kemira's holding in Pohjola Voima Oy, which entitled to nuclear power production capacity in Finland.	
	<b>OCCUPATIONAL HEALTH AND SAFETY</b> <b>Total Recordable Injury Frequency (TRIF)</b> (per million hours, Kemira + contractor, 1 year rolling average) → Achieve zero injuries (TRIF 2.0 by 2020) → KPI reported quarterly	Safety performance significantly improved due to our time and efforts invested on management commitment, employee engagement and higher visibility of safety related matters in our internal communication.	
 Responsibility towards the employees	<b>EMPLOYEE ENGAGEMENT</b> <b>Employee engagement index based on Voices@Kemira biennial survey</b> → The index at or above the external industry norm <b>Participation rate in Voices@Kemira</b> → 75% or above → KPI reported biennially	Next biennial Voices@Kemira survey is being planned for 2017.	
	<b>LEADERSHIP DEVELOPMENT</b> <b>Leadership development activities provided, average</b> → Two (2) leadership development activities per people manager position during 2016–2020 <sup>3</sup> → KPI reported annually	The amount of leadership development activities during 2016 was very high (494), and we are significantly ahead of our target of having 1500 development activities <sup>4</sup> during 2016–2020.	

1 117 sustainability assessments have been performed for strategic, critical and large spend suppliers.

2 Carbon index value in 2015 was corrected from 91 to 92 due to more accurate information from few sites.

3 The cumulative amount of leadership development required to reach two (2) leadership development activities per people manager position during 2016–2020 equals 1,500 leadership activities (when number of people manager positions is 650–850).

4 Development activities include job rotations, coaching and mentoring, and development programs.

## SEGMENTS

## PULP &amp; 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 the customer needs, ensuring the leading portfolio of products and services for paper wet-end, focusing on packaging and board, as well as tissue. Pulp & Paper leverages its strong application portfolio in North America and EMEA and builds a strong position in the emerging Asian and South American markets.

EUR million	2016	2015
<b>Revenue</b>	<b>1,457.3</b>	1,417.3
<b>Operative EBITDA</b>	<b>195.3</b>	171.0
Operative EBITDA, %	13.4	12.1
EBITDA	187.8	157.1
EBITDA, %	12.9	11.1
Operative EBIT	111.6	96.8
Operative EBIT, %	7.7	6.8
EBIT	101.6	82.6
EBIT, %	7.0	5.8
Capital employed*	1,111.8	1,068.6
Operative ROCE*, %	10.0	9.1
ROCE*, %	9.1	7.7
<b>Capital expenditure excl. M&amp;A</b>	<b>127.1</b>	118.9
Capital expenditure incl. M&A	125.1	240.1
<b>Cash flow after investing activities</b>	<b>105.7</b>	-63.2

\* 12-month rolling average

Pulp & Paper segment's **revenue** increased 3% to EUR 1,457.3 million (1,417.3). Revenue in local currencies, excluding divestments and acquisitions, decreased 1% due to decline in sales prices, despite the sales volume growth. Currency exchange rates had a -1% impact and acquisitions a +4% impact on revenue.

In **EMEA**, revenue increased 1% to EUR 760.2 million (753.0), mainly due to the acquisition impact. Stable demand for sodium chlorate and process chemicals contributed to the sales volume growth.

In **the Americas**, revenue increased 4% to EUR 519.1 million (501.5). Growth was supported by acquisitions, as well as the new bleaching chemical site in Brazil.

In **APAC**, revenue increased 9% to EUR 178.0 million (162.8), mainly due to acquisitions and sales volume growth. Competitive pressure increased in sizing chemicals during the second half impacting the region's revenue.

**Operative EBITDA** increased 14% to EUR 195.3 million (171.0), mainly due to sales volume growth, gross margin improvement and acquisitions. Lower fixed costs also contributed positively. Operative EBITDA margin improved to 13.4% (12.1%). **EBITDA** increased 20% to EUR 187.8 million (157.1) with a margin of 12.9% (11.1%).

## OIL &amp; MINING

Oil & Mining provides a unique combination of innovative chemicals and application knowledge that improves process efficiency and yield in oil, gas and metals recovery. The segment uses its in-depth understanding of extraction processes to tailor solutions for water management and re-use. Expanding from its position in North America and EMEA, Oil & Mining continues to build a strong base for growth in South America, Middle East, and Africa.

EUR million	2016	2015
<b>Revenue</b>	<b>309.5</b>	350.1
<b>Operative EBITDA</b>	<b>18.4</b>	33.5
Operative EBITDA, %	5.9	9.6
EBITDA	11.6	30.8
EBITDA, %	3.7	8.8
Operative EBIT	-3.8	11.1
Operative EBIT, %	-1.2	3.2
EBIT	-12.1	2.9
EBIT, %	-3.9	0.8
Capital employed*	274.5	271.4
Operative ROCE*, %	-1.4	4.1
ROCE*, %	-4.4	1.1
<b>Capital expenditure excl. M&amp;A</b>	<b>38.0</b>	28.5
Capital expenditure incl. M&A	38.0	30.7
<b>Cash flow after investing activities</b>	<b>-19.9</b>	10.7

\* 12-month rolling average

Oil & Mining segment's **revenue** decreased 12% to EUR 309.5 million (350.1). Revenue in local currencies, excluding acquisitions and divestments, decreased 11% mainly as a result of lower sales volumes and prices in the U.S. shale oil and gas fracking activity. Currency exchange rates had an impact of -1%.

In **the Americas**, revenue decreased 22% to EUR 191.5 million (245.9), mainly due to lower activity in the shale oil and gas market. Currency exchange had a negative impact on revenue in the region.

In **EMEA**, revenue increased 13% to EUR 118.0 million (104.3) as a result of new product sales in the field of Chemical Enhanced Oil Recovery. The region started polyacrylamide deliveries to India in the second quarter of 2015. However, the contract was not renewed in the beginning of 2017.

**Operative EBITDA** decreased 45% to EUR 18.4 million (33.5) as a result of the lower revenue. Operative EBITDA margin was 5.9% (9.6%). **EBITDA** decreased 62% to EUR 11.6 million (30.8) with a margin of 3.7% (8.8%).



**MUNICIPAL & INDUSTRIAL**

*Municipal & Industrial is a leading water chemicals supplier for raw and wastewater applications in EMEA and North America, and aims to capture selected growth opportunities in emerging markets. The segment enables its municipal and industrial customers to improve their water treatment efficiency by supplying them with competitive, high-performing products and value adding application support.*

EUR million	2016	2015
<b>Revenue</b>	<b>596.5</b>	605.7
<b>Operative EBITDA</b>	<b>88.8</b>	82.8
Operative EBITDA, %	14.9	13.7
EBITDA	84.8	75.9
EBITDA, %	14.2	12.5
Operative EBIT	62.3	55.2
Operative EBIT, %	10.4	9.1
EBIT	57.5	47.1
EBIT, %	9.6	7.8
Capital employed*	330.7	320.2
Operative ROCE*, %	18.8	17.2
ROCE*, %	17.4	14.7
<b>Capital expenditure excl. M&amp;A</b>	<b>47.5</b>	34.2
Capital expenditure incl. M&A	47.5	34.2
<b>Cash flow after investing activities</b>	<b>55.6</b>	38.2

\* 12-month rolling average

Municipal & Industrial segment's **revenue** decreased 2% to EUR 596.5 million (605.7). Revenue in local currencies remained at the prior year level as a combination of the higher sales volumes and lower sales prices. Currency exchange rates had an impact of -1%.

In **EMEA**, revenue decreased 1% to EUR 389.6 million (393.2), mainly due to the weak British pound. Organic growth was positive thanks to the higher sales volumes of coagulants and polymers.

In **the Americas**, revenue decreased 2% to EUR 184.5 million (187.7), mainly due to lower sales prices and negative currency exchange rates, while sales volume growth continued.

In **APAC**, revenue decreased by 10% to EUR 22.4 million (24.9), mainly due to slowdown in demand of our industrial customers in China. Currencies had a negative impact on revenue. The region has also increased the focus on product lines with better profitability.

**Operative EBITDA** increased 7% to EUR 88.8 million (82.8), mostly as a result of improved gross margin and higher sales volumes. Operative EBITDA margin improved to 14.9% (13.7%). **EBITDA** increased 12% to EUR 84.8 million (75.9) with a margin of 14.2% (12.5%).

**PARENT COMPANY'S FINANCIAL PERFORMANCE**

Kemira Oyj's revenue increased to EUR 1,364.2 million (1,347.0) in 2016. EBITDA was EUR 77.0 million (109.2). EBITDA decreased, mainly due to an increase in inter-company service costs. The parent company's financing income and expenses were EUR 182.2 million (104.8). Financing income and expenses increased, mainly due to dividends from Group companies. Net profit totaled EUR 215.8 million (165.2). Capital expenditure totaled EUR 17.7 million (60.9), excluding investments in subsidiaries.

**KEMIRA OYJ'S SHARES AND SHAREHOLDERS**

On December 31, 2016, 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 32,622 registered shareholders (32,601). Non-Finnish shareholders held 25.1% of the shares (21.4%) including nominee registered holdings. Households owned 16.0% of the shares (16.1%). Kemira held 2,975,327 treasury shares (3,280,602) representing 1.9% (2.1%) of all company shares.

Kemira Oyj's share price increased 11% since the beginning of the year and closed at EUR 12.13 on the Nasdaq Helsinki at the end of December 2016 (10.88). Shares registered a high of EUR 12.55 and a low of EUR 8.92 in January–December 2016. The volume-weighted average share price was EUR 10.84. The company's market capitalization, excluding treasury shares, was EUR 1,848 million at the end of December 2016 (1,654).

In January–December 2016, Kemira Oyj's share trading volume on Nasdaq Helsinki was 65 million shares (75). The average daily trading volume was 256,233 (298,313) shares. Source: Nasdaq. The total volume of Kemira Oyj's share trading in January–December 2016 was 95 million (112), 32% (33%) of which was executed on other trading platforms (BATS, Chi-X, Turquoise). Source: Kemira.com.

## OWNERSHIP ON DECEMBER 31, 2016

Corporations	40.1%
Financial and insurance corporations	3.6%
General government	11.2%
Households	16.0%
Non-profit institutions	4.0%
Non-Finnish shareholders incl. nominee registered	25.1%

## SHAREHOLDING BY NUMBER OF SHARES HELD DECEMBER 31, 2016

Number of shares	Number of shareholders	% of shareholders	Shares total	% of shares and votes
1–100	7,598	23.3	463,931	0.3
101–500	13,998	42.9	3,819,909	2.5
501–1,000	5,135	15.8	3,923,221	2.5
1,001–5,000	4,934	15.1	10,247,683	6.6
5,001–10,000	500	1.5	3,612,609	2.3
10,001–50,000	350	1.1	6,643,382	4.3
50,001–100,000	43	0.1	3,291,981	2.1
100,001–500,000	49	0.2	10,583,444	6.8
500,001–1,000,000	3	0.0	2,118,813	1.4
1,000,001–	12	0.0	110,637,584	71.2
<b>Total</b>	<b>32,622</b>	<b>100.0</b>	<b>155,342,557</b>	<b>100.0</b>

## LARGEST SHAREHOLDERS DECEMBER 31, 2016

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	8,164,836	5.3
4 Ilmarinen Mutual Pension Insurance Company	4,800,451	3.1
5 Nordea funds	1,783,056	1.2
6 Skagen Vekst Verdipapierfond	1,350,000	0.9
7 The State Pension Fund	1,190,000	0.8
8 Veritas Pension Insurance Company Ltd.	1,131,112	0.7
9 Etola Erkki Olavi	1,000,000	0.6
10 Etera Mutual Pension Insurance Company	609,331	0.4
11 Aktia Funds	470,000	0.3
12 LähiTapiola Funds	465,829	0.3
13 Alfred Berg Funds	455,325	0.3
14 Pohjola Funds Managment	428,594	0.3
15 OP-Henkivakuutus Ltd.	413,689	0.3
Kemira Oyj	2,975,327	1.9
Nominee registered and foreign shareholders	38,946,080	25.1
Others, total	36,984,623	23.6
<b>Total</b>	<b>155,342,557</b>	<b>100.0</b>

## PERFORMANCE SHARE PLAN FOR MANAGEMENT AND KEY EMPLOYEES

On December 15, 2014, the Board of Directors of Kemira Oyj decided to establish a long-term share-based incentive plan ("Performance Share Plan") directed at a group of key employees in Kemira. The aim of the plan is to combine the objectives of the shareholders and the persons participating in the plan in order to increase the value of Kemira, to commit the participants to Kemira, and to offer them a competitive reward plan based on earning of Kemira's shares.

The Performance Share Plan includes three performance periods: calendar years 2015, 2016, and 2017. The Board of Directors of Kemira decides on the plan's performance criteria and on the required performance levels for each criterion at the beginning of each performance period. The potential reward is to be paid partly in Kemira's shares and partly in cash. The cash portion covers the taxes and tax-related costs arising from the reward to the participant. As a rule, no reward will be paid if the participant's employment or service ends before the disbursement of the reward. 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 the participant's employment or service ends during the restriction period, he or she must, as a rule, gratuitously return the shares given as a reward. For details of the plan, see Kemira remuneration statement.

## EARNINGS PERIOD 2016

The criteria for the plan for the earning period 2016 was based on the Group's revenue and operative EBITDA margin. The Performance Share Plan 2016 was directed at 85 people. The maximum rewards for 2016 would have corresponded to the value of an approximate total of 504,200 Kemira Oyj's shares and additionally, the cash portion intended to cover taxes and tax-related costs. Group's revenue did not reach the Performance Share Plan's threshold level for 2016, and thus there will be no reward payout for the earnings period 2016.

## AGM DECISIONS

### ANNUAL GENERAL MEETING

Kemira Oyj's Annual General Meeting held on March 21, 2016 confirmed the dividend of EUR 0.53. The dividend was paid out on April 6, 2016.

The AGM 2016 authorized the Board of Directors to decide on the repurchase of a maximum of 4,800,000 company's own shares ("Share Repurchase Authorization"). The Share Repurchase Authorization is valid until the end of the next Annual General Meeting. The Board has not exercised its authority by December 31, 2016.

The AGM 2016 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, 2017. The authorization from the AGM 2016 has been used in connection with the remuneration of the Board of Directors and the authorization from the AGM 2015 has been used for the remuneration of key employees in 2016.

The AGM elected Deloitte & Touche Oy to serve as the company's auditor, with Jukka Vattulainen, Authorized Public Accountant, acting as the principal auditor.

## 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, 2016, the Annual General Meeting elected seven members to the Board of Directors. The Annual General Meeting re-elected Wolfgang Büchele, Winnie Fok, Juha Laaksonen, Timo Lappalainen, Jari Paasikivi, and Kerttu Tuomas, and elected Kaisa Hietala as a new member to 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 2016, Kemira's Board of Directors met 11 times with a 98.7% 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 Juha Laaksonen and Kerttu Tuomas as members. In 2016, the Personnel and Remuneration Committee met 4 times with a 100% attendance rate. The Audit Committee is chaired by Juha Laaksonen and has Kaisa Hietala, Timo Lappalainen and Jari Paasikivi as members. In 2016, the Audit Committee met 5 times with a 100% attendance rate.

## CHANGES TO COMPANY MANAGEMENT

On January 20, 2017, Michael Löffelmann, EVP, Projects & Manufacturing Technology, left Kemira to take up a leadership position in another company. Esa-Matti Puputti, EVP Operational Excellence, acts as the interim head of Projects & Manufacturing Technology.

## STRUCTURE

There have been no acquisitions or divestments during the year which would have impacted the company's structure.

## SHORT-TERM RISKS AND UNCERTAINTIES

Effective compliance with and systematic execution of Kemira's risk management policy and principles proactively

protect and help Kemira to reach the desired aggregate risk level and ensure the continuity of Kemira's operations.

#### 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 could have a negative impact on the 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 the customers' demands, for instance, towards water treatment technologies with lower chemical consumption, and this may have a negative impact, especially on the Municipal & Industrial segment's ability to compete. On the other hand, the customer's possible capacity expansions could increase the chemical consumption and challenge Kemira's current production capacity. Failure from Kemira's side to be prepared to meet and manage these changed expectations could result in a loss of the market share.

In order to manage and mitigate this risk, Kemira systematically monitors leading indicators 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 possible increase in demands. Kemira's geographic and customer industry diversity also provides partial protection against the risk of changed customer demands.

#### 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. Although laws and regulations can generally be considered as an opportunity for Kemira, certain legislative initiatives supporting, for instance, the use of biodegradable raw materials or biological water treatment, limiting the use of aluminum or phosphates, or relating to recovery or recycling of phosphorus, may also have a negative impact on Kemira's business. Significant changes, for instance, in chemical, environmental or transportation laws and regulations may impact on 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 effective 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 the substances of potential concern and to create management plans for them. Plans would consider, 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 the strategic decision making. Kemira takes active role in regulatory discussions whenever justified from the perspective of the industry or business.

#### 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 the Kemira's key business segments may use aggressive means as a competitive tool, which could affect Kemira's financial results. A major competitor or customer consolidations could change the market dynamics and possibly also change Kemira's market position.

Kemira is seeking growth in segments that are less familiar and where new competitive situations will 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.

#### ECONOMIC CONDITIONS AND GEOPOLITICAL CHANGES

Uncertainties in the global economic and geopolitical development are considered to include direct or indirect risks, such as a continuation of low-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 the countries which are important to Kemira, could cause business interference or other adverse consequences.

Weak economic development may result in the customer closures or consolidations diminishing the 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 this risk. Kemira continuously monitors geopolitical movements and

changes, and aims to adjust its business accordingly, if reasonable.

#### HAZARD RISKS

Kemira's production activities involve many hazard risks, such as fires and explosions, machinery breakdowns, natural catastrophes, environmental incidents, and possible resulting liabilities, as well as the employee health and safety risks. These risk events could derive from several factors, including 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, 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.

#### 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. Both 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 launch 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 business segments. Kemira has further improved the 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 (launched into the market within the last 5 years).

#### ACQUISITIONS

Acquisitions can be considered an important driver in the accomplishment of corporate goals and strategies.

Consolidations are driven by, for instance, chemical manufacturers' interests in realizing synergies and establishing footholds in the new markets.

Kemira's market position may deteriorate if it is unable to find and take advantage of the future acquisition opportunities. Inorganic growth through acquisitions also

involves risks, such as the ability to successfully integrate acquired operations and personnel. If realized, this risk may result in a shortage in the set financial 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 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.

#### PRICE AND AVAILABILITY OF RAW MATERIALS AND COMMODITIES

Continuous improvement of profitability is a crucial part of the Kemira's strategy. Significant and sudden increase in the cost of raw material, commodity, or logistics could place Kemira's profitability targets at risk if Kemira will 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 increase raw material prices. Also, material demand changes in industries that are the main users of certain raw materials may lead to significant raw material price fluctuations. Poor availability of certain raw materials may affect Kemira's production 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.

#### SUPPLIERS

The continuity of Kemira's business operations is dependent on an accurate and a good-quality supply of the 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 the 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.

#### TALENT MANAGEMENT

To secure competitiveness and growth, as well as to improve operative 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 the 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 <http://www.kemira.com>. Financial risks are also described in the Notes to the Financial Statements.

#### EVENTS AFTER THE REVIEW PERIOD

##### PROPOSALS OF THE NOMINATION BOARD TO THE ANNUAL GENERAL MEETING 2017

The Nomination Board proposes to the Annual General Meeting of Kemira Oyj that six members (previously seven) be elected to the Board of Directors and that the present members Wolfgang Büchele, Kaisa Hietala, Timo Lappalainen, Jari Paasikivi and Kerttu Tuomas be re-elected as members of the Board of Directors. The Nomination Board proposes that Ms. Shirley Cunningham be elected as new member of the Board of Directors. In addition, the Nomination Board proposes 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. Winnie Fok and Juha Laaksonen have advised the Nomination Board, that they are not available as candidates to continue in Kemira's Board of Directors.

Ms. Shirley Cunningham, Executive Vice President and Chief Operating Officer, Ag Business and Enterprise Strategy, is a member of the Senior Leadership Team at CHS Inc., USA. She currently serves on the Board of Directors of Ardent Mills, LLC, Ventura Foods, LLC and TEMCO, LLC. Ms. Cunningham holds a master's degree in business administration from Washington University.

The Nomination Board proposes to the Annual General Meeting that the remuneration paid to the members of the Board of Directors will remain unchanged. The remuneration paid to the members of the Board of Directors would thus be as follows. The annual fees: for the Chairman EUR 80,000 per year, for the Vice Chairman and the Chairman of

the Audit Committee EUR 49,000 per year and for the other members EUR 39,000 per year. A fee payable for each meeting of the Board of Directors and the Board Committees would be for the members residing in Finland EUR 600, for the members residing in the 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, 2017. The meeting fees are proposed to be paid in cash.

The Nomination Board has consisted of the following representatives: Pekka Paasikivi, Chairman of the Board of Oras Invest Oy as the Chairman of the Nomination Board; Kari Järvinen, Managing Director of Solidium Oy; Reima Rytsölä, Executive Vice-President, Varma Mutual Pension Insurance Company and Timo Ritakallio, President and CEO, 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.

##### FIRE AT A SUPPLIER'S SITE IN PORI, FINLAND

On January 30, 2017 an extensive fire occurred at Huntsman Pigments' plant in Pori, Finland. Kemira's facilities at the site were not directly exposed and there were no personal injuries. Huntsman Pigments is a key raw material supplier for Kemira's coagulant production and also purchases chemicals and energy from Kemira. Kemira is taking actions to mitigate the disruption of the raw material supply. The length of the stoppage at the Huntsman Pigments' site and the possible financial impact to Kemira is currently unknown.

#### DIVIDEND AND DIVIDEND POLICY

On December 31, 2016, Kemira Oyj's distributable funds totaled EUR 822,049,454 of which net profit for the period was EUR 215,781,981. 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 24, 2017 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, 2016.

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

## MID- AND LONG-TERM FINANCIAL TARGETS AND OUTLOOK FOR 2017

Kemira updated its mid- to long-term financial targets on September 14, 2016, emphasizing its continued goal of above-the-market revenue growth with improving profitability. The company has progressed well towards the previous targets of EUR 2.7 billion in revenue and operative EBITDA margin of 15%, despite the weak developments in oil & gas markets, which started in 2015.

Kemira aims at above-the-market revenue growth with operative EBITDA margin of 14–16%. The gearing target is below 60%.

Main drivers for Kemira's profitable growth are:

- In Pulp & Paper: above-the-market growth arising from the new Total Chemistry Management (TCM) contracts and bleaching chemical capacity additions, as well as synergy capture from acquisitions
- In Oil & Mining: profitable growth in newer applications such as Chemical Enhanced Oil Recovery (CEOR) and oil sands, as well as potential oil market recovery
- In Municipal & Industrial: increasing revenue from Advanced Water Treatment (AWT) applications, as well as continuing growth in current business driven by selective geographic expansion
- Group-wide operational efficiencies with new BOOST program.

Kemira has launched an operational excellence program 'BOOST' to further improve its efficiency. Estimated annual savings run-rate from the program are EUR 20–30 million in 2–3 years. BOOST will focus on the supply chain process optimization and improved asset utilization.

The integration of the acquired AkzoNobel's paper chemicals business has progressed better than expected and Kemira has raised the synergy target from EUR 15 million to EUR 20 million.

In addition, Kemira continues to evaluate acquisition opportunities to enhance profitable growth.

### OUTLOOK FOR 2017

Kemira expects its operative EBITDA to increase from the prior year (2016: EUR 302.5 million).

Helsinki, February 7, 2017

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) on non-GAAP basis. Kemira believes that alternative performance measures, like operative EBITDA and operative EBIT, followed by Kemira management, provide useful and more comparable information of its operative business performance. 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 from the Definitions of the key figures in this financial statements, as well as at [www.kemira.com](http://www.kemira.com) >Investors > Financial information.

	2016	2015	2014	2013	2012
<b>INCOME STATEMENT AND PROFITABILITY</b>					
Revenue, EUR million	2,363	2,373	2,137	2,229	2,241
Operative EBITDA, EUR million	303	287	253	252	249
Operative EBITDA, %	12.8	12.1	11.8	11.3	11.1
EBITDA, EUR million <sup>1) 2)</sup>	284	264	253	142	180
EBITDA, %	12.0	11.1	11.8	6.4	8.0
Operative EBIT, EUR million	170	163	158	164	156
Operative EBIT, %	7.2	6.9	7.4	7.4	6.9
Operating profit (EBIT), EUR million <sup>1) 2)</sup>	147	133	153	43	33
Operating profit (EBIT), %	6.2	5.6	7.1	1.9	1.5
Share of the results of associates, EUR million <sup>1)</sup>	0	0	0	-1	11
Finance costs (net), EUR million	19	31	31	39	16
% of revenue	0.8	1.3	1.4	1.7	0.7
Interest cover <sup>1) 2)</sup>	15	9	8	4	11
Profit before tax, EUR million <sup>2)</sup>	128	102	122	3	29
% of revenue	5.4	4.3	5.7	0.1	1.3
Net profit for the period (attributable to equity owners of the parent), EUR million <sup>2)</sup>	92	71	90	-32	18
Return on investment (ROI), % <sup>2) 3)</sup>	7	7	8	1	3
Return on equity (ROE), % <sup>2)</sup>	8	6	8	-3	1
Capital employed, EUR million <sup>2)</sup>	1,718	1,660	1,428	1,496	1,768
Operative return on capital employed (ROCE), % <sup>2)</sup>	9.9	9.8	11.1	10.9	9.4
Return on capital employed (ROCE), % <sup>2)</sup>	8.6	8.0	10.7	2.8	2.5
Research and development expenses, EUR million	32	32	28	32	42
% of revenue	1.4	1.3	1.3	1.4	1.6
<b>CASH FLOW</b>					
Net cash generated from operating activities, EUR million	271	248	74	200	176
Disposals of subsidiaries and property, plant and equipment and intangible assets, EUR million	37	3	146	193	30
Capital expenditure, EUR million	211	305	145	198	134
% of revenue	9	13	7	9	6
Capital expenditure excl. acquisitions, EUR million	213	182	146	139	134
% of revenue	9	8	7	6	6
Cash flow after investing activities, EUR million	98	-54	75	196	72
Cash flow return on capital invested (CFROI), % <sup>2)</sup>	12	12	4	10	8

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

2) Comparative figures for 2012 have been restated according to the revised IAS 19 'Employee Benefits'.

3) The financial figure for 2013 has been restated. Finance costs relating to a write-down of the associate company of Sachtleben have been decreased by EUR 23 million.

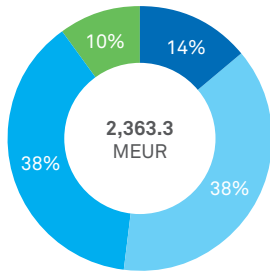
4) Number of shares outstanding, excluding the number of treasury shares.

5) The dividend for 2016 is the Board of Directors' proposal to the Annual General Meeting.



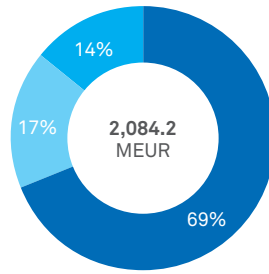
	2016	2015	2014	2013	2012
<b>BALANCE SHEET AND SOLVENCY</b>					
Non-current assets, EUR million	1,822	1,825	1,613	1,501	1,682
Shareholders' equity (Equity attributable to equity owners of the parent), EUR million <sup>2)</sup>	1,170	1,180	1,151	1,113	1,247
Total equity including non-controlling interests, EUR million <sup>2)</sup>	1,183	1,193	1,163	1,126	1,261
Total liabilities, EUR million	1,438	1,402	1,132	1,086	1,202
Total assets, EUR million <sup>2)</sup>	2,621	2,595	2,296	2,211	2,462
Net working capital	195	218	222	198	230
Interest-bearing net liabilities, EUR million	634	642	486	456	532
Equity ratio, % <sup>2)</sup>	45	46	51	51	51
Gearing, % <sup>2)</sup>	54	54	42	41	42
Interest-bearing net liabilities per EBITDA <sup>2)</sup>	2.2	2.4	1.9	3.2	3.0
<b>PERSONNEL</b>					
Personnel at period-end	4,818	4,685	4,248	4,453	4,857
Personnel (average)	4,802	4,559	4,285	4,632	5,043
of whom in Finland	807	793	823	1,027	1,173
<b>EXCHANGE RATES</b>					
Key exchange rates at 31 Dec					
USD	1.054	1.089	1.214	1.379	1.319
CAD	1.419	1.512	1.406	1.467	1.314
SEK	9.553	9.190	9.393	8.859	8.582
CNY	7.320	7.061	7.536	8.349	8.221
BRL	3.431	4.312	3.221	3.258	2.704
<b>PER SHARE FIGURES</b>					
Earnings per share (EPS), basic and diluted, EUR <sup>2) 4)</sup>	0.60	0.47	0.59	-0.21	0.12
Net cash generated from operating activities per share, EUR <sup>4)</sup>	1.78	1.63	0.49	1.32	1.16
Dividend per share, EUR <sup>4) 5)</sup>	0.53	0.53	0.53	0.53	0.53
Dividend payout ratio, % <sup>2) 4) 5)</sup>	88.0	113.5	89.6	-255.0	455.1
Dividend yield, % <sup>4) 5)</sup>	4.4	4.9	5.4	4.4	4.5
Equity per share, EUR <sup>2) 4)</sup>	7.68	7.76	7.57	7.32	8.20
Price per earnings per share (P / E ratio) <sup>2) 4)</sup>	20.14	23.29	16.72	-58.50	101.51
Price per equity per share <sup>2) 4)</sup>	1.58	1.40	1.31	1.66	1.44
Price per cash flow from operations per share <sup>4)</sup>	6.83	6.68	20.24	9.23	10.18
Dividend paid, EUR million <sup>5)</sup>	80.8	80.7	80.6	80.6	80.6
<b>SHARE PRICE AND TRADING</b>					
Share price, year high, EUR	12.55	12.27	12.27	13.02	12.00
Share price, year low, EUR	8.92	9.14	9.11	10.55	8.00
Share price, year average, EUR	10.96	10.86	10.87	11.76	10.10
Share price at 31 Dec, EUR	12.13	10.88	9.89	12.16	11.81
Number of shares traded (1,000)	64,827	74,877	75,018	64,937	88,346
% on number of shares	42	49	49	42	57
Market capitalization at 31 Dec, EUR million <sup>4)</sup>	1,848.2	1,654.4	1,503.8	1,848.8	1,795.6
<b>NUMBER OF SHARES AND SHARE CAPITAL</b>					
Average number of shares, basic (1,000) <sup>4)</sup>	152,314	152,059	152,048	152,039	152,037
Average number of shares, diluted (1,000) <sup>4)</sup>	152,526	152,395	152,203	152,179	152,173
Number of shares at 31 Dec, basic (1,000) <sup>4)</sup>	152,367	152,062	152,051	152,042	152,041
Number of shares at 31 Dec, diluted (1,000) <sup>4)</sup>	152,619	152,544	152,373	152,091	152,090
Increase in number of shares (1,000)	305	11	9	1	11
Share capital, EUR million	221.8	221.8	221.8	221.8	221.8

REVENUE BY GEOGRAPHICAL AREAS



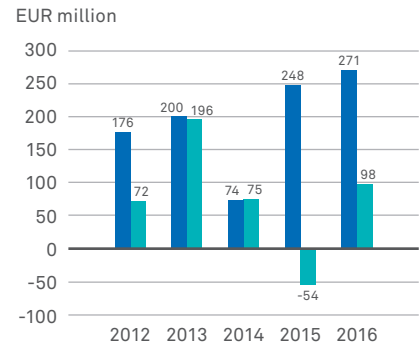
- Finland, domicile of the parent company
- Other Europe, Middle-East and Africa
- Americas
- Asia Pacific

OPERATING EXPENSES



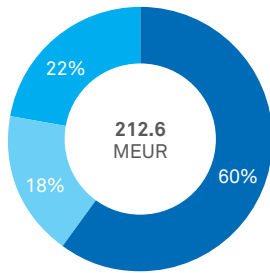
- Material and services
- Employee benefit expenses
- Other operating expenses

CASH FLOW

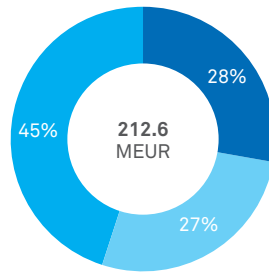


- Net cash generated from operating activities
- Cash flow after investing activities

CAPITAL EXPENDITURE BY SEGMENT EXCLUDING ACQUISITIONS

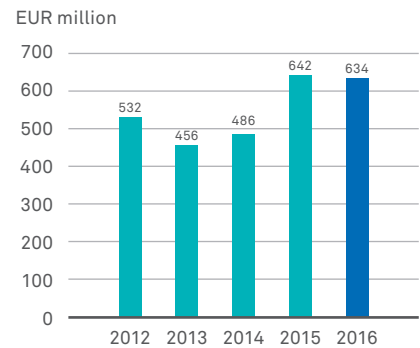


- Pulp & Paper
- Oil & Mining
- Municipal & Industrial

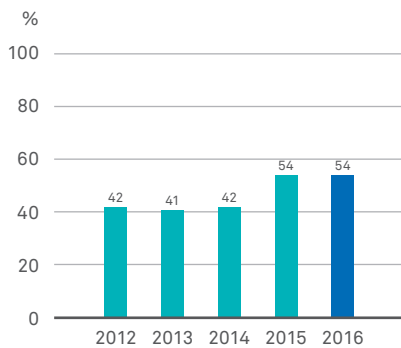


- Maintenance
- Improvement
- Expansion

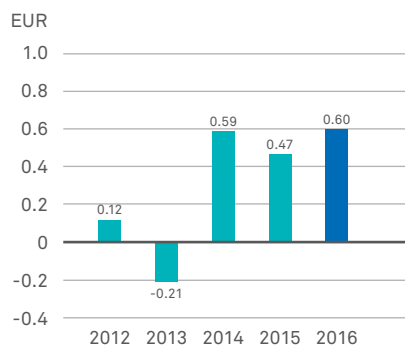
INTEREST-BEARING NET LIABILITIES



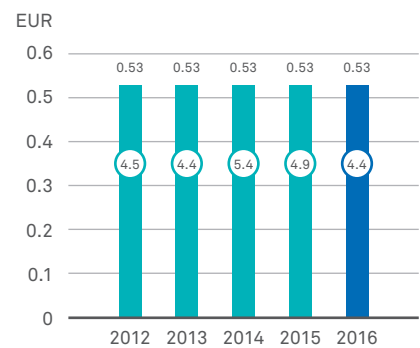
GEARING



EARNINGS PER SHARE



DIVIDEND PER SHARE AND DIVIDEND YIELD <sup>1)</sup>



- Dividend per share <sup>1)</sup>
- Dividend yield, % <sup>1)</sup>

1) The dividend for 2016 is the Board of Directors' proposal to the Annual General Meeting.

# DEFINITIONS OF KEY FIGURES

## FINANCIAL FIGURES

### OPERATIVE EBITDA

Operating profit (EBIT) + depreciation and amortization + impairments  
- items affecting comparability

### ITEMS AFFECTING COMPARABILITY<sup>1)</sup>

Restructuring and streamlining programs + transaction and integration expenses in acquisitions + divestment of businesses and other disposals + other items

### OPERATIVE EBIT

Operating profit (EBIT) - items affecting comparability

### INTEREST-BEARING NET LIABILITIES

Interest-bearing liabilities - cash and cash equivalents

### EQUITY RATIO, %

$\frac{\text{Total equity} \times 100}{\text{Total assets} - \text{prepayments received}}$

### GEARING, %

$\frac{\text{Interest-bearing net liabilities} \times 100}{\text{Total equity}}$

### INTEREST COVER

$\frac{\text{Operating profit} + \text{depreciation, amortization and impairments}}{\text{Finance costs, net}}$

### RETURN ON INVESTMENTS (ROI), %

$\frac{(\text{Profit before tax} + \text{interest expenses} + \text{other financial expenses}) \times 100}{(\text{Total assets} - \text{non-interest-bearing liabilities})^2}$

### RETURN ON EQUITY (ROE), %

$\frac{\text{Net profit attributable to equity owners of the parent} \times 100}{\text{Equity attributable to equity owners of the parent}^2}$

### CASH FLOW RETURN ON INVESTMENT (CFROI), %

$\frac{\text{Net cash generated from operating activities} \times 100}{(\text{Total assets} - \text{interest-free liabilities})^2}$

### CASH FLOW AFTER INVESTING ACTIVITIES

Net cash generated from operating activities + net cash used in investing activities

### OPERATIVE RETURN ON CAPITAL EMPLOYED (OPERATIVE ROCE), %

$\frac{(\text{Operative EBIT} + \text{share of profit or loss of associates}) \times 100^3}{\text{Capital employed}^4}$

### RETURN ON CAPITAL EMPLOYED (ROCE), %

$\frac{(\text{Operating profit} + \text{share of the results of associates}) \times 100^3}{\text{Capital employed}^4}$

### CAPITAL TURNOVER

$\frac{\text{Revenue}}{\text{Capital employed}^4}$

### INTEREST-BEARING NET LIABILITIES / EBITDA

$\frac{\text{Interest-bearing net liabilities}}{\text{Operating profit (EBIT) + depreciation and amortization + impairments}}$

### NET FINANCIAL COST, %

$\frac{(\text{Finance costs, net} - \text{dividend income} - \text{exchange rate differences}) \times 100}{\text{Interest-bearing net liabilities}^2}$

### 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

### CAPITAL EMPLOYED

Property, plant and equipment + intangible assets + net working capital + investments in associates

## 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, %

$\frac{\text{Dividend per share} \times 100}{\text{Earnings per share (EPS)}}$

### DIVIDEND YIELD, %

$\frac{\text{Dividend per share} \times 100}{\text{Share price at 31 Dec}}$

### 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, %

$\frac{\text{Number of shares traded} \times 100}{\text{Average number of shares}}$

1) Non-GAAP measures excludes the effects of significant items of income and expenses which may have an impact on the comparability in the financial reporting of Kemira Group. Restructuring and streamlining programs; transaction and integration expenses in acquisition; divestments of businesses and other disposals are considered to be the most common items affecting comparability.

2) Average

3) Operating profit 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

## CONSOLIDATED INCOME STATEMENT (IFRS)

	Note	Year ended 31 December	
		2016	2015
<b>Revenue</b>	2	2,363.3	2,373.1
Other operating income	3	5.1	7.1
Operating expenses	4, 5	-2,084.2	-2,116.4
<b>EBITDA</b>		284.2	263.8
Depreciation, amortization and impairments	6, 11, 12, 13	-137.2	-131.2
<b>Operating profit (EBIT)</b>		147.0	132.6
Finance income	7	9.5	5.2
Finance expense	7	-27.5	-33.9
Exchange differences	7	-1.1	-2.1
Finance costs, net	7	-19.1	-30.8
Share of the results of associates	2, 8	0.1	0.3
<b>Profit before tax</b>		128.0	102.1
Income taxes	9	-30.1	-24.9
<b>Net profit for the period</b>		97.9	77.2
<b>Net profit attributable to</b>			
Equity owners of the parent		91.8	71.0
Non-controlling interests	18	6.1	6.2
<b>Net profit for the period</b>		97.9	77.2
<b>Earnings per share for net profit attributable to the equity owners of the parent company (EUR per share)</b>			
Basic and diluted	10	0.60	0.47

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

## CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME (IFRS)

	Note	Year ended 31 December	
		2016	2015
<b>Net profit for the period</b>		97.9	77.2
<b>Other comprehensive income</b>			
<b>Items that may be reclassified subsequently to profit or loss</b>			
Available-for-sale financial assets		-31.6	-21.0
Exchange differences on translating foreign operations		11.3	26.2
Cash flow hedges		8.5	-2.5
<b>Items that will not be reclassified subsequently to profit or loss</b>			
Remeasurements on defined benefit plans		-10.7	35.9
<b>Other comprehensive income for the period, net of tax</b>	9, 18	-22.5	38.6
<b>Total comprehensive income for the period</b>		75.4	115.8
<b>Total comprehensive income attributable to</b>			
Equity owners of the parent		69.6	109.6
Non-controlling interests	18	5.8	6.2
<b>Total comprehensive income for the period</b>		75.4	115.8

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 9.

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

## CONSOLIDATED BALANCE SHEET (IFRS)

		As at 31 December	
	Note	2016	2015
<b>ASSETS</b>			
<b>NON-CURRENT ASSETS</b>			
Goodwill	11	522.4	518.3
Other intangible assets	12	115.9	134.7
Property, plant and equipment	13	915.6	815.3
Investments in associates	8	1.2	1.2
Available-for-sale financial assets	14, 15	202.5	271.6
Deferred tax assets	21	27.5	29.5
Other investments	15	4.4	5.8
Receivables of defined benefit pension	22	32.1	48.9
<b>Total non-current assets</b>		<b>1,821.6</b>	<b>1,825.3</b>
<b>CURRENT ASSETS</b>			
Inventories	16	216.9	207.0
Interest-bearing receivables	15, 17	0.2	0.2
Trade receivables and other receivables	15, 17	386.1	389.8
Current income tax assets		22.7	21.4
Cash and cash equivalents	28	173.4	151.5
<b>Total current assets</b>		<b>799.3</b>	<b>769.9</b>
<b>Total assets</b>		<b>2,620.9</b>	<b>2,595.2</b>
<b>EQUITY AND LIABILITIES</b>			
<b>EQUITY</b>			
	18		
<b>Equity attributable to equity owners of the parent</b>			
Share capital		221.8	221.8
Share premium		257.9	257.9
Fair value and other reserves		72.2	94.2
Unrestricted equity reserve		196.3	196.3
Translation differences		-0.8	-12.4
Treasury shares		-20.0	-22.0
Retained earnings		442.6	444.5
<b>Equity attributable to equity owners of the parent</b>		<b>1,170.0</b>	<b>1,180.3</b>
<b>Non-controlling interests</b>		<b>12.9</b>	<b>12.9</b>
<b>Total equity</b>		<b>1,182.9</b>	<b>1,193.2</b>
<b>NON-CURRENT LIABILITIES</b>			
Interest-bearing liabilities	15, 19, 20	649.5	670.9
Other liabilities	15	21.4	21.4
Deferred tax liabilities	21	63.2	55.9
Liabilities of defined benefit pension	22	79.8	77.3
Provisions	23	26.5	28.1
<b>Total non-current liabilities</b>		<b>840.4</b>	<b>853.6</b>
<b>CURRENT LIABILITIES</b>			
Interest-bearing liabilities	15, 19, 20	157.9	122.7
Trade payables and other liabilities	15, 24	405.2	388.7
Current income tax liabilities		20.3	22.1
Provisions	23	14.2	14.9
<b>Total current liabilities</b>		<b>597.6</b>	<b>548.4</b>
<b>Total liabilities</b>		<b>1,438.0</b>	<b>1,402.0</b>
<b>Total equity and liabilities</b>		<b>2,620.9</b>	<b>2,595.2</b>

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

## CONSOLIDATED STATEMENT OF CASH FLOW (IFRS)

	Note	As at 31 December	
		2016	2015
<b>CASH FLOW FROM OPERATING ACTIVITIES</b>			
Net profit for the period		97.9	77.2
Adjustments for			
Depreciation, amortization and impairments	6, 11, 12, 13	137.2	131.2
Income taxes	9	30.1	24.8
Finance costs, net	7	19.1	30.8
Share of the results of associates	8	-0.1	-0.3
Other non-cash income and expenses not involving cash flow		0.3	2.6
<b>Operating profit before change in net working capital</b>		<b>284.5</b>	<b>266.3</b>
<b>Change in net working capital</b>			
Increase (-) / decrease (+) in inventories		-4.6	7.7
Increase (-) / decrease (+) in trade and other receivables		13.3	-28.9
Increase (+) / decrease (-) in trade payables and other liabilities		20.8	41.9
<b>Change in net working capital</b>		<b>29.5</b>	<b>20.7</b>
<b>Cash flow from operations before financing items and taxes</b>		<b>314.0</b>	<b>287.0</b>
Interest and other finance cost paid		-27.1	-26.3
Interest and other finance income received		1.1	4.3
Realized exchange gains and losses		5.6	-5.2
Dividends received		0.2	0.1
Income taxes paid		-23.2	-12.3
<b>Net cash generated from operating activities</b>		<b>270.6</b>	<b>247.6</b>
<b>CASH FLOW FROM INVESTING ACTIVITIES</b>			
Purchases of subsidiaries and asset acquisitions, net of cash acquired	26	2.0	-123.4
Purchases of available-for-sale financial assets		0.0	-4.2
Purchases of property, plant and equipment and intangible assets		-212.6	-177.5
Change in long-term loan receivables decrease (+) / increase (-)		0.9	0.4
Proceeds from sale of subsidiaries, net of cash disposed	25	0.0	1.1
Proceeds from sale of available-for-sale financial assets		35.4	0.1
Proceeds from sale of property, plant, equipment and intangible assets		1.5	2.1
<b>Net cash used in investing activities</b>		<b>-172.8</b>	<b>-301.4</b>
<b>CASH FLOW FROM FINANCING ACTIVITIES</b>			
Proceeds from non-current interest-bearing liabilities (+)		50.0	250.0
Repayment from non-current interest-bearing liabilities (-)		-48.1	-86.0
Short-term financing, net increase (+) / decrease (-)		6.8	9.9
Dividends paid		-86.5	-86.6
Other finance items		0.0	0.1
<b>Net cash used in financing activities</b>		<b>-77.8</b>	<b>87.4</b>
<b>Net decrease (-) / increase (+) in cash and cash equivalents</b>		<b>20.0</b>	<b>33.6</b>
Cash and cash equivalents at 31 Dec		173.4	151.5
Exchange gains (+) / losses (-) on cash and cash equivalents		1.9	-1.2
Cash and cash equivalents at 1 Jan		151.5	119.1
<b>Net decrease (-) / increase (+) in cash and cash equivalents</b>		<b>20.0</b>	<b>33.6</b>

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

## CONSOLIDATED STATEMENT OF CHANGES IN EQUITY (IFRS)

	EQUITY ATTRIBUTABLE TO OWNERS OF THE PARENT									
	Share capital	Share premium	Fair value and other reserves	Unrestricted equity reserve	Exchange differences	Treasury shares	Retained earnings	Total	Non-controlling interests	Total equity
<b>Equity at January 1, 2015</b>	221.8	257.9	117.4	196.3	-38.6	-22.1	418.0	1,150.7	12.6	1,163.3
Net profit for the period							71.0	71.0	6.2	77.2
Available-for-sale financial assets			-21.0					-21.0		-21.0
Exchange differences on translating foreign operations					26.2			26.2		26.2
Cash flow hedges			-2.5					-2.5		-2.5
Remeasurements on defined benefit plans							35.9	35.9		35.9
<b>Total comprehensive income</b>			-23.5		26.2		106.9	109.6	6.2	115.8
<b>Transactions with owners</b>										
Dividends paid							-80.6	-80.6	-5.9	-86.5
Treasury shares issued to the Board of Directors						0.1		0.1		0.1
Share-based payments							0.7	0.7		0.7
Transfers in equity			0.3				-0.3	0.0		0.0
Other changes							-0.2	-0.2		-0.2
<b>Transactions with owners</b>			0.3			0.1	-80.4	-80.0	-5.9	-85.9
<b>Equity at December 31, 2015</b>	221.8	257.9	94.2	196.3	-12.4	-22.0	444.5	1,180.3	12.9	1,193.2
<b>Equity at January 1, 2016</b>	221.8	257.9	94.2	196.3	-12.4	-22.0	444.5	1,180.3	12.9	1,193.2
Net profit for the period							91.8	91.8	6.1	97.9
Available-for-sale financial assets			-31.6					-31.6		-31.6
Exchange differences on translating foreign operations					11.6			11.6	-0.3	11.3
Cash flow hedges			8.5					8.5		8.5
Remeasurements on defined benefit plans							-10.7	-10.7		-10.7
<b>Total comprehensive income</b>			-23.1		11.6		81.1	69.6	5.8	75.4
<b>Transactions with owners</b>										
Dividends paid							-80.7	-80.7	-5.8	-86.5
Treasury shares issued to the target group of share-based incentive plan						1.9		1.9		1.9
Treasury shares issued to the Board of Directors						0.1		0.1		0.1
Share-based payments							-1.2	-1.2		-1.2
Transfers in equity			1.1				-1.1	0.0		0.0
<b>Transactions with owners</b>			1.1			2.0	-83.0	-79.9	-5.8	-85.7
<b>Equity at December 31, 2016</b>	221.8	257.9	72.2	196.3	-0.8	-20.0	442.6	1,170.0	12.9	1,182.9

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



# NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note

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

The principal accounting policies applied in the preparation of these Consolidated Financial Statements are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated.

### GROUP PROFILE

Kemira is a global chemicals company serving customers in water-intensive industries. The company provides expertise in application know-how and chemicals that improve its customers' water, energy and raw material efficiency. Kemira's three segments Pulp & Paper, Oil & Mining and Municipal & Industrial focus on customers in pulp & paper, oil & gas, mining and water treatment respectively.

The Group's parent company is Kemira Oyj. It is domiciled in Helsinki, Finland, and its registered address is Porkkalankatu 3, 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](http://www.kemira.com).

The Board of Directors of Kemira Oyj has approved the Financial Statements for publication at its meeting on February 7, 2017. 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 to make 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). In 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 regarding the adoption of the International Financial Reporting Standards 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 million euros and have been prepared based on the historical cost excluding the items measured at fair value that are available-for-sale financial assets, financial assets and liabilities at fair value through profit or loss, and share-based payments on the grant date.

The preparation of 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 which need a higher degree of judgment and are significant to the Consolidated Financial Statements are described below in section "Critical accounting estimates and judgments".

### CHANGES IN ACCOUNTING POLICIES AND DISCLOSURES

#### NEW AND AMENDED IFRSs AND INTERPRETATIONS ADOPTED IN 2016

The following new and revised IFRSs have been adopted in these Consolidated Financial Statements. The application of these new and revised IFRSs has not had any material impact on the amounts reported for the current and prior years but may affect the accounting for future transactions and events.

- *Amendments to IAS 1 Disclosure Initiative.*
- *Amendments to IFRS 11 Accounting for Acquisitions of Interests in Joint Operations.*
- *Amendments to IFRS 10, IFRS 12 and IAS 28 Investment Entities: Applying the Consolidation Exception.*
- *Amendments to IAS 16 and IAS 38 Clarification of Acceptable Methods of Depreciation and Amortisation.*
- *IAS 16 and IAS 41 Agriculture: Bearer Plants.*
- *Amendments to IAS 19 Defined Benefit Plans: Employee Contributions.*
- *Annual Improvements to IFRSs 2010–2012 Cycle.*
- *Annual Improvements to IFRSs 2012–2014 Cycle.*

#### APPLICATION OF NEW AND REVISED IFRSs IN ISSUE BUT NOT YET EFFECTIVE

IASB has published the following new or revised standards and interpretations not yet adopted by the Group. The Group will adopt each standard as of the effective date, or if the effective date is other than the first day of the reporting period, from the next reporting period beginning after the effective date.

- IFRS 9 *Financial Instruments* (effective in the EU for annual periods beginning on or after 1 January 2018). IFRS 9 will supersede current IAS 39 *Financial Instruments: Recognition and Measurement*. IFRS introduced

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new requirements for the classification and measurement of financial assets and introduces a new impairment model for financial assets, which is based on expected credit losses. Recognition and measurement of financial liabilities will mainly continue to be on the same bases as currently adopted under IAS 39. 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.

In the previous financial years, the Group has applied cash flow hedge accounting for electricity forward contracts in accordance with IAS 39. IFRS 9 will change the assessment of the effectiveness of electricity derivatives. In addition, expected credit losses of loans and receivables will be calculated and recognized in accordance with the requirements of the new standard. The Group's analyzes of IFRS 9 impacts will be completed in the year 2017. The Group estimates that the new standard will not have material impact on the Consolidated Financial Statements. The Group will apply IFRS 9 on 1 January 2018.

- IFRS 15 *Revenue from Contracts with Customers* (effective in the EU for annual periods beginning on or after 1 January 2018). IFRS 15 establishes a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers. IFRS 15 will supersede the current revenue recognition guidance including IAS 18 Revenue, IAS 11 Construction Contracts and the related interpretations when it becomes effective. 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. Furthermore, extensive disclosures are required by IFRS 15.

Quarterly results for the financial year 2018 and the annual Consolidated Financial Statements 2018 will be prepared in compliance with IFRS 15. The standard guidance permits two methods of adoption: full retrospective method or modified retrospective method. The Group expects to adopt the IFRS 15 standard using the modified retrospective method for the existing and new sales contracts on January 1, 2018. The information from the prior years 2016 and 2017 will be disclosed in accordance with the existing revenue recognition standards IAS 18 and IAS 11. Possible cumulative effect of the transition to the IFRS 15 standard will be recognized in the equity on January

1, 2018. The Group has assessed the impacts of the IFRS 15 standard on the financial reporting and the work will continue in 2017. The Group estimates that the new standard will not have a material impact on the Consolidated Financial Statements. The Group's revenue mainly consists of the sale of chemical products. The revenue recognition for these sales remain substantially unchanged and occurs at the point when control of a sale of the products is transferred to the customer. Shipping and handling services are recognized in conjunction with the sale of the products and they are not treated as separate performance obligations.

- IFRS 16 *Leases* (effective for annual periods beginning on or after 1 January 2019). IFRS 16 provides a comprehensive model for the identification of lease arrangements and their treatment in the financial statements of both lessees and lessors. It will supersede the current guidance including IAS 17 Leases and the related interpretations when it becomes effective. 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. On the reporting date December 31, 2016, the Group's operating lease commitments of EUR 211.2 million are disclosed in the Note 29. The Group continues to identify and assess the existing operating lease agreements and right-of-use assets and lease liabilities to be recognized in the balance sheet on the basis of these agreements. IFRS 16 standard will change the accounting practices relating the lease agreements. The Group estimates that this will have an impact on the balance sheet and key figures, as well as the classification of the income statement and cash flow. The assessment of the impact of IFRS 16 is not completed and will continue in 2017. The standard has not yet been endorsed by the EU.
- IFRIC Interpretation 22 *Foreign Currency Transactions and Advance Consideration* (effective for annual periods beginning on or after 1 January 2018). The interpretation issued on December 2016 provides guidance on "the date of the transaction" when an entity pays or received consideration in advance in a foreign currency. In 2017, the Group will assess the potential impact of the interpretation. The interpretation has not yet been endorsed by the EU.

- Other already published, but not yet effective under the new standards, standard amendments or IFRIC interpretation are not expected to have impact on the Group's financial reporting.

## CONSOLIDATION

### SUBSIDIARIES (NOTE 33)

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

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

All intra-group transactions are eliminated. Intra-group shareholdings are eliminated by using the acquisition method. The consideration transferred for the acquisition of a subsidiary is defined as an aggregate of the fair values of the assets transferred, the liabilities assumed and the equity interests 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 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 recorded as goodwill. If this is less than the fair value of the net assets of the subsidiary acquired in the case of a 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 shows separately the total amounts attributable to the equity holders of the parent and to non-controlling interests. The Group recognizes negative non-controlling interests, unless non-controlling interest do 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, 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 to its fair value, and the difference is recognized in profit or loss.

### ASSOCIATES (NOTE 8)

Associated companies are companies over which the Group exercises significant influence (voting rights generally being 20–50 percent) 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 its associates' movements in other comprehensive income is recognized in Group's other comprehensive income. The Group's associates do not have such items for financial years 2015–2016.

## 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 euros, which is the Group's presentation currency and the parent company's functional currency.

In the Consolidated Financial Statements, the income statements of foreign subsidiaries are translated into euro 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. Retranslating the net profit for the period and the other comprehensive income 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 translated into euro at the rate quoted on the balance sheet date.

Translation differences in the loans granted to foreign subsidiaries in replacement of their equity 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 gain or loss on the sale.

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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, and non-monetary items 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 financial income and expenses.

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## REVENUE RECOGNITION

Revenue is measured at the fair value of the consideration received or receivable, and represents the total invoicing value of products sold and services rendered less; sales tax, discounts and foreign exchange differences in trade receivables as adjusting items.

The revenue from the sale of goods is recognized in the income statement when the major risks and rewards related to the ownership of the goods have been transferred to the buyer. Revenue from services is recognized in the accounting period in which the services are rendered.

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## PENSION OBLIGATIONS (NOTE 22)

The Group has 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 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 compensation 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

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using interest rates of high-quality corporate bonds that are denominated in the currency in which the benefits will be paid, and that have the 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 on 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 as the employee benefits expenses and net interest cost on finance income and finance expense. Past-service costs are recognized immediately in income statements.

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 expense 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.

## SHARE-BASED PAYMENTS (NOTE 5, 31)

The Group has equity-settled share-based compensation plans under which the Group receives services from employees as consideration for equity instrument of the Group. The potential rewards are provided partly in shares and partly in cash. The potential reward provided in shares is recognized as a personnel expense in the income statement and in the equity. Correspondingly, the rewards provided in cash are recognized as a personnel expense in the income statement and in liabilities. The total expense is recognized over the vesting period, which is the period over which the specified vesting conditions are to be satisfied.

Share-based compensation expense is 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 to original estimates in the income statement as a personnel expense, with the corresponding adjustment made to equity and liabilities at fair value.

## CURRENT AND DEFERRED INCOME TAX (NOTE 9, 21)

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 in the case 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. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation. It establishes provisions where appropriate on the basis of amounts expected to be paid to the tax authorities.

Deferred income 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 Consolidated 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 combination 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 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 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.

## INTANGIBLE ASSETS AND PROPERTY, PLANT AND EQUIPMENT (NOTE 11–13)

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 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.

Development costs are capitalized as intangible assets when it can be shown that a development project will generate probable future economic benefit, and the costs attributable to the development project can reliably be measured. Capitalized development costs are presented as a separate item and amortized over their useful lives. 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.

Other intangible assets include for instance software and software licenses as well as patents, technologies, non-compete agreements and customer relationships bases acquired in business combinations.

Property, plant and equipment (PP&E) and intangible assets (with definite useful lives) are measured at cost less accumulated depreciation and amortization and any impairment losses. The Group has no intangible assets that have an indefinite useful life other than goodwill.

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

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

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, respectively. 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 benefit and the costs can be reliably measured. The costs of major inspections or the overhaul of asset performed at regular intervals and identified as separate components are capitalized and depreciated over their useful lives.

Depreciation 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 include in disposal group.

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GOVERNMENT GRANTS (NOTE 4)

Government grants for investments are recognized as a deduction from the carrying amount of these assets. The grants are recognized in the income statement as smaller depreciations over the asset's useful life. Government grants for research activities are deducted from expenses.

LEASES (NOTE 21, 29)

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 PP&E.

Also the 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.

INVENTORIES (NOTE 16)

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.

FINANCIAL ASSETS, FINANCIAL LIABILITIES AND DERIVATIVE CONTRACTS

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. The Group's financial assets are classified for subsequent measurement as financial assets at fair value through profit or loss, loans and receivables issued by the Group, and available-for-sale financial assets.

CATEGORY	FINANCIAL INSTRUMENT	MEASUREMENT
Financial assets at fair value through profit or loss	Currency forward contracts, currency options, currency swaps, interest rate forwards, interest rate futures, interest rate options, interest rate swaps, electricity forwards, certificates of deposit, commercial papers, units in mutual funds, embedded derivatives	Fair value
Loans and receivables	Non-current loan receivables, bank deposits, trade receivables and other receivables	(Amortized) cost
Available-for-sale financial assets	Shares, bond investments	Fair value

FINANCIAL ASSETS AT FAIR VALUE THROUGH INCOME STATEMENTS

Financial assets at fair value through profit or loss are measured at fair value. 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 IAS 39 is not applied are classified as financial assets held for trading. These 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.

LOANS AND RECEIVABLES

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

AVAILABLE-FOR-SALE FINANCIAL ASSETS (NOTE 14)

Available-for-sale financial assets are measured at fair value if it is considered that fair value can be determined reliably. Unrealized changes in fair value of financial assets available for sale are recognized in other comprehensive income and presented under equity in the fair value reserve taking the tax effect into account. Accumulated changes in fair value are transferred to the income statement as a reclassification adjustment when the investment is divested or it has been impaired to the extent that an impairment loss has to be recognized. Available-for-sale financial assets 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. PVO Group owns and operates, among others, two nuclear power plant units in Olkiluoto in the municipality of Eurajoki. The 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 PVO Group that entitles to the electricity from completed power plants 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. The forward electricity price quotations in Finland area published by the Nordic Electricity Exchange have been used as the market price for electricity of the first five years and after this the development of the prices 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 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 includes terminal value. The discount rate has been calculated using the annually determined average weighted cost of capital.

#### CASH AND CASH EQUIVALENTS (NOTE 28)

Cash and cash equivalents consist of cash in hand, 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.

#### IMPAIRMENT OF FINANCIAL ASSETS

The Group assesses any impairment losses on its financial instruments on each balance sheet date. An impairment of a financial asset is recognized when an event with a negative effect on the future cash flows from the investment has occurred. For items measured at 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 at fair value through profit or loss and other financial liabilities. Financial liabilities at fair value through profit and loss

include derivatives to which hedge accounting is not applied.

CATEGORY	FINANCIAL INSTRUMENT	MEASUREMENT
Financial liabilities at fair value through profit or loss	Currency forward contracts, currency options, currency swaps, interest rate forwards, interest rate futures, interest rate options, interest rate swaps, electricity forwards, embedded derivatives	Fair value
Other financial liabilities	Current and non-current loans, pension loans, bond and trade payables	(Amortized) cost

#### DERIVATIVES (NOTE 27)

The fair values of currency, interest rate and commodity derivatives, currency options and units in mutual funds 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.

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.

All of the derivatives open on the balance sheet date are measured at their fair values. As a rule, fair value changes from open derivative contracts are recognized through profit or loss in the Consolidated Financial Statements. The number of embedded derivatives used by the Group is low.

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 interest costs over the loan term.

#### HEDGE ACCOUNTING (NOTE 27)

According to IAS 39, hedge accounting 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. Hedge accounting is applied to hedging the interest rate risk, commodity risk and fair value.

Hedge effectiveness is monitored as required by IAS 39. 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

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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 in the range of 80–125 percent. Hedge effectiveness is assessed both prospectively and retrospectively. 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 under IAS 39 are recognized directly in the income statement.

At the inception of a hedge, the Group has documented the existence of the hedging relationship, 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 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. Interest rate and commodity derivatives are used as investment instruments in cash flow hedging. Interest rate and commodity derivatives are used as hedging instruments in cash flow hedges. Cash flow hedge accounting, specified in IAS 39 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 the fixed rate bond loan. Interest rate derivatives are used as instruments in fair value hedging. The fair value of the hedging derivative contracts of change in fair value 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.

#### PROVISIONS (NOTE 23)

Provisions for restructuring costs, personnel related costs, environmental obligations, legal claims, and onerous contracts are recognized in the balance sheet when the Group has a present legal or constructive obligation as a result of past events; 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 rate that reflects current market assessments of the time value of money and the risks specific to the obligation.

#### CONTINGENT LIABILITIES (NOTE 29)

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 a present obligation that it is not probable that an outflow of resources embodying economic benefits will be required to settle the obligation; or the amount of the obligation cannot be measured with sufficient reliability. Contingent liability is disclosed in the notes.

#### NON-CURRENT ASSETS HELD FOR SALE AND DISCONTINUED OPERATIONS

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. Depreciation on these assets discontinues at the time of classification. Non-current assets classified as held for sale are disclosed separately in the balance sheet.

A discontinued operation is a component of the Group that has either been disposed of, or is classified as held for sale, and meets one of the following criteria:

- it represents a separate major line of business or geographical area of operations,
- it is part of a single coordinated plan to dispose of a separate major line of business or geographical area of operations, or
- it is a subsidiary that has been acquired exclusively with a prospect of reselling.

The profit or loss of the discontinued operation is stated as a separate item in the consolidated income statement and

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statement of comprehensive income. Assets held for sale and related to other comprehensive income items are recognized in the balance sheet separately from other items.

### IMPAIRMENT OF NON-FINANCIAL ASSETS (NOTE 11)

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. Operating segments are Pulp & Paper, Oil & Mining and Municipal & Industrial. Two or more operating segments are not combined one reportable segment. Goodwill impairment is tested by comparing the reportable segment's (Pulp & Paper, Oil & Mining and Municipal & Industrial) 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 continuing use of an asset and on the latest five-year forecasts by the business unit's 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. Note 11 provides more detailed information on impairment testing.

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 previously 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. An impairment loss for goodwill is never reversed.

### EMISSIONS ALLOWANCES (NOTE 30)

The Group holds assigned emissions allowances, under the EU emissions trading system, at its Helsingborg site in Sweden. Carbon dioxide allowances are accounted for as intangible assets measured at cost. Carbon dioxide 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 in the market.

### TREASURY SHARES (NOTE 18)

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

### DIVIDEND DISTRIBUTION

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

### EARNINGS PER SHARE (NOTE 10)

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

### CRITICAL ACCOUNTING ESTIMATES AND JUDGMENTS

Estimates and judgments are continuously evaluated and they 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 estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are addressed below.

### 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 gross margin levels, discount rates and the projected period. Major adverse developments in cash flows and interest rates may

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necessitate the recognition of an impairment loss. More information on goodwill impairment testing, as well as the assumptions used in the sensitivity analysis is presented in Note 11.

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#### ESTIMATED FAIR VALUE OF SHARES IN PVO GROUP

The Group's investments include non-listed shares, holdings in PVO Group representing the largest of these. The Group's shareholding in the company 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. Developments in the actual fair value may differ from the estimated value due to factors, such as electricity prices, the forecast period or the discount rate. More information on PVO Group's fair value determination is presented in Note 14.

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#### 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. Pension liability is calculated by independent actuaries. See Note 22 for details on the calculation of the defined benefit pension assumptions.

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#### ENVIRONMENTAL PROVISIONS

Recognizing environmental provisions requires the management's estimates, since the precise euro amount of obligations related to the provisions is not known when preparing the Financial Statements. Provisions are disclosed in Note 23.

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#### DEFERRED TAXES

For the recognition of deferred tax assets on tax losses and other items, the management assesses the amount of a probable future taxable profit against which unused tax losses and unused tax credits can be utilized. Actual profits may differ from the forecasts and in such case, the change will affect the taxes in future periods. Deferred taxes are disclosed in Note 21.

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## 2. SEGMENT INFORMATION

The reporting segments presented in the segment information are:

#### 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 tissue.

#### OIL & MINING

Oil & Mining provides a unique combination of innovative chemicals and application knowledge that improves process efficiency and yield in oil, gas, and metals recovery. The segment uses its in-depth understanding of extraction processes to tailor solutions for water management and re-use.

#### MUNICIPAL & INDUSTRIAL

Municipal & Industrial is a leading water chemicals supplier for raw and wastewater applications in EMEA and North America, and aims to capture selected growth opportunities in emerging markets. The segment enables its municipal and industrial customers to improve their water treatment efficiency by supplying them with competitive, high-performing products and value adding application support.

#### SEGMENT REPORTING

Segment information is presented in a manner consistent with the Group's internal organizational and reporting structure. Kemira 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, Middle East and Africa (EMEA), the Americas and Asia Pacific (APAC).

## INCOME STATEMENT ITEMS

2016	Pulp & Paper	Oil & Mining	Municipal & Industrial	Group
<b>Revenue<sup>1)</sup></b>	1,457.3	309.5	596.5	2,363.3
<b>EBITDA<sup>2)</sup></b>	187.8	11.6	84.8	284.2
Depreciation, amortization and impairments	-86.2	-23.7	-27.3	-137.2
<b>Operating profit (EBIT)<sup>2)</sup></b>	101.6	-12.1	57.5	147.0
Finance costs, net				-19.1
Share of the results of associates				0.1
<b>Profit before tax</b>				128.0
Income taxes				-30.1
<b>Net profit for the period</b>				97.9

1) Segments revenue consists only of sales from external customers and there are no intersegment sales. Revenue consists mainly of sale of products.

2) Includes items affecting comparability.

## ITEMS AFFECTING COMPARABILITY IN EBITDA AND EBIT

2016	Pulp & Paper	Oil & Mining	Municipal & Industrial	Group
<b>Operative EBITDA</b>	195.3	18.4	88.8	302.5
Restructuring and streamlining programs				-5.8
Transaction and integration expenses in acquisition				-5.0
Divestment of businesses and other disposals				0.5
Other items				-8.0
<b>Total items affecting comparability</b>	-7.5	-6.8	-4.0	-18.3
<b>EBITDA</b>	187.8	11.6	84.8	284.2
<b>Operative EBIT</b>	111.6	-3.8	62.3	170.1
Items affecting comparability in EBITDA	-7.5	-6.8	-4.0	-18.3
Items affecting comparability in depreciation, amortization and impairments	-2.5	-1.5	-0.8	-4.8
<b>Operating profit (EBIT)</b>	101.6	-12.1	57.5	147.0

## BALANCE SHEET ITEMS

2016	Pulp & Paper	Oil & Mining	Municipal & Industrial	Group
Segment assets	1,364.7	345.8	430.8	2,141.3
Reconciliation to total assets as reported in the Group balance sheet:				
Available-for-sale financial assets				202.5
Deferred income tax assets				27.5
Other investments				4.4
Defined benefit pension receivables				32.1
Other assets				39.7
Cash and cash equivalents				173.4
<b>Total assets as reported in the Group balance sheet</b>				2,620.9
Segment liabilities	231.3	65.1	95.2	391.6
Reconciliation to total liabilities as reported in the Group balance sheet:				
Interest-bearing non-current financial liabilities				649.5
Interest-bearing current financial liabilities				157.9
Other liabilities				239.0
<b>Total liabilities as reported in the Group balance sheet</b>				1,438.0

Note

## OTHER ITEMS

2016	Pulp & Paper	Oil & Mining	Municipal & Industrial	Group
Capital employed by segments at 31 Dec	1,133.4	280.7	335.6	1,749.7
Capital employed by segments, 12-month rolling average	1,111.8	274.5	330.7	1,718.2
Operative ROCE, %	10.0	-1.4	18.8	9.9
Capital expenditure	125.1	38.0	47.5	210.6

## INCOME STATEMENT ITEMS

2015	Pulp & Paper	Oil & Mining	Municipal & Industrial	Group
<b>Revenue</b> <sup>1)</sup>	1,417.3	350.1	605.7	2,373.1
<b>EBITDA</b> <sup>2)</sup>	157.1	30.8	75.9	263.8
Depreciation, amortization and impairments	-74.5	-27.9	-28.8	-131.2
<b>Operating profit</b> <sup>2)</sup>	82.6	2.9	47.1	132.6
Finance costs, net				-30.8
Share of the results of associates				0.3
<b>Profit before tax</b>				102.1
Income taxes				-24.9
<b>Net profit for the period</b>				77.2

1) Segments revenue consists only of sales from external customers. There are no intersegment sales. Revenue consists mainly of sale of products.

2) Includes items affecting comparability.

## ITEMS AFFECTING COMPARABILITY IN EBITDA AND EBIT

2015	Pulp & Paper	Oil & Mining	Municipal & Industrial	Group
<b>Operative EBITDA</b>	171.0	33.5	82.8	287.3
Restructuring and streamlining programs				-5.7
Transaction and integration expenses in acquisition				-13.0
Divestment of businesses and other disposals				-1.8
Other items				-3.0
<b>Total items affecting comparability</b>	-13.9	-2.7	-6.9	-23.5
<b>EBITDA</b>	157.1	30.8	75.9	263.8
<b>Operative EBIT</b>	96.8	11.1	55.2	163.1
Items affecting comparability in EBITDA	-13.9	-2.7	-6.9	-23.5
Items affecting comparability in depreciation, amortization and impairments	-0.3	-5.5	-1.2	-7.0
<b>Operating profit (EBIT)</b>	82.6	2.9	47.1	132.6

## BALANCE SHEET ITEMS

2015	Pulp & Paper	Oil & Mining	Municipal & Industrial	Group
Segment assets	1,304.0	333.3	415.9	2,053.2
Reconciliation to total assets as reported in the Group balance sheet:				
Available-for-sale financial assets				271.6
Deferred income tax assets				29.5
Other investments				5.8
Defined benefit pension receivables				48.9
Other assets				34.7
Cash and cash equivalents				151.5
<b>Total assets as reported in the Group balance sheet</b>				<b>2,595.2</b>
Segment liabilities	214.4	56.6	94.8	365.8
Reconciliation to total liabilities as reported in the Group balance sheet:				
Interest-bearing non-current financial liabilities				670.9
Interest-bearing current financial liabilities				122.7
Other liabilities				242.6
<b>Total liabilities as reported in the Group balance sheet</b>				<b>1,402.0</b>

## OTHER ITEMS

2015	Pulp & Paper	Oil & Mining	Municipal & Industrial	Group
Capital employed by segments at 31 Dec	1,089.6	276.7	321.1	1,687.4
Capital employed by segments, 12-month rolling average	1,068.6	271.4	320.2	1,659.5
Operative ROCE, %	9.1	4.1	17.2	9.8
Capital expenditure	240.1	30.8	34.2	305.1

## INFORMATION ABOUT GEOGRAPHICAL AREAS

Revenue by geographical area based on customer location	2016	2015
Finland, domicile of the parent company	334.7	334.8
Other Europe, Middle East and Africa	904.6	906.0
Americas	896.3	935.9
Asia Pacific	227.7	196.4
<b>Total</b>	<b>2,363.3</b>	<b>2,373.1</b>

Non-current assets by geographical area	2016	2015
Finland, domicile of the parent company	660.1	710.1
Other Europe, Middle East and Africa	459.4	441.1
Americas	504.4	477.3
Asia Pacific	138.1	118.1
<b>Total</b>	<b>1,762.0</b>	<b>1,746.6</b>

## INFORMATION ABOUT MAJOR CUSTOMERS

The Group derives revenue from many significant customers. However, 10% or more of the Group's revenue is not derived from any single external customer in 2016 or 2015.

### 3. OTHER OPERATING INCOME

	2016	2015
Gains on sale of non-current assets	0.9	1.0
Rental income	1.2	1.5
Services	2.6	2.3
Sale of scrap and waste	0.1	0.1
Income from royalties, know-how and licenses	0.0	0.1
Other income from operations	0.3	2.1
<b>Total</b>	<b>5.1</b>	<b>7.1</b>

### 4. OPERATING EXPENSES

	2016	2015
Change in inventories of finished goods (inventory increase + / decrease -)	3.6	11.0
Own work capitalized <sup>1)</sup>	-2.7	-2.3
<b>Total</b>	<b>0.9</b>	<b>8.7</b>

#### Materials and services<sup>2)</sup>

Materials and supplies		
Purchases during the financial year	1,389.0	1,426.8
Change in inventories of materials and supplies (inventory increase + / decrease -)	6.3	-1.4
External services	36.7	33.8
<b>Total</b>	<b>1,432.0</b>	<b>1,459.2</b>

**Employee benefit expenses** 364.6 356.0

#### Other operating expenses<sup>2)</sup>

Rents	53.6	47.6
Loss on sales of property, plant and equipment	0.0	0.1
Other expenses <sup>3)</sup>	233.1	244.8
<b>Total</b>	<b>286.7</b>	<b>292.5</b>
<b>Total operating expenses</b>	<b>2,084.2</b>	<b>2,116.4</b>

- 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) The Group has revised presentation of the items and year 2015 has been restated.
- 3) In 2016, other operating expenses include research and development expenses of EUR 32.1 million (31.9). Government grants received for R&D were EUR 0.8 million (1.2). The extent of grants received reduces research and development expenses.

Note	2016	2015
<b>EMPLOYEE BENEFIT EXPENSES</b>		
<b>Wages and salaries</b>		
Wages	280.7	274.4
Emoluments of Kemira Oyj's CEO and the Board of Directors	31 1.9	1.1
Share-based payments	5 2.3	2.1
<b>Total</b>	<b>284.9</b>	<b>277.6</b>
<b>Indirect employee benefit expenses</b>		
Expenses for defined benefit plans	22 3.6	3.4
Pension expenses for defined contribution plans	22.5	20.8
Other employee benefit costs	53.6	54.2
<b>Total</b>	<b>79.7</b>	<b>78.4</b>
<b>Total employee benefit expenses</b>	<b>364.6</b>	<b>356.0</b>

	2016	2015
<b>NUMBER OF PERSONNEL</b>		
<b>Average number of personnel by geographical area</b>		
Europe, Middle East and Africa	2,609	2,536
Americas	1,578	1,550
Asia Pacific	615	473
<b>Total</b>	<b>4,802</b>	<b>4,559</b>
Personnel in Finland, average	807	793
Personnel outside Finland, average	3,995	3,766
<b>Total</b>	<b>4,802</b>	<b>4,559</b>
<b>Number of personnel at 31 Dec</b>	<b>4,818</b>	<b>4,685</b>

	2016	2015
<b>DELOITTE &amp; TOUCHE OY'S FEES AND SERVICES</b>		
Audit fees	1.5	1.5
Tax services	0.2	0.3
Other services	0.4	0.5
<b>Total</b>	<b>2.1</b>	<b>2.3</b>

## 5. SHARE-BASED PAYMENTS

### LONG-TERM SHARE INCENTIVE PLAN 2015–2017

Kemira's long-term share incentive plan comprises three performance periods: calendar years 2015, 2016, and 2017. 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 Plan reward for the performance period 2015 and 2016 was based on the Group's revenue and on the Group's operative EBITDA margin. For the earning period 2015, the shares of 294,445 pcs were delivered to 84 participants under the rule. For the earning period 2016, the Plan financial targets were not achieved, and thus there will be no reward payout.

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

### LONG-TERM SHARE INCENTIVE PLAN 2015

The key assumptions for the fair value of the rewards relating to the performance period 2015 are presented in the following table.

Performance period (calendar year)	2015
Lock-up period of shares	2 years
Number of shares at December 31, 2016	292,572
Number of participants at December 31, 2016	83

### THE EFFECT OF SHARE-BASED PAYMENTS ON OPERATING PROFIT

	2016	2015
Rewards provided in shares	0.9	0.9
Rewards provided in cash	1.4	1.2
<b>Total</b>	<b>2.3</b>	<b>2.1</b>

## 6. DEPRECIATION, AMORTIZATION AND IMPAIRMENTS

	2016	2015
<b>Amortization of intangible assets</b>		
Other intangible assets <sup>1)</sup>	26.6	25.7
Development costs	1.7	3.8
<b>Total</b>	<b>28.3</b>	<b>29.5</b>
<b>Depreciation of property, plant and equipment</b>		
Buildings and constructions	16.9	16.2
Machinery and equipment	81.7	78.1
Other tangible assets	5.5	5.9
<b>Total</b>	<b>104.1</b>	<b>100.2</b>
<b>Impairment of intangible assets and property, plant and equipment</b>		
Other intangible assets	1.8	0.0
Goodwill	0.1	0.8
Land	0.4	0.7
Buildings and constructions	0.3	0.0
Machinery and equipment	2.2	0.0
<b>Total</b>	<b>4.8</b>	<b>1.5</b>
<b>Total depreciation, amortization and impairments</b>	<b>137.2</b>	<b>131.2</b>

1) Includes amortization of EUR 14.0 million (7.4) during financial year 2016 related to AkzoNobel paper chemicals business, Soto Industries LLC and Polymer Services LLC acquisitions. More information on the acquisitions is disclosed in Notes 12 and 26. Total amortization related to business acquisitions is EUR 19.2 million (12.6) during financial year 2016.

Goodwill impairment tests is disclosed in Note 11.

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## 7. FINANCE INCOME AND EXPENSES

	2016	2015
<b>Finance income</b>		
Dividend income	0.1	0.0
Interest income		
Interest income from loans and receivables <sup>1)</sup>	1.7	4.0
Interest income from financial assets at fair value through profit or loss	0.4	0.7
Other finance income <sup>2)</sup>	7.3	0.4
<b>Total</b>	<b>9.5</b>	<b>5.1</b>
<b>Finance expense</b>		
Interest expenses		
Interest expenses from other liabilities	-19.9	-17.7
Interest expenses from financial assets at fair value through profit or loss	-3.8	-7.7
Other finance expenses <sup>3)</sup>	-3.8	-8.5
<b>Total</b>	<b>-27.5</b>	<b>-33.9</b>
<b>Exchange gains and losses</b>		
Exchange gains and losses from financial assets and liabilities at fair value through profit or loss	-1.9	0.0
Exchange gains and losses from loans and other receivables	-3.0	-1.7
Exchange gains and losses from other liabilities	3.8	-0.3
<b>Total</b>	<b>-1.1</b>	<b>-2.0</b>
<b>Total finance income and expenses</b>	<b>-19.1</b>	<b>-30.8</b>
Net finance expenses as a percentage of revenue	0.8	1.3
Net interest as a percentage of revenue	0.9	0.9
<b>Change in Consolidated Statement of Comprehensive Income from hedge accounting instruments</b>		
Cash flow hedge accounting: Amount recognized in the Consolidated Statement of Comprehensive Income	8.5	-2.5
<b>Total</b>	<b>8.5</b>	<b>-2.5</b>
<b>Exchange differences</b>		
Realized	0.3	-5.1
Unrealized	-1.4	3.1
<b>Total</b>	<b>-1.1</b>	<b>-2.0</b>

- 1) In 2015 includes interest income from income taxes of EUR 3 million.  
 2) In 2016 includes EUR 5 million gain from sale of electricity production assets (Pohjolan Voima Oy) and changes in fair values of electricity derivatives EUR 2.2 million.  
 3) In 2015 includes write-down of EUR -2.3 million a shareholder's loan related to Kemira's ownership in TVO (Teollisuuden Voima Oyj), a Finnish power company and ineffective portion of electricity hedge EUR -0.8 million.

## 8. INVESTMENTS IN ASSOCIATES

	2016	2015
<b>Net book value at 1 Jan</b>	<b>1.2</b>	<b>0.9</b>
Dividends received	-0.1	0.0
Share of the results of associates	0.1	0.3
<b>Net book value at 31 Dec</b>	<b>1.2</b>	<b>1.2</b>

The Group does not have any significant individual associate. The Group's associates and ownership of shares has been presented in Note 33.

Summary of the associates financial information is presented in the following table. The presented figures equal the figures in the financial statements of the each associate, not the portion of Kemira Group.

	2016	2015
Assets	19.3	21.4
Liabilities	17.4	19.2
Revenue	6.6	7.5
Profit (+) / loss (-) for the period	0.2	0.5

Related party transactions carried out with associates are disclosed in Note 31.

## 9. INCOME TAXES

	2016	2015
Current taxes	-19.6	-24.2
Taxes for prior years	-1.8	4.8
Change in deferred taxes	-8.7	-5.5
<b>Total</b>	<b>-30.1</b>	<b>-24.9</b>

Subsidiaries have EUR 108.1 million (143.9) tax losses, of which no deferred tax benefits have been recognized. Subsidiaries' tax losses have been used during the fiscal year and deferred tax benefits have been recognized. Subsidiaries' tax losses are incurred in different currencies and therefore exchange rate differences affect the amount of the tax losses.

Due to the Group's wide global business operations, the Group has several tax audits on going at all times. Prior tax audits have not resulted in material adjustments to income tax assessments. In addition, the Group has a tax dispute pending at the Administrative Court in Finland due to the appeal of the Tax Recipients' Legal Services Unit. In case of an unfavorable decision, there will be no tax effect for the Group.



## RECONCILIATION BETWEEN TAX EXPENSE AND TAX CALCULATED AT DOMESTIC TAX RATE

	2016	2015
Profit before tax	128.0	102.1
Tax at parent's tax rate 20%	-25.6	-20.4
Foreign subsidiaries' different tax rate	-3.0	2.0
Non-deductible expenses and tax-exempt profits	-2.9	-1.2
Share of profit or loss of associates	0.0	0.1
Tax losses	-5.5	-7.4
Tax for prior years	-1.8	4.8
Effect of change in tax rates	-0.2	0.0
Tax credit from WHT related to prior years	3.1	0.0
Changes in deferred taxes related to prior years	5.8	-2.8
Others	0.0	0.0
<b>Total taxes</b>	<b>-30.1</b>	<b>-24.9</b>

## THE TAX RELATING TO COMPONENTS OF OTHER COMPREHENSIVE INCOME

	2016			2015		
	Before tax	Tax charge (-) / credit (+)	After tax	Before tax	Tax charge (-) / credit (+)	After tax
Available-for-sale financial assets	-39.5	7.9	-31.6	-26.3	5.3	-21.0
Exchange differences on translating foreign operations	23.4	-12.1	11.3	26.2	0.0	26.2
Cash flow hedges	10.6	-2.1	8.5	-3.1	0.6	-2.5
Remeasurements on defined benefit plans	-17.3	6.6	-10.7	44.8	-8.9	35.9
<b>Other comprehensive income</b>	<b>-22.8</b>	<b>0.3</b>	<b>-22.5</b>	<b>41.6</b>	<b>-3.0</b>	<b>38.6</b>

## 10. EARNINGS PER SHARE

	2016	2015
<b>Earnings per share, basic</b>		
Net profit attributable to equity owners of the parent	91.8	71.0
Weighted average number of shares <sup>1)</sup>	152,314,390	152,059,309
<b>Basic earnings per share, EUR</b>	<b>0.60</b>	<b>0.47</b>
<b>Earnings per share, diluted</b>		
Net profit attributable to equity owners of the parent	91.8	71.0
Weighted average number of shares <sup>1)</sup>	152,314,390	152,059,309
Adjustments for:		
Treasury shares possibly subject to emission in share-based payments	211,454	335,317
Weighted average number of shares for diluted earnings per share	152,525,844	152,394,626
<b>Diluted earnings per share, EUR</b>	<b>0.60</b>	<b>0.47</b>

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

## 11. GOODWILL

	Note	2016	2015
<b>Net book value at 1 Jan</b>		<b>518.3</b>	485.6
Acquisition of subsidiaries and business acquisitions <sup>1)</sup>	26	0.0	21.3
Decreases and other changes		-0.1	-0.8
Exchange differences		4.2	12.2
<b>Net book value at 31 Dec</b>		<b>522.4</b>	518.3

1) In 2015, goodwill has increased by EUR 21.3 million, which is related to the acquired AkzoNobel paper chemicals business.

### GOODWILL IMPAIRMENT TESTING

The Group performs its annual impairment testing of goodwill on September 30. Impairment testing for goodwill is also carried out when changes in circumstances indicate that the carrying amount may not be recoverable. The recoverable amounts of cash-generating units have been determined based on value in use calculations. The key assumptions are long-term growth rate and discount rate. In 2016, impairment testing did not indicate any impairment (2015: no impairment).

Goodwill is allocated to three individual cash-generating unit 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 three reportable segments are Pulp & Paper, Oil & Mining and Municipal & Industrial. A summary of the net book value and goodwill to the Group's reportable segments is presented in the following table.

	Dec 31, 2016	
	Net book value	of which goodwill
Pulp & Paper	1,086	360
Oil & Mining	282	83
Municipal & Industrial	302	79
<b>Total</b>	<b>1,670</b>	<b>522</b>

	Dec 31, 2015	
	Net book value	of which goodwill
Pulp & Paper	1,025	357
Oil & Mining	255	83
Municipal & Industrial	300	78
<b>Total</b>	<b>1,580</b>	<b>518</b>

### KEY ASSUMPTIONS FOR IMPAIRMENT TESTING OF GOODWILL

#### LONG-TERM GROWTH RATE

The long-term growth rate used is purely for the impairment testing of goodwill. The assumptions of the long-term growth rate were used based on the Group's financial forecasts prepared 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 growth rate 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 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.

%	2016	2015
Pulp & Paper	6.5	6.1
Oil & Mining	6.8	6.7
Municipal & Industrial	6.5	5.4

#### SENSITIVITY ANALYSIS

The 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 any impairment losses to be recorded on the reportable segment level.

## 12. OTHER INTANGIBLE ASSETS

Note

2016	Internally generated development costs	Other intangible assets	Prepayments	Total
<b>Acquisition cost at 1 Jan</b>	47.2	208.5	12.8	268.5
Additions		22.8	-8.5	14.3
Acquisitions of subsidiaries and business acquisitions		-4.0		-4.0
Decreases and other changes		-6.6	-0.1	-6.7
Exchange rate differences		1.5		1.5
<b>Acquisition cost at 31 Dec</b>	47.2	222.2	4.2	273.6
<b>Accumulated amortization at 1 Jan</b>	-45.5	-88.3		-133.8
Accumulated amortization relating to decreases and transfers		6.8		6.8
Amortization during the financial year	-1.7	-26.9		-28.6
Impairments		-1.8		-1.8
Exchange rate differences		-0.3		-0.3
<b>Accumulated amortization at 31 Dec</b>	-47.2	-110.5		-157.7
<b>Net book value at 31 Dec</b>	0.0	111.7	4.2	115.9

2015	Internally generated development costs	Other intangible assets	Prepayments	Total
<b>Acquisition cost at 1 Jan</b>	47.2	185.9	13.5	246.6
Additions		8.8	2.6	11.4
Acquisitions of subsidiaries and business acquisitions <sup>1)</sup>		75.6	-0.1	75.5
Decreases and other changes		-62.8	-3.7	-66.5
Exchange rate differences		1.0	0.5	1.5
<b>Acquisition cost at 31 Dec</b>	47.2	208.5	12.8	268.5
<b>Accumulated amortization at 1 Jan</b>	-41.7	-128.6		-170.3
Accumulated amortization relating to decreases and transfers		66.6		66.6
Amortization during the financial year	-3.8	-25.7		-29.5
Exchange rate differences		-0.6		-0.6
<b>Accumulated amortization at 31 Dec</b>	-45.5	-88.3		-133.8
<b>Net book value at 31 Dec</b>	1.7	120.2	12.8	134.7

1) Other intangible assets include AkzoNobel's paper chemicals business, Soto Industries LLC, and Polymer Services LLC, of which acquisition value EUR 75,6 million was allocated to intangible assets as customer relationships, non-compete agreements, patents and technologies.

## 13. PROPERTY, PLANT AND EQUIPMENT

	Land	Buildings and constructions	Machinery and equipment	Other property, plant and equipment	Prepayments and non-current assets under construction <sup>1)</sup>	Total
<b>2016</b>						
<b>Acquisition cost at 1 Jan</b>	54.5	446.3	1,319.2	54.7	127.8	2,002.5
Additions		39.0	130.4	6.5	22.4	198.3
Decreases and other changes	-0.6	-2.2	-0.5	-0.7	-0.7	-4.7
Reclassifications		0.1	4.2	0.4	-4.7	0.0
Exchange rate differences	-0.8	-2.3	-0.6	0.8	9.6	6.7
<b>Acquisition cost at 31 Dec</b>	53.1	480.9	1,452.7	61.7	154.4	2,202.8
<b>Accumulated depreciation at 1 Jan .</b>	-9.5	-247.2	-905.5	-25.0		-1,187.2
Accumulated depreciation related to decreases and transfers		1.6	1.2	0.6		3.4
Depreciation during the financial year		-17.1	-83.4	-5.6		-106.1
Impairments	-0.4	-0.3	-2.2			-2.9
Exchange rate differences		1.8	4.5	-0.7		5.6
<b>Accumulated depreciation at 31 Dec</b>	-9.9	-261.2	-985.4	-30.7		-1,287.2
<b>Net book value at 31 Dec</b>	43.2	219.7	467.3	31.0	154.4	915.6

	Land	Buildings and constructions	Machinery and equipment	Other property, plant and equipment	Prepayments and non-current assets under construction <sup>1)</sup>	Total
<b>2015</b>						
<b>Acquisition cost at 1 Jan</b>	51.0	424.9	1,221.2	53.1	65.6	1,815.8
Additions		10.1	67.1	2.0	86.8	166.0
Acquisitions of subsidiaries and business acquisitions <sup>2)</sup>	2.6	5.1	13.1	0.1	1.7	22.6
Decreases and other changes	-0.4	-9.3	-39.4	-3.2	-0.1	-52.4
Reclassifications		3.6	16.5	0.7	-20.8	0.0
Exchange rate differences	1.3	11.9	40.7	2.0	-5.4	50.5
<b>Acquisition cost at 31 Dec</b>	54.5	446.3	1,319.2	54.7	127.8	2,002.5
<b>Accumulated depreciation at 1 Jan</b>	-8.8	-234.8	-844.1	-21.9		-1,109.6
Accumulated depreciation related to decreases and transfers		9.3	38.6	3.1		51.0
Depreciation during the financial year		-16.2	-78.3	-5.7		-100.2
Impairments	-0.7					-0.7
Exchange rate differences		-5.5	-21.7	-0.5		-27.7
<b>Accumulated depreciation at 31 Dec</b>	-9.5	-247.2	-905.5	-25.0		-1,187.2
<b>Net book value at 31 Dec</b>	45.0	199.1	413.7	29.7	127.8	815.3

1) Prepayment and non-current assets under construction mainly comprises of plant investments.

2) Property, plant and equipment includes acquisitions of AkzoNobel's paper chemicals business, Soto Industries LLC, and Polymer Services LLC with book value of EUR 22.6 million.

## FINANCE LEASE ASSETS

Property, plant and equipment where the Group is a lessee under a finance lease includes the following amounts:

	2016	2015
Acquisition cost – capitalized finance leases	3.5	6.0
Accumulated depreciation	-2.0	-2.5
<b>Net book value at 31 Dec</b>	1.5	3.5

The Group leases buildings and constructions, machinery and equipment and other property, plant and equipment under finance lease agreements.

## 14. AVAILABLE-FOR-SALE FINANCIAL ASSETS

Note

	2016	2015
<b>Net book value at 1 Jan</b>	271.6	293.7
Additions	0.0	4.2
Decreases <sup>1)</sup>	-29.6	-0.1
Change in fair value	-39.5	-26.2
<b>Net book value at 31 Dec</b>	<b>202.5</b>	271.6

1) In 2016, Kemira sold 43.33% of its holding of class B shares in Pohjolan Voima Oy to Etelä-Suomen Voima Oy. The transaction price was EUR 35 million and recognized capital gain was EUR 5 million.

## THE SHARES OF POHJOLAN VOIMA GROUP

The available-for-sale financial assets total EUR 202.5 million (271.6) include the shares in Pohjolan Voima Group of EUR 201.0 million (270.0); their valuation principles are described in more detail in Kemira Group's accounting policies. Kemira Oyj owns 5% of Pohjolan Voima Oy, and 1% of its subsidiary Teollisuuden Voima Oyj.

	Class of shares	Holding %	Class of assets	2016 Fair value	2015 Fair value
Pohjolan Voima Oy	A	5	hydro power	65.2	75.6
Pohjolan Voima Oy <sup>1)</sup>	B	2	nuclear power	31.9	72.8
Pohjolan Voima Oy	B2	7	nuclear power	18.0	18.0
Teollisuuden Voima Oyj	A	2	nuclear power	61.5	79.4
Muut Pohjolan Voima Oy ja Teollisuuden Voima Oyj	C, C2, G5, G6, M	several	several	24.4	24.2
<b>Total</b>				<b>201.0</b>	270.0

The fair value of the shares is based on the discounted cash flow resulting from the difference between the market price and the production cost of electricity. The discount rate used to calculate the net present value at the year-end is an annually defined weighted average cost of capital. The short-term discount rate in 2016 was 3.7% (4.2%) and the long-term discount rate was 4.4% (4.8%). A 10% decrease in the electricity market future price would decrease the fair value of shares by approximately EUR 31 million. An increase of 1 percentage point in the discount rate would decrease the fair value by approximately EUR 27 million.

## 15. CARRYING AMOUNTS OF FINANCIAL ASSETS AND LIABILITIES BY MEASUREMENT CATEGORIES

		Financial instruments under hedge accounting	Financial assets at fair value through profit and loss	Financial assets at fair value through profit and loss (fair value hedging)	Loans and other receivables	Available-for-sale investments	Other liabilities	Total carrying amounts by balance sheet item	Total fair value
2016	Note								
<b>Non-current financial assets</b>									
Investments									
Available-for-sale financial assets <sup>1)</sup>	14					202.5		202.5	202.5
Other assets					4.4			4.4	4.4
<b>Current financial assets</b>									
Receivables <sup>2)</sup>	17								
Interest-bearing receivables					0.2			0.2	0.2
Non-interest-bearing receivables									
Trade receivables					291.1			291.1	291.1
Other receivables <sup>3) 4)</sup>		3.8	2.8	3.4				10.0	10.0
<b>Total</b>		3.8	2.8	3.4	295.7	202.5		508.2	508.2
<b>Non-current financial liabilities</b>									
Interest-bearing liabilities	19								
Loans from financial institutions							294.7	294.7	307.7
Bonds <sup>5)</sup>							352.3	352.3	363.3
Other liabilities							2.4	2.4	2.5
Other liabilities							21.4	21.4	21.4
<b>Current financial liabilities</b>									
Interest-bearing liabilities	19								
Loans from financial institutions							63.0	63.0	65.7
Other liabilities							95.0	95.0	99.2
Non-interest-bearing current liabilities	24								
Trade payables							159.6	159.6	159.6
Other liabilities <sup>3)</sup>		3.0	4.1				33.6	40.7	40.7
<b>Total</b>		3.0	4.1				1,022.0	1,029.1	1,060.1

1) The available-for-sale financial assets mainly include shares of the Pohjolan Voima Group.

2) The carrying amount represents the maximum credit risk.

3) Other receivables and liabilities are financial assets at fair value through profit and loss or financial instruments under hedge accounting.

4) Other receivables include electricity derivative transactions related to collateral of EUR 0.0 million (0.3) paid to counterparties.

5) Includes hedge accounting adjustment of EUR 2.3 million (2.4).

2015	Note	Financial instruments under hedge accounting	Financial assets at fair value through profit and loss	Financial assets at fair value through profit and loss (fair value hedging)	Loans and other receivables	Available-for-sale investments	Other liabilities	Total carrying amounts by balance sheet item	Total fair value
<b>Non-current financial assets</b>									
Investments									
Available-for-sale financial assets <sup>1)</sup>	14					271.6		271.6	271.6
Other assets					5.8			5.8	5.8
<b>Current financial assets</b>									
Receivables <sup>2)</sup>	17								
Interest-bearing receivables					0.2			0.2	0.2
Non-interest-bearing receivables									
Trade receivables					295.4			295.4	295.4
Other receivables <sup>3) 4)</sup>			5.2	3.3	0.3			8.8	8.8
<b>Total</b>			5.2	3.3	301.7	271.6		581.8	581.8
<b>Non-current financial liabilities</b>									
Interest-bearing liabilities	19								
Loans from financial institutions							315.2	315.2	333.1
Bonds <sup>5)</sup>							352.4	352.4	359.2
Other liabilities							3.3	3.3	3.4
Other liabilities							21.4	21.4	21.4
<b>Current financial liabilities</b>									
Interest-bearing liabilities	19								
Loans from financial institutions							36.7	36.7	38.1
Other liabilities							86.0	86.0	89.2
Non-interest-bearing current liabilities	24								
Trade payables							162.4	162.4	162.4
Other liabilities <sup>3)</sup>		12.2	2.1				32.4	46.7	47.9
<b>Total</b>		12.2	2.1				1,009.8	1,024.1	1,054.7

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## FAIR VALUE OF FINANCIAL ASSETS

FAIR VALUE HIERARCHY	2016			Total net	2015			Total net
	Level 1	Level 2	Level 3		Level 1	Level 2	Level 3	
Available-for-sale financial assets	-	-	202.5	202.5	-	-	271.6	271.6
Other investments	-	4.4	-	4.4	-	5.8	-	5.8
Currency investments	-	2.8	-	2.8	-	5.2	-	5.2
Interest rate instruments, hedge accounting	-	3.4	-	3.4	-	3.3	-	3.3
Other instruments	-	3.8	-	3.8	-	-	-	-
Other receivables	-	0.2	-	0.2	-	0.2	-	0.2
Trade receivables	-	291.1	-	291.1	-	295.4	-	295.4
<b>Total</b>	-	<b>305.7</b>	<b>202.5</b>	<b>508.2</b>	-	<b>309.9</b>	<b>271.6</b>	<b>581.5</b>

**Level 1:** Fair value is determined based on quoted market prices.

**Level 2:** Fair value is determined by using valuation techniques. The fair value refers to the value that is observable from the market value of elements of the financial instrument or the market value of corresponding financial instrument; or 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 inputs are not based on observable market data. Level 3 includes mainly the shares of Pohjolan Voima Group.

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

LEVEL 3 SPECIFICATION	Level 3 Total net 2016	Level 3 Total net 2015
<b>Instrument</b>		
Net book value at 1 Jan	271.6	293.7
Effect on the Statement of Comprehensive Income	-39.5	-26.3
Increases	0.0	4.2
Decreases	-29.6	0.0
<b>Net book value at 31 Dec</b>	<b>202.5</b>	<b>271.6</b>

## FAIR VALUE OF FINANCIAL LIABILITIES

FAIR VALUE HIERARCHY	2016			Total net	2015			Total net
	Level 1	Level 2	Level 3		Level 1	Level 2	Level 3	
Non-current interest-bearing liabilities	-	673.5	-	673.5	-	695.1	-	695.1
Repayments from non-current interest-bearing liabilities	-	65.7	-	65.7	-	38.1	-	38.1
Non-current other liabilities	-	21.4	-	21.4	-	21.4	-	21.4
Finance lease liabilities	-	0.5	-	0.5	-	1.2	-	1.2
Loans from financial institutions	-	98.7	-	98.7	-	88.6	-	88.6
Current other liabilities	-	33.6	-	33.6	-	33.6	-	33.6
Currency instruments	-	4.1	-	4.1	-	2.1	-	2.1
Interest rate instruments, hedge accounting	-	2.2	-	2.2	-	1.7	-	1.7
Other instruments, hedge accounting	-	0.8	-	0.8	-	10.5	-	10.5
Trade payables	-	159.6	-	159.6	-	162.4	-	162.4
<b>Total</b>	-	<b>1,060.1</b>	-	<b>1,060.1</b>	-	<b>1,054.7</b>	-	<b>1,054.7</b>



## 16. INVENTORIES

	2016	2015
Materials and supplies	69.0	66.8
Finished goods	134.9	131.3
Prepayments	13.0	8.9
<b>Total</b>	<b>216.9</b>	<b>207.0</b>

In 2016, EUR 1.7 million (2.5) of the inventory value was recognized as an expense in order to decrease the book values of inventories to correspond with their net realizable value.

## 17. TRADE RECEIVABLES AND OTHER RECEIVABLES

	Note	2016	2015
<b>Trade and other receivables</b>			
Trade receivables	28	291.1	295.4
Prepayments		4.3	4.5
Prepaid expenses and accrued income		40.6	45.1
Other receivables		50.1	44.8
<b>Total</b>		<b>386.1</b>	<b>389.8</b>
<b>Interest-bearing receivables</b>			
Loan receivables		0.2	0.2

In 2016, items that are due in a time period longer than one year include trade receivables of EUR 0.0 million (0.5), prepaid expenses and accrued income of EUR 5.5 million (0.8) and non-interest-bearing receivables of EUR 13.3 million (6.5), prepayments 0.9 million (0.0), loans receivable 0.1 million (0.0).

	Note	2016	2015
<b>Net working capital</b>			
Inventories	16	216.9	207.0
Trade receivables and other receivables	17	386.1	389.8
Excluding financing items in other receivables		-16.8	-13.1
Trade payables and other liabilities	24	405.2	388.7
Excluding financing items in other liabilities		-13.6	-22.8
<b>Total</b>		<b>194.6</b>	<b>217.8</b>

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## 18. SHAREHOLDERS' EQUITY

### SHARE CAPITAL

	Number of shares outstanding (1,000)	Share capital
January 1, 2015	152,051	221.8
Treasury shares issued to the Board of Directors	11	
December 31, 2015	152,062	221.8
<b>January 1, 2016</b>	<b>152,062</b>	<b>221.8</b>
Treasury shares issued to key personnel based on long-term share incentive plan 2015	294	
Treasury shares issued to the Board of Directors	13	
Treasury shares given back	-2	
<b>December 31, 2016</b>	<b>152,367</b>	<b>221.8</b>

Kemira Oyj has one class of shares. Each share entitles its holder to one vote at the Annual General Meeting. On December 31, 2016, the share capital was EUR 221.8 million and the total number of shares issued was 155,342,557 including 2,975,327 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.

### SHARE PREMIUM

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

### FAIR VALUE RESERVES

The fair value reserve is a reserve accumulated based on available-for-sale financial assets (shares) measured at fair value and hedge accounting.

### OTHER RESERVES

Other reserves originate from local requirements of subsidiaries. On December 31, 2016, other reserves were EUR 5.0 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 the specific decision, be recognized in share capital.

### EXCHANGE DIFFERENCES

The foreign currency exchange differences arise from the translation of foreign subsidiaries' financial statements. Also, foreign subsidiaries loans have been granted in replacement of their equity, and the exchange differences have been included in foreign currency exchange differences.

### TREASURY SHARES

Kemira had 2,975,327 (3,280,602) of its treasury shares in possession on December 31, 2016. The average share price of treasury shares was EUR 6,73 and they represented 1.9% (2.1%) of the share capital, and the aggregate number of votes conferred by all shares. The aggregate par value of the treasury shares is EUR 4.2 million.

### NON-CONTROLLING INTERESTS

	2016	2015
<b>Net book value at 1 Jan</b>	<b>12.9</b>	12.6
Dividends	-5.8	-5.9
Decreases	0.0	0.0
Share of the profit for the period	6.1	6.2
Exchange rate differences	-0.3	0.0
<b>Net book value at 31 Dec</b>	<b>12.9</b>	12.9

The Group's subsidiaries in which is a non-controlling interest has been disclosed in Note 33.

## 19. INTEREST-BEARING LIABILITIES

	2016	2015
<b>Interest-bearing current liabilities</b>		
Loans from financial institutions	63.0	36.7
Finance lease liabilities	0.4	0.6
Other current liabilities	94.5	85.4
<b>Total</b>	<b>157.9</b>	<b>122.7</b>
<b>Interest-bearing non-current liabilities</b>		
Loans from financial institutions	294.7	315.2
Bonds	352.3	352.4
Finance lease liabilities	0.1	0.6
Other non-current liabilities	2.4	2.7
<b>Total</b>	<b>649.5</b>	<b>670.9</b>
<b>Interest-bearing non-current liabilities maturing in</b>		
2018 (2017)	79.4	67.6
2019 (2018)	210.4	83.0
2020 (2019)	209.7	210.1
2021 (2020)	-	160.2
2022 (2021) or later	150.0	150.0
<b>Total</b>	<b>649.5</b>	<b>670.9</b>
<b>Interest-bearing liabilities maturing in five years or over a longer period of time</b>		
Bond	150.0	150.0
Loans from financial institutions	-	-
<b>Total</b>	<b>150.0</b>	<b>150.0</b>

The foreign currency breakdown of non-current loans is disclosed in Note 28 'Management of financial risks'. The Group's liabilities include neither debentures nor convertible bonds.

	2016	2015
<b>Interest-bearing net liabilities</b>		
Interest-bearing non-current liabilities	649.5	670.9
Interest-bearing current liabilities	157.9	122.7
<b>Interest-bearing liabilities</b>	<b>807.4</b>	<b>793.6</b>
Cash and cash equivalents	173.4	151.5
<b>Total</b>	<b>634.0</b>	<b>642.1</b>

## 20. FINANCE LEASE LIABILITIES

	2016	2015
<b>Maturity of minimum lease payments</b>		
No later than 1 year	0.4	0.6
1–5 years	0.1	0.7
Later than 5 years	0.0	0.0
<b>Total minimum lease payments</b>	<b>0.5</b>	<b>1.3</b>
<b>Present value of finance lease liabilities</b>		
Total minimum lease payments	0.5	1.3
Future finance charges on finance leases	0.0	-0.1
<b>Total</b>	<b>0.5</b>	<b>1.2</b>
<b>Maturity of the present value of finance lease liabilities</b>		
No later than 1 year	0.4	0.6
1–5 years	0.1	0.6
Later than 5 years	0.0	0.0
<b>Total present value of finance lease liabilities</b>	<b>0.5</b>	<b>1.2</b>

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## 21. DEFERRED TAX LIABILITIES AND ASSETS

	Jan 1, 2016	Recognized in the income statement	Recognized in other comprehensive income	Recognized in equity	Acquired and disposed subsidiaries	Exchange differences and reclassifications	Dec 31, 2016
<b>Deferred tax liabilities</b>							
Depreciation difference and untaxed reserves	59.2					-2.4	56.8
Available-for-sale financial assets	24.6		-7.9				16.7
Defined benefit pensions	11.3	0.1	-3.5			-0.1	7.8
Fair value adjustments of net assets acquired <sup>1)</sup>	9.8	-2.2				-0.3	7.3
Other	12.3	-6.7	11.9	0.2		1.0	18.7
<b>Total</b>	117.2	-8.8	0.5	0.2	0.0	-1.8	107.3
Deferred tax assets deducted	-61.3						-44.1
<b>Deferred tax liabilities in the balance sheet</b>	55.9						63.2
<b>Deferred tax assets</b>							
Provisions	17.7	-2.6				1.0	16.1
Tax losses	32.3	-5.6				-3.9	22.8
Defined benefit pensions	4.7	0.2	2.8			0.4	8.1
Other	36.1	-9.5	-2.3			0.3	24.6
<b>Total</b>	90.8	-17.5	0.5	0.0	0.0	-2.2	71.6
Deferred tax liabilities deducted	-61.3						-44.1
<b>Deferred tax assets in the balance sheet</b>	29.5						27.5

	Jan 1, 2015	Recognized in the income statement	Recognized in other comprehensive income	Recognized in equity	Acquired and disposed subsidiaries	Exchange differences and reclassifications	Dec 31, 2015
<b>Deferred tax liabilities</b>							
Depreciation difference and untaxed reserves	55.2	0.7				3.3	59.2
Available-for-sale financial assets	29.8		-5.2				24.6
Defined benefit pensions	2.6	-0.2	8.5			0.4	11.3
Fair value adjustments of net assets acquired <sup>1)</sup>	7.6	-1.7			3.8	0.1	9.8
Other	2.7	9.2	0.3			0.1	12.3
<b>Total</b>	97.9	8.0	3.6	0.0	3.8	3.9	117.2
Deferred tax assets deducted	-51.5						-61.3
<b>Deferred tax liabilities in the balance sheet</b>	46.4						55.9
<b>Deferred tax assets</b>							
Provisions	4.9	5.9				6.9	17.7
Tax losses	56.7	-17.4				-7.0	32.3
Defined benefit pensions	4.2	0.8	-0.2			-0.1	4.7
Other	19.4	13.2	0.8		0.6	2.1	36.1
<b>Total</b>	85.2	2.5	0.6	0.0	0.6	1.9	90.8
Deferred tax liabilities deducted	-51.5						-61.3
<b>Deferred tax assets in the balance sheet</b>	33.7						29.5

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

## 22. DEFINED BENEFIT PENSION PLANS AND EMPLOYEE BENEFITS

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

### FINLAND

The Group's most significant defined benefit plan is in Finland through the Pension Fund Neliapila that takes care of the part of some employees' supplementary pension benefits. The Pension Fund Neliapila covers employees whose employment has begun prior to 1.1.1991 in Kemira, meaning that the fund is closed for new employees. The plan is a final average pay pension plan concerning supplementary pension benefits. Pension Fund Neliapila's obligations are a total of EUR 258.0 million (241.2) and the plan assets are EUR 288.5 million (287.5).

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

The 2017 pension reform legislation and associated mortality rate assumption affects the calculation of supplementary benefits for persons under Pension Fund Neliapila. In the IFRS financial statements for 2015, the new assumed mortality is recognized in other comprehensive income. The pension reform legislation change of EUR 0.5 million is recognized in profit or loss as past service cost in the IFRS financial statements for 2016.

### SWEDEN

A significant defined benefit pension plan is the ITP 2 plan for white-collar employees. To qualify for a full pension, the 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 normal retirement pension, complementary retirement pensions and survivors' pension. In addition, Kemira must have a 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 43.8 million (46.9).

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

	2016	2015
Defined benefit obligations	359.0	337.5
Fair value of plan assets	-311.3	-309.1
<b>Net recognized assets (-) / liabilities (+) in the balance sheet</b>	<b>47.7</b>	<b>28.4</b>
Liabilities of defined benefit plans	79.8	77.3
Receivables for defined benefit plans	-32.1	-48.9
<b>Net recognized receivables (-) / liabilities (+) of defined benefit plans in the balance sheet</b>	<b>47.7</b>	<b>28.4</b>

### AMOUNT OF DEFINED BENEFIT PLANS RECOGNIZED IN THE COMPREHENSIVE INCOME

	2016	2015
Service cost	3.6	3.4
Net interest cost <sup>1)</sup>	1.0	1.7
<b>Components of defined benefit expenses (+) / income (-) recorded in the income statement</b>	<b>4.6</b>	<b>5.1</b>

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

### DEFINED BENEFIT PLANS RECOGNISED IN OTHER COMPREHENSIVE INCOME

	2016	2015
Items resulting from remeasurements on defined benefit pensions <sup>2)</sup>		
Actuarial gains (-) / losses (+) on defined benefit obligation arising from changes in demographic assumptions <sup>3)</sup>	-2.8	-8.8
Actuarial gains (-) / losses (+) on defined benefit obligation arising from changes in financial assumptions <sup>4)</sup>	36.1	-29.0
Actuarial gains (-) / losses (+) on defined benefit obligation arising from experience assumptions	-3.9	3.1
Actuarial gains (-) / losses (+) on plan assets	-12.1	-10.1
<b>Other comprehensive income for defined benefit plans expenses (+) / income (-)</b>	<b>17.3</b>	<b>-44.8</b>

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 9.

3) In 2016, the result represents an actuarial gain and is mainly due to the changed mortality table in the ITP 2 plan in Sweden. In 2015, the actuarial gains are affected by EUR 8.8 million of revised mortality rates related to Pension Fund Neliapila. The updated mortality rate is treated as demographic assumption in the IAS 19 calculation.

4) In 2016 and 2015, the actuarial gains / losses are mainly due to the changes in the discount rates.

## THE MOVEMENT IN THE DEFINED BENEFIT OBLIGATIONS OVER THE PERIOD

	2016	2015
1 Defined benefit obligation at 1 Jan	337.5	375.2
2 Current service cost	2.8	3.0
Interest cost	7.3	6.7
3 Actuarial losses (+) / gains (-) on obligation	29.4	-34.7
4 Exchange differences on foreign plans	-1.5	0.3
5 Effect of business combinations and divestments <sup>5)</sup>	0.0	4.8
6 Benefits paid	-19.7	-19.8
7 Curtailments and settlements	-0.3	-0.1
Past service cost	0.5	0.3
8 Other movements	3.0	1.8
<b>Defined benefit obligation at 31 Dec</b>	<b>359.0</b>	<b>337.5</b>

## THE MOVEMENT IN THE FAIR VALUE OF PLAN ASSETS OVER THE PERIOD IN DEFINED BENEFIT PLANS

	2016	2015
14 Fair value at 1 Jan	309.1	309.6
15 Interest income	6.3	5.0
Contributions	0.9	2.2
16 Actuarial losses (-) / gains (+) on plan assets	12.1	10.1
17 Exchange differences on foreign plans	0.1	-0.7
18 Effect of business combinations and divestments <sup>5)</sup>	0.0	0.5
19 Benefits paid	-16.8	-17.1
20 Other movements	-0.4	-0.5
<b>Fair value of plan assets at 31 Dec</b>	<b>311.3</b>	<b>309.1</b>

5) In 2015 Kemira acquired AkzoNobel paper chemicals business. As a result of the acquisition, the transferred defined benefits plans to Kemira are mainly located in Germany, France, Italy, Indonesia, Thailand, Korea and Australia.

## ANALYSIS OF PLAN ASSETS BY ASSET CATEGORY IN DEFINED BENEFIT PLANS

	2016	2015
28 Interest rate investments and other assets	189.8	175.1
29 Shares and share funds	104.6	117.2
30 Properties occupied by the Group	15.5	15.5
Kemira Oyj's shares	1.4	1.3
<b>Total assets</b>	<b>311.3</b>	<b>309.1</b>

The Finnish Pension Fund Neliapila, which has the most of the defined benefit plan's assets EUR 288.5 million (287.5), consist of interest rate investments and other assets EUR 180.1 million (165.9); shares and share funds EUR 91.5

million (104.8); properties EUR 15.5 million (15.5) and Kemira Oyj's shares EUR 1.4 million (1.3). In Pension Fund Neliapila, the investment positions are 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 scheme. In Pension Fund Neliapila, a significant investment risk can be considered as market risk. Financial market cyclical fluctuations due to market risk are managed by ensuring that the investment position is sufficiently diversified.

The income (+) / expense (-) of actual return on plan assets of the Group's defined benefit plan was EUR 18.5 million (14.7).

## SIGNIFICANT ACTUARIAL ASSUMPTIONS, %

	2016	2015
Discount rate	1.3–3.6	2.0–4.0
Inflation rate	1.1–2.5	1.5–2.5
Future salary increases	1.7–3.0	1.5–3.0
Future pension increases	1.1–3.0	1.7–3.0

The significant assumptions used in calculating the obligations of the Finnish Pension Fund Neliapila were as follows: discount rate 1.3% (2.0%), inflation rate 1.7% (1.5%), future salary increases 1.7% (1.5%) and future pension increases 2.0% (1.7%).

## SENSITIVITY ANALYSES

The sensitivity analysis is based on maintaining other assumptions stagnant even through one assumption changes. In practice, this is unlikely to occur and changes in some of the assumptions may correlate. 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, the defined benefit obligation would increase by EUR 23.6 million (6.6%) in case all other assumptions were held constant.

## PENSION FUND NELIAPILA IN FINLAND

	Defined benefit obligation	Impact on defined benefit obligation
Discount rate 1.3% (December 31, 2016)	258.0	
Discount rate +0.5%	242.7	-5.9%
Discount rate -0.5%	275.0	6.6%
<hr/>		
Future pension increases 2.0% (December 31, 2016)	258.0	
Future pension increases +0.5%	273.1	5.9%
Future pension increases -0.5%	244.2	-5.3%

Change in mortality assumption in which an increase in life expectancy by one year will increase defined benefit obligation to EUR 11.3 million (4.4%).

## ITP 2 IN SWEDEN

	Defined benefit obligation	Impact on defined benefit obligation
Discount rate 2.5% (December 31, 2016)	43.8	
Discount rate +0.5%	40.7	-7.1%
Discount rate -0.5%	47.3	8.0%
<hr/>		
Future salary increases 2.5% (December 31, 2016)	43.8	
Future salary increases +0.5%	44.9	2.5%
Future salary increases -0.5%	42.8	-2.2%

Change in mortality assumption in which an increase in life expectancy by one year will increase defined benefit obligation to EUR 1.8 million (4.1%).

Expected contributions to the defined benefit plans for the year ended December 31, 2017, are EUR 3.4 million.

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## 23. PROVISIONS

	Personnel related provisions	Restructuring provisions	Environmental provisions	Other provisions	Total
<b>Non-current provisions</b>					
At January 1, 2016	3.4	0.7	16.6	7.4	28.1
Exchange rate differences	0.1		0.2	0.5	0.8
Additional provisions and increases in existing provisions		3.5	1.4	0.3	5.2
Used during the financial year	-0.2	-0.2	-1.0		-1.4
Unused amounts reversed	-0.1			-3.8	-3.9
Reclassification	-2.5	-0.5		0.7	-2.3
<b>At December 31, 2016</b>	<b>0.7</b>	<b>3.5</b>	<b>17.2</b>	<b>5.1</b>	<b>26.5</b>
<b>Current provisions</b>					
At January 1, 2016	3.9	8.2	2.6	0.2	14.9
Exchange rate differences					0.0
Additional provisions and increases in existing provisions	7.0	1.1	1.5		9.6
Used during the financial year	-4.0	-3.0	-1.5	-0.2	-8.7
Unused amounts reversed	-1.0	-0.6	-0.4		-2.0
Reclassification	4.1	-3.7			0.4
<b>At December 31, 2016</b>	<b>10.0</b>	<b>2.0</b>	<b>2.2</b>	<b>0.0</b>	<b>14.2</b>

	2016	2015
<b>Analysis of total provisions</b>		
Non-current provisions	26.5	28.1
Current provisions	14.2	14.9
<b>Total</b>	<b>40.7</b>	<b>43.0</b>

In 2016, increases in provisions are mainly related to plant closures and environmental clean-up work in those plants. More information on environmental risks and liabilities can be found in Note 30.

## 24. TRADE PAYABLES AND OTHER CURRENT LIABILITIES

	2016	2015
<b>Trade payables and other liabilities</b>		
Prepayments received	1.2	1.7
Trade payables	159.6	162.4
Accrued expenses	210.8	192.8
Other non-interest-bearing current liabilities	33.6	31.8
<b>Total</b>	<b>405.2</b>	<b>388.7</b>
<b>Accrued expenses</b>		
Employee benefits	60.5	62.6
Items related to revenues and purchases	105.9	80.3
Interest	9.1	9.9
Exchange rate differences	0.2	0.3
Other	35.1	39.7
<b>Total</b>	<b>210.8</b>	<b>192.8</b>



## 25. CASH FLOW FROM DISPOSALS OF SUBSIDIARIES

	2016	2015
<b>Disposal of subsidiaries</b>		
Proceeds from the disposals <sup>1)</sup>	-	1.1
Cash and cash equivalents in disposed companies	-	-
<b>Total cash flow on disposals of subsidiaries</b>	-	1.1
<b>Assets and liabilities disposed of subsidiaries</b>		
Net working capital	-	-
Property, plant and equipment and intangible assets	-	-
Other non-interest-bearing receivables	-	-
Non-controlling interests	-	-
Interest-bearing liabilities	-	-
Non-interest-bearing liabilities	-	-
<b>Total assets and liabilities of disposed subsidiaries</b>	-	-

1) In 2015, proceeds from the disposals includes a final payment related to the sold business in Brazil. Kemira sold Brazilian coagulant business to Bauminas Química Ltda. in 2013.

## 26. BUSINESS COMBINATIONS

### 2015: ACQUISITION OF AKZONOBEL PAPER CHEMICALS BUSINESS

On May 4, 2015 Kemira acquired AkzoNobel paper chemicals business. As a result of the acquisition, six AkzoNobel paper chemicals production sites and about 350 employees transferred to Kemira. The transferred production sites are located in South Korea, Thailand, Indonesia, Australia, Spain and Italy. The acquisition strengthens Kemira's market position especially in the APAC region. It also enables efficiency improvements in global paper chemicals manufacturing network.

The consideration of EUR 127.1 million was paid in cash and it does not involve the contingent consideration. Kemira acquired a 100% interest in acquired business and the acquired business has been consolidated into Pulp & Paper segment. A provisional goodwill of EUR 21.3 million arises from the expected synergy in the business combination.

Based on the acquisition calculation under IFRS 3 EUR 62.0 million was allocated to intangible assets as customer relationships, non-compete agreements, patents and technologies. Acquired intangible assets will be amortized within an average of six years.

The following table summarizes the consideration paid for AkzoNobel paper chemicals business, and the amounts of the assets acquired and liabilities assumed recognized on the acquisition date:

	Note	
<b>Purchase consideration, paid in cash, total</b>		<b>127.1</b>
<b>The assets and liabilities recognized as a result of the acquisition</b>		
Intangible assets	12	62.0
Property, plant and equipment	13	21.9
Inventories		14.8
Trade receivables		8.1
Other receivables		3.5
Cash and cash equivalents		13.6
Deferred tax liabilities		-3.9
Provisions, trade payables and other payables		-14.2
<b>Net assets acquired in fair value</b>		<b>105.8</b>
Goodwill	11	21.3
<b>Total</b>		<b>127.1</b>

Acquisition-related costs of EUR 7.7 million have been included in other operating expenses in the Consolidated Income Statement for the year ended 31 December 2015.

The revenue included in the Consolidated Income Statement since 4 May 2015 contributed by AkzoNobel paper chemicals business was EUR 146 million. It also contributed EBITDA of EUR 13 million over the same period.

Had AkzoNobel paper chemicals business been consolidated from 1 January 2015, the consolidated income statement would show pro forma revenue of EUR 219 million and pro forma EBITDA of EUR 19 million. The pro forma amounts are provided for comparative purposes only and do not necessarily reflect the actual result that would have occurred, nor is it necessarily indicative of future results of operations of the combined companies.

### 2015: ACQUISITIONS OF SOTO INDUSTRIES LLC AND POLYMER SERVICES LLC

On September 2, 2015, Kemira announced that it has acquired certain assets of Soto Industries, LLC, a privately owned company, headquartered in Charlotte, North Carolina. Soto specializes in the application of scale control products, defoamers, and settling agents for the pulp and paper industry. The acquisition is consolidated to Pulp & Paper segment.

On December 8, 2015, Kemira acquired certain assets of Polymer Services, LLC, a privately owned company, headquartered in Plainville, Kansas. Polymer Services, LLC is a highly specialized company focusing on the field application of polymer gel treatments for enhanced or improved oil recovery. The acquisition is consolidated to Oil & Mining segment.

## 27. DERIVATIVE INSTRUMENTS

NOMINAL VALUES	2016			2015		
	< 1 year	> 1 year	Total	< 1 year	> 1 year	Total
<b>Currency instruments</b>						
Forward contracts	260.9	-	260.9	402.3	-	402.3
<b>Interest rate instruments</b>						
Interest rate swaps	31.3	273.5	304.8	65.9	282.9	348.8
of which cash flow hedges	31.3	173.5	204.8	65.9	182.9	248.8
of which fair value hedges	-	100.0	100.0	-	100.0	100.0
<b>Other instruments</b>						
Electricity forward contracts, bought (GWh)	709.5	1,262.0	1,971.5	562.2	893.5	1,455.7
of which cash flow hedges (GWh)	709.5	1,262.0	1,971.5	562.2	893.5	1,455.7

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

FAIR VALUES	2016			2015		
	Assets gross	Liabilities gross	Total net	Assets gross	Liabilities gross	Total net
<b>Currency instruments</b>						
Forward contracts	2.8	-4.1	-1.3	5.2	-2.1	3.1
<b>Interest rate instruments</b>						
Interest rate swaps	3.4	-2.2	1.2	3.3	-1.7	1.6
of which cash flow hedges	-	-2.2	-2.2	-	-1.7	-1.7
of which fair value hedges	3.4	-	3.4	3.3	-	3.3
<b>Other instruments</b>						
Electricity forward contracts, bought	3.8	-0.8	3.0	-	-10.5	-10.5
of which cash flow hedges	3.8	-0.8	3.0	-	-10.5	-10.5

FAIR VALUES	2016				2015			
	Assets gross		Liabilities gross		Assets gross		Liabilities gross	
	< 1 year	> 1 year	< 1 year	> 1 year	< 1 year	> 1 year	< 1 year	> 1 year
<b>Currency instruments</b>								
Forward contract	2.8	-	-4.1	-	5.2	-	-2.1	-
<b>Interest rate instruments</b>								
Interest rate swaps	-	3.4	-	-2.2	-	3.3	-0.6	-1.1
of which cash flow hedges	-	-	-	-2.2	-	-	-0.6	-1.1
of which fair value hedges	-	3.4	-	-	-	3.3	-	-
<b>Other instruments</b>								
Electricity forward contracts, bought	1.5	2.3	-0.1	-0.7	-	-	-5.2	-5.3
of which cash flow hedges	1.5	2.3	-0.1	-0.7	-	-	-5.2	-5.3

## 28. MANAGEMENT OF FINANCIAL RISKS

The Group Treasury manages financial risks in accordance with the treasury policy in force. Approved by the Board of Directors, the treasury policy 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, thus contributing to safeguarding the Company's profit performance and shareholders' equity. Kemira employs various financial instruments within the set limits. The Group uses only instruments of which market values and risks can be monitored continuously and reliably. It uses derivative instruments only for hedging purposes, not for speculation. Management of foreign exchange and interest rate risk is centralized in the Group Treasury.

### FOREIGN EXCHANGE RISK

Foreign currency transaction risk arises from net currency flows denominated in currencies other than the domestic currency within and outside the eurozone. 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 exchange rate risk of the Swedish krona had an equivalent value of approximately EUR 56 million (60), the average hedging rate being 68% (58%). The U.S. dollar denominated exchange rate risk was approximately EUR 42 million (14), the average hedging rate being 51% (65%). The Canadian dollar's denominated exchange rate risk had an equivalent value of approximately EUR 23 million (39), the average hedging rate being 64% (54%). Kemira is exposed to smaller transaction risks in relation to the Chinese renminbi, the Norwegian krona and Brazilian real with the annual exposure in those currencies being approximately EUR 49 million. 49% of NOK's exposure was hedged on an average basis.

Kemira mainly uses forwards and currency options in hedging against foreign exchange risks. The table below shows an estimate of the largest group-level foreign currency cash flow risks.

Transaction exposure (EUR million)	2016				2015			
	SEK	CAD	USD	Other	SEK	CAD	USD	Other
Operative cash flow forecast <sup>1)</sup>	-56.6	22.6	41.6	0.2	-60.4	38.9	14.1	34.6
Loans, net	-2.8	-	408.0	51.1	2.7	1.5	430.7	17.3
Derivatives, operative cash flow hedging	36.1	-15.5	-21.3	-0.3	39.2	-23.2	-9.2	-8.5
Derivatives, hedging of loans, net	-	-	1.0	-48.2	-2.7	-1.5	-65.9	-73.9
<b>Total</b>	<b>-23.3</b>	<b>7.1</b>	<b>429.3</b>	<b>2.8</b>	<b>-21.2</b>	<b>15.7</b>	<b>369.7</b>	<b>-30.5</b>

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

At the turn of 2016/2017, the foreign currency operative cash flow forecast for 2017 was EUR 193 million of which 43% was hedged (41%). The hedge ratio is monitored daily. In hedging the total cash flow risk, a neutral level is achieved when 50% of the forecasted net foreign currency cash flow is hedged. A minimum of 30% 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 average exchange rates, and without hedging, would increase EBITDA by approximately EUR 1 million.

Since Kemira's consolidated financial statements are compiled in euros, Kemira is subject to currency translation risk to the extent that the income statement and balance sheet items of subsidiaries located outside Finland are reported in some other currency than the euro. Most significant translation risk currencies are the U.S. dollar, the Swedish krona, the Canadian Dollar, Chinese Renminbi and the Brazilian real.

Kemira's main equity items denominated in foreign currencies are in 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 of net investments in foreign subsidiaries. These hedges do not apply hedge accounting. To the some foreign subsidiaries loans in U.S. dollar have been granted in replacement of their equity, and currency differences have been included in foreign currency translation differences.

### INTEREST RATE RISK

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 Group may borrow in either fixed or floating rate and use both interest rate swaps and interest rate options as well as forward rate agreements and interest rate futures in order to meet the goal set under the related policy.

The duration of the Group's interest-bearing loan portfolio was 26 months at the end of 2016 (31 months). Excluding the interest rate derivatives, the duration was 22 months (27 months). At the end of 2016, 72% of the Group's entire net debt portfolio, including derivatives and pension loans, was fixed (80%). The net financing cost of the Group was 2.2% (3.9%). 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 and the U.S. dollar-denominated debt. On the balance sheet date, the average interest rate of loan portfolio was approximately 2.1%.

Financial assets and liabilities with fixed interest rate are exposed to price risks arising from changes in interest rates. Financial assets and liabilities with floating interest rate, of which changes alongside market interest rates, are exposed to cash flow risks due to interest rates.

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

Time to interest rate fixing at Dec 31, 2016	<1 year	1–5 years	> 5 year	Total
Floating net liabilities	179.2	-	-	179.2
Fixed net liabilities	31.3	273.5	150.0	454.8
<b>Total</b>	<b>210.5</b>	<b>273.5</b>	<b>150.0</b>	<b>634.0</b>

Time to interest rate fixing at Dec 31, 2015	<1 year	1–5 years	> 5 year	Total
Floating net liabilities	128.3	-	-	128.3
Fixed net liabilities	65.9	297.9	150.0	513.8
<b>Total</b>	<b>194.2</b>	<b>297.9</b>	<b>150.0</b>	<b>642.1</b>

As a consequence of treasury policy, the Group's average interest rate is generally higher than the short-term market interest rates when low rates prevail and, on the other hand, lower than the market interest rates when high rates prevail. If interest rates would rise by one percentage point on January 1, 2017, the resulting interest expenses before taxes incurred by the Group over the next 12 months would increase by approximately EUR 0.5 million (0.4). During 2017, Kemira will reprice 19% (20%) 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 -2.2 million (-1.7) and fair value hedging with market value of EUR 3.4 million (3.3). 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 IAS 39. The Group's accounting policies section describes the Group policy regarding hedge accounting. One percentage point increase in interest rates would have positive impact in market valuation of interest rate swaps of EUR 0.4 million (0.3) in equity.

## 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 forwards 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 asset, 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 +/-5.5 million (+/- 3.5). This impact would be mainly in equity.

## CREDIT AND COUNTERPARTY RISK

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 good credit rating as well as by decentralizing agreements among them.

The Group Treasury approves the new banking relationships of subsidiaries. At present, there are 10 approved financial institution counterparties used by the Group Treasury, all of which have a credit rating of at least 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 179.6 million (160.0). Kemira monitors its counterparty risk on a monthly basis by defining the maximum risk associated with each counter-

party 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.

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 may invest a maximum of EUR 150 million in liquid assets in the commercial papers of Finnish companies and certificates of deposit. The maximum single investment is EUR 25 million for a period of up to three months.

Kemira has a group wide credit policy. According to the policy each customer has a pre-defined risk category and credit limit which are constantly monitored. Based on the customer evaluation Kemira decides the applicable payment terms to minimize credit risk. Pre-approved payment terms have been defined on 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. The age distribution of outstanding trade receivables at the end of the year 2016 is shown in the following chart.

AGEING OF TRADE RECEIVABLES	2016	2015
Undue trade receivables	240.2	248.7
Trade receivables 1–90 days overdue	48.1	44.4
Trade receivables more than 91 days overdue	2.8	2.3
<b>Total</b>	<b>291.1</b>	<b>295.4</b>

In 2016, impairment loss of trade receivables amounted to EUR 2.2 million (2.9).

In USA, Kemira has an accounts receivable purchase facility worth USD 38 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 counterparty and 96.9% of the receivables transferred are derecognized from the balance sheet. The amount of outstanding receivables transferred, which also reflects the carrying value of the receivables before the transfer was EUR 30.4 million (28.8) at 31 December 2016. The amounts recognized in the balance sheet at 31 December 2016 due to the continuing involvement are EUR 1.1 million (0.6) in assets and EUR 0.5 million (0.3) in liabilities.

## LIQUIDITY AND REFINANCING RISKS

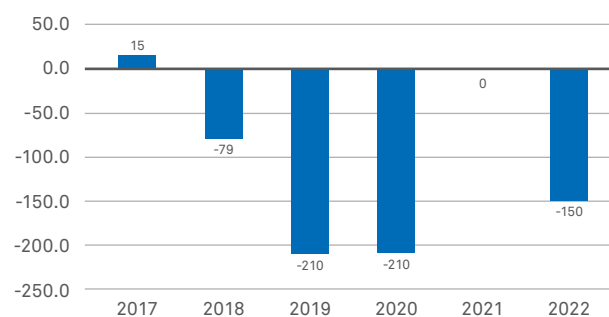
In order to secure its liquidity, the Group uses account overdrafts, money market investments, and revolving credit facility. At the end of 2016 the Group's cash and cash equivalents stood at EUR 173.4 million (151.5), of which short-term investment accounted for EUR 78.3 million (45.4) and bank deposits EUR 95.1 million (106.1).

The Group diversifies its refinancing risk by raising financing from various sources. The Group has bank loans, insurance company loans as well as a short-term domestic commercial paper program, with the objective of balancing the maturity schedule of the loan portfolio and maintaining a sufficiently long maturity for long-term loans.

In accordance with the Group Treasury policy, the average maturity of outstanding loans should always be at least 3 years. 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. Moreover, the maturity profile of the long-term debt portfolio and refinancing should be planned so that a maximum of 30% of the total debt portfolio will mature during the next 12 months. The average maturity of debt at the end of 2016 was 3.5 years.

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 2016, there were no commercial papers outstanding on the market. Simultaneously, the Group had EUR 173.4 million of outstanding liquid short-term investments. In addition, the Group has revolving credit facility of EUR 400 million which will mature on August 29, 2020. At the turn of the year 2016/2017, the revolving credit facility was undrawn. The revolving credit facility represents a flexible form of both short-term and long-term financing with a predictable fee structure.

### MATURITY SPLIT OF INTEREST-BEARING NET DEBT



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**CAPITAL STRUCTURE MANAGEMENT**

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

Besides gearing, certain other bilateral loan agreements contain a covenant according to which the Company represents and warrants that its financial status will remain such that the consolidated shareholders' equity is always at least 25% of the consolidated total assets (equity ratio).

The Board of Directors will propose a per-share dividend of EUR 0.53 for 2016 (EUR 0.53), corresponding to a dividend payout ratio of 88% (114%). Kemira's dividend policy aims at paying a stable and competitive dividend.

	2016	2015
Interest-bearing liabilities	807.4	793.6
Cash and cash equivalents	173.4	151.5
Interest-bearing net liabilities	634.0	642.1
Equity	1,182.9	1,193.2
Total assets	2,620.9	2,595.2
Gearing	54%	54%
Equity ratio	45%	46%

**CASH AND CASH EQUIVALENTS**

	2016		2015	
	Book value	Fair value	Book value	Fair value
Cash and cash equivalents	95.1	95.1	106.1	106.1
Money market investments	78.3	78.3	45.4	45.4
<b>Total</b>	<b>173.4</b>	<b>173.4</b>	<b>151.5</b>	<b>151.5</b>

Money market investments are short-term.

**NON-CURRENT INTEREST-BEARING LOANS AND AMORTIZATIONS OF NON-CURRENT INTEREST-BEARING LOANS**

Currency	Dec 31, 2016		Maturity						
	Fair value	Book value	2017	2018	2019	2020	2021	2022-	
EUR	617.9	599.0	19.3	10.0	210.0	209.7	-	150.0	
USD	117.7	112.7	43.7	69.0	-	-	-	-	
Other	1.1	1.1	0.4	0.4	0.3	-	-	-	
<b>Total</b>	<b>736.7</b>	<b>712.8</b>	<b>63.4</b>	<b>79.4</b>	<b>210.3</b>	<b>209.7</b>	<b>-</b>	<b>150.0</b>	

Currency	Dec 31, 2015		Maturity						
	Fair value	Book value	2016	2017	2018	2019	2020	2021-	
EUR	607.2	586.6	25.8	24.8	15.9	209.9	160.2	150.0	
USD	124.9	120.5	11.5	42.2	66.8	-	-	-	
Other	1.1	1.1	-	0.6	0.3	0.2	-	-	
<b>Total</b>	<b>733.2</b>	<b>708.2</b>	<b>37.3</b>	<b>67.6</b>	<b>83.0</b>	<b>210.1</b>	<b>160.2</b>	<b>150.0</b>	

The figures include the amortizations planned for 2017 (2016) excluding other current loans.

## CASH FLOW FROM ALL FINANCIAL LIABILITIES

Loan type	Dec 31, 2016		2017	2018	Maturity		2021	2022-
	Drawn	Undrawn			2019	2020		
Long-term interest-bearing liabilities	360.0		63.0	79.4	7.9	209.7		
financial expenses			7.6	6.2	4.6	4.4		
Bonds <sup>1)</sup>	352.3				202.3			150.0
financial expenses			8.4	8.4	5.9	3.4	3.4	1.7
Revolving credit facility	-	400.0						
financial expenses			0.8	0.8	0.8	0.6		
Finance lease liabilities	0.5		0.4	0.1				
financial expenses			0.1					
Commercial paper program	-	600.0						
financial expenses								
Other interest-bearing current loans	94.6		94.6					
financial expenses			3.0					
<b>Interest-bearing loans total</b>	<b>807.4</b>	<b>1,000.0</b>	<b>177.9</b>	<b>94.9</b>	<b>221.5</b>	<b>218.1</b>	<b>3.4</b>	<b>151.7</b>
Trade payables	159.6							
Forward contracts								
liabilities	4.1		4.1					
assets	-2.8		-2.8					
Other derivatives <sup>2)</sup>	3.0		0.1	0.2	0.5	2.2		
<b>Trade payables and derivatives total</b>	<b>163.9</b>		<b>1.4</b>	<b>0.2</b>	<b>0.5</b>	<b>2.2</b>		
<b>Total</b>	<b>971.3</b>	<b>1,000.0</b>	<b>179.3</b>	<b>95.1</b>	<b>222.0</b>	<b>220.3</b>	<b>3.4</b>	<b>151.7</b>
Guarantees			3.1					

Loan type	Dec 31, 2015		2016	2017	Maturity		2020	2021-
	Drawn	Undrawn			2018	2019		
Long-term interest bearing liabilities	354.6	50.0	36.7	67.4	82.8	7.5	160.2	-
financial expenses			7.1	6.4	5.1	3.4	3.2	
Bonds <sup>1)</sup>	352.4					202.4		150.0
financial expenses			8.4	8.4	8.4	8.4	5.9	3.4
Revolving credit facility	-	400.0						
financial expenses			0.8	0.8	0.8	0.8	0.6	
Finance lease liabilities	1.2		0.6	0.2	0.2	0.2		
financial expenses			0.1					
Commercial paper program	-	600.0						
financial expenses								
Other interest-bearing current loans	85.4		85.4					
financial expenses			3.0					
<b>Interest-bearing loans total</b>	<b>793.6</b>	<b>1,050.0</b>	<b>142.1</b>	<b>83.2</b>	<b>97.3</b>	<b>222.7</b>	<b>169.9</b>	<b>153.4</b>
Trade payables	162.4							
Forward contracts								
liabilities	2.1		2.1					
assets	-5.2		-5.2					
Other derivatives <sup>2)</sup>	12.2		5.6	3.3	2.1	0.4	0.8	
<b>Trade payables and derivatives total</b>	<b>171.5</b>		<b>2.5</b>	<b>3.3</b>	<b>2.1</b>	<b>0.4</b>	<b>0.8</b>	
<b>Total</b>	<b>965.1</b>	<b>1,050.0</b>	<b>144.6</b>	<b>86.5</b>	<b>99.4</b>	<b>223.1</b>	<b>170.7</b>	<b>153.4</b>
Guarantees			3.0					

1) Includes hedge accounting adjustment of EUR 2.3 million (2.4).

2) Interest rate swaps and electricity forwards.

## 29. COMMITMENTS AND CONTINGENT LIABILITIES

COMMITMENTS	2016	2015
<b>Assets pledged</b>		
On behalf of own commitments	5.9	6.1
<b>Guarantees</b>		
On behalf of own commitments	54.4	52.9
On behalf of others	3.1	3.0
<b>Operating lease commitments – the Group as lessee</b>		
Minimum lease payments under operating leases are as follows:		
No later than 1 year	39.7	37.5
Later than 1 year and no later than 5 years	88.7	89.5
Later than 5 years	82.8	95.2
<b>Total</b>	<b>211.2</b>	<b>222.2</b>
<b>Other obligations</b>		
On behalf of own commitments	1.1	1.1
On behalf of associates	0.4	0.6

### THE MOST SIGNIFICANT OFF-BALANCE SHEET INVESTMENTS COMMITMENTS

On December 31, 2016, major amounts of contractual commitments for the acquisition of property, plant and equipment were about EUR 48.4 million (22.6) for plant investments.

### LITIGATION

On August 19, 2009, Kemira Oyj received a summons stating that Cartel Damage Claims Hydrogen Peroxide SA had filed an action against six hydrogen peroxide manufacturers, including Kemira, for violations of competition law applicable to the hydrogen peroxide business. In its claim, Cartel Damage Claims Hydrogen Peroxide SA seeks an order from the Regional Court of Dortmund in Germany to obtain an unabridged and full copy of the decision of the European Commission, dated May 3, 2006, and demands that the defendants, including Kemira, are jointly and severally ordered to pay damages together with accrued interest on the basis of such decision.

Cartel Damage Claims Hydrogen Peroxide SA stated that it will specify the amount of the damages at a later stage after the full copy of the decision of the European Commission has been obtained by it. In order to provide initial guidance as to the amount of such damages, Cartel Damage Claims Hydrogen Peroxide SA presented in its claim a preliminary calculation of the alleged overcharge having been paid to the defendants as a result of the

violation of the applicable competition rules by the parties which have assigned and sold their claim to Cartel Damage Claims Hydrogen Peroxide SA. In the original summons such alleged overcharge, together with accrued interest until December 31, 2008, was stated to be EUR 641.3 million.

Thereafter Cartel Damage Claims Hydrogen Peroxide SA delivered to the attorneys of the defendants an April 14, 2011 dated brief addressed to the court and an expert opinion. In the said brief the minimum damage including accrued interest until December 31, 2010, based on the expert opinion, was stated to be EUR 475.6 million. It is further stated in the brief that the damages analysis of the expert does not include lost profit.

The process is currently pending in the Regional Court of Dortmund, Germany. By its decision on April 29, 2013 it decided to suspend the case and to ask a preliminary ruling on jurisdiction from the Court of Justice of the European Union which has given its ruling on May 21, 2015. Thereafter, on request by Regional Court of Dortmund, the parties have filed their briefs on admissibility of the proceedings. In its brief responding to the said request of the court Cartel Damage Claims Hydrogen Peroxide SA has additionally waived seeking an order to obtain an unabridged and full copy of the decision of the European Commission, dated May 3, 2006, and demanded from Kemira and the three other defendants jointly and severally damages an amount to be decided by the court but at least EUR 196.2 million together with accrued interest calculated from August 24, 2009 at an interest rate exceeding by 5 per cent the base rate at a time, and other interest of EUR 97.6 million. Kemira defends against the claim of Cartel Damage Claims Hydrogen Peroxide SA.

Kemira Oyj has additionally been served on April 28, 2011 a summons stating that Cartel Damage Claims Hydrogen Peroxide SA had filed an application for summons in the municipal court of Helsinki for violations of competition law applicable to the hydrogen peroxide business claiming from Kemira Oyj as maximum compensation EUR 78.0 million as well as overdue interest starting from November 10, 2008 as litigation expenses with overdue interest. The referred violations of competition law are the same as those on basis of which CDC has taken legal action in Germany in Dortmund. The municipal court made on July 4, 2013 a decision which could not be appealed separately. In its decision the municipal court considered to have jurisdiction and that the claims made by the claimant were at least not totally time-barred. 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. 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 includes significant limitations of liabilities for Kemira regarding the pending legal actions filed by CDC entities in Dortmund, Germany



(mentioned above) and in Amsterdam, the Netherlands (mentioned below).

Kemira Oyj's subsidiary Kemira Chemicals Oy (former Finnish Chemicals Oy) has on June 9, 2011 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 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 interested 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.

As mentioned above the settlement between Kemira and CDC relating the Helsinki litigation also includes significant limitations of liabilities for Kemira regarding the pending legal actions filed by CDC entities in Dortmund, Germany and 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 processes. No assurance can be given as to the outcome of the processes, and unfavorable judgments against Kemira could have a material 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 materially adverse effect upon its consolidated results or financial position.

## 30. ENVIRONMENTAL RISKS AND LIABILITIES

The bulk of Kemira's business is in the chemical industry. Our 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 the consolidated financial statements in accordance with IFRS and observes the established internal environmental principles and procedures. Provisions for environmental remediation totaled EUR 19.4 million (19.2). The biggest provisions relate to site closures and the limited reconditioning of the sediment of a lake adjacent in Vaasa, Finland.

### EMISSION ALLOWANCES

The Group holds assigned emissions allowances under the EU Emissions Trading System in Sweden. At Group level, the allowances showed a net surplus of 56,165 tons in 2016 (a net surplus of 62,349 tons).

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## 31. RELATED PARTIES

Parties are considered to be related if one party has the ability to control the other party or exercise significant influence, or 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 Neliapiila. 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 <sup>1)</sup>	Severance payments, EUR	2016	2015
CEO Jari Rosendal	567,000	324,000	603,177	-	1,494,177	669,765
Deputy CEO Jukka Hakkila <sup>2)</sup>	181,653	86,502	211,117	-	479,272	225,242
Other members of Management Board <sup>3)</sup>	2,194,639	997,872	1,805,836	-	4,998,347	2,519,733
<b>Total</b>	<b>2,943,292</b>	<b>1,408,374</b>	<b>2,620,130</b>	<b>-</b>	<b>6,971,796</b>	<b>3,414,740</b>

1) Share-based incentive plans for management and key personnel are disclosed in Note 5.

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 CEO

Remuneration of 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 60 percent of the annual 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 to cover taxes and the tax-related costs arising from the reward.

CEO Jari Rosendal 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. CEO's retirement age is determined by TyEL. CEO has not a separate supplementary pension arrangement.

A mutual termination notice period of six months applies to CEO. 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, 2016, the Annual General Meeting decided that the 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, Kemira shares acquired from the securities market, and 60% is paid in cash. The shares will be transferred to the members of the Board of Directors within two weeks after the release of Kemira's Interim Report January 1 - March 31, 2016.

There are no special terms or conditions associated with owning these 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, EUR	Cash compensation, EUR <sup>4)</sup>	2016 Total, EUR	2015 Total, EUR
Jari Paasikivi, Chairman	3,043	31,561	59,934	91,495	92,107
Kerttu Tuomas, Vice Chairman	1,864	19,333	37,758	57,091	58,899
Wolfgang Büchele	1,483	15,381	35,373	50,754	53,160
Winnie Fok	1,483	15,381	49,773	65,154	69,960
Juha Laaksonen	1,864	19,333	41,358	60,691	61,299
Timo Lappalainen	1,483	15,381	32,973	48,354	48,960
Kaisa Hietala (since March 21, 2016)	1,483	15,381	31,773	47,154	-
<b>Total</b>	12,703	131,751	288,942	420,693	384,385

4) Includes the annual fees and the meeting fees.

## TRANSACTIONS CARRIED OUT WITH RELATED PARTIES

	2016	2015
<b>Revenue</b>		
Associated companies	1.5	1.7
<b>Purchases</b>		
Associated companies	3.3	3.2
Pension Fund Neliapila	1.2	1.1
<b>Total</b>	4.5	4.3
<b>Receivables</b>		
Associated companies	0.1	0.1
<b>Liabilities</b>		
Associated companies	0.3	0.3

The amount of contingent liabilities on behalf of associates are presented in Note 29.

Related parties include Pension Fund Neliapila, which is a separate legal entity. Pension Fund Neliapila manages Kemira Oyj'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 are presented in more detail in Note 22.

No loans had been granted to the key persons of the management at year-end of 2015 and 2016, 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.

## 32. CHANGES IN THE GROUP STRUCTURE

## DIVESTMENTS OF GROUP COMPANIES

- TRICHEM SOLUTIONS PRIVATE LIMITED was sold on February 6, 2016.
- Kemira Asia Pacific Pte. Ltd. was dissolved on February 19, 2016.
- Kemira de Mexico S.A. de C.V. was dissolved on February 24, 2016.

## CHANGES IN THE HOLDINGS OF GROUP COMPANIES WITHIN THE GROUP

- Kemira Korea Corporation was merged with and into Kemira Chemicals Korea Corporation on January 1, 2016.
- Kemira Logistics, Inc. merged with and into Kemira Water Solutions, Inc. on March 31, 2016.
- PT Kemira Indonesia sold shares of PT Kemira Chemicals Indonesia to Kemira Oyj on August 15, 2016.
- Kemira Oyj sold shares of Kemira Chemicals Germany GmbH to Kemira Germany GmbH on October 14, 2016.
- Kemira Germany Sales GmbH merged with and into Kemira Chemicals Germany GmbH on December 15, 2016.

## NAME CHANGES

Former name	New name
Kemira Chemicals India Private Limited	TRICHEM SOLUTIONS PRIVATE LIMITED

## 33. THE GROUP'S SUBSIDIARIES AND INVESTMENT IN ASSOCIATES

## SUBSIDIARIES

	City	Country	Kemira Group's Holding %	Kemira Oyj's Holding %	Non-controlling interest's Holding %
<b>Kemira Oyj (parent company)</b>	Helsinki	Finland			
Aliada Quimica de Portugal Lda.	Estarreja	Portugal	50.1		49.9
AS Kemivesi	Tallinn	Estonia	100.0	100.0	
CJSC "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.	Harrogate	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.	Maitland	Canada	100.0	100.0	
Kemira Chemicals Germany GmbH	Frankfurt am Main	Germany	100.0		
Kemira Chemicals Korea Corporation	Gunsan-City	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 Chemicals Spain S.A.	Barcelona	Spain	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.	Lauterbourg	France	100.0		
Kemira Europe Oy	Helsinki	Finland	100.0	100.0	
Kemira Finance Solutions B.V.	Rotterdam	Netherlands	100.0		
Kemira France SAS	Lauterbourg	France	100.0		
Kemira Gdańsk Sp. z o.o.	Gdansk	Poland	100.0		
Kemira Germany GmbH	Leverkusen	Germany	100.0	100.0	
Kemira GrowHow A / S	Fredericia	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 Ibérica Sales and Marketing S.L.	Barcelona	Spain	100.0		
Kemira International Finance B.V.	Rotterdam	Netherlands	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 Nderland Holding B.V.	Rotterdam	Netherlands	100.0	100.0	
Kemira Operon Oy	Helsinki	Finland	100.0	100.0	
Kemira Rotterdam B.V.	Rotterdam	Netherlands	100.0		
Kemira South Africa (Pty) Ltd.	Weltevredenpark	South Africa	100.0		
Kemira Świecie Sp. z o.o.	Swiecie	Poland	100.0	100.0	

	City	Country	Kemira Group's Holding %	Kemira Oyj's Holding %	Non-controlling interest's Holding %
Kemira Taiwan Corporation	Taipei	Taiwan	100.0		
Kemira (Thailand) Co., Ltd.	Bangkok	Thailand	100.0		
Kemira Uruguay S.A.	Montevideo	Uruguay	100.0		
Kemira Water Danmark A / S	Esbjerg	Denmark	100.0	100.0	
Kemira Water Solutions Brasil -Produtos para tratamento de agua Ltda.	São Paulo	Brazil	100.0	100.0	
Kemira Water Solutions Canada Inc.	Varennes Qs	Canada	100.0		
Kemira Water Solutions, Inc.	Atlanta, GA	United States	100.0		
Kemwater Brasil S.A.	Camaçari	Brazil	100.0		
Kemwater ProChemie s.r.o.	Kosmonosy	Czech Republic	95.1		4.9
PT Kemira Indonesia	Jakarta	Indonesia	100.0	74.8	
PT Kemira Chemicals Indonesia	Pasuruan	Indonesia	99.8		0.2
Scandinavian Tanking System A / S	Copenhagen	Denmark	100.0		
ZAO Avers	St. Petersburg	Russia	100.0		

## ASSOCIATES

	City	Country	Kemira Group's Holding %	Kemira Oyj's Holding %
FC Energia Oy	Ikaalinen	Finland	34.0	
FC Power Oy	Ikaalinen	Finland	34.0	
Haapaveden Ympäristöpalvelut Oy	Haapavesi	Finland	40.5	
Honkalahden Teollisuuslaituri Oy	Joutseno	Finland	50.0	

## 34. EVENTS AFTER THE BALANCE SHEET DATE

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

## KEMIRA OYJ INCOME STATEMENT (FAS)

	Note	Year ended 31 December	
		2016	2015
<b>Revenue</b>	2	<b>1,364,211,556.79</b>	1,347,012,217.00
Change in inventories of finished goods	4	2,755,294.03	3,953,695.97
Other operating income	3	2,273,459.05	3,002,062.57
Materials and services	4	-851,640,194.15	-866,441,566.01
Personnel expenses	5	-47,003,676.91	-42,156,568.73
Depreciation, amortization and impairments	6	-38,511,189.49	-38,197,982.33
Other operating expenses	4	-393,603,485.01	-336,150,104.02
<b>Operating profit / loss</b>		<b>38,481,764.31</b>	71,021,754.45
Financial income and expenses	7	182,211,554.97	104,816,107.86
<b>Profit / loss before appropriations and taxes</b>		<b>220,693,319.28</b>	175,837,862.31
Appropriations	8	2,694,417.39	2,235,818.95
Income taxes	9	-7,605,755.19	-12,917,723.00
<b>Net profit for the period</b>		<b>215,781,981.48</b>	165,155,958.26

## KEMIRA OYJ BALANCE SHEET (FAS)

		As at 31 December	
	Note	2016	2015
<b>ASSETS</b>			
<b>NON-CURRENT ASSETS</b>			
Intangible assets	10	82,956,948.85	100,880,994.96
Property, plant and equipment	11	30,383,281.23	33,434,220.14
<b>Investments</b>	12		
Shares in subsidiaries		2,103,542,628.42	2,083,703,472.85
Other investments		118,574,547.83	148,222,158.17
<b>Total investments</b>		2,222,117,176.25	2,231,925,631.02
<b>Total non-current assets</b>		2,335,457,406.33	2,366,240,846.12
<b>CURRENT ASSETS</b>			
Inventories	13	83,345,318.15	85,390,061.32
Non-current receivables	14	310,822,574.15	266,310,037.66
Current receivables	14	290,600,971.41	317,022,561.67
Money market investments	15	70,719,098.15	30,394,906.22
Cash and cash equivalents		57,070,058.22	63,910,883.58
<b>Total current assets</b>		812,558,020.08	763,028,450.45
<b>Total assets</b>		3,148,015,426.41	3,129,269,296.57
<b>EQUITY AND LIABILITIES</b>			
<b>EQUITY</b>			
	16		
Share capital		221,761,727.69	221,761,727.69
Share premium		257,877,731.94	257,877,731.94
Fair value reserve		2,717,240.52	-4,657,093.00
Unrestricted equity reserve		199,963,876.20	199,963,876.20
Retained earnings		406,303,596.51	319,793,483.44
Net profit / loss for the financial year		215,781,981.48	165,155,958.26
<b>Total equity</b>		1,304,406,154.34	1,159,895,684.53
<b>Appropriations</b>	17	6,901,698.88	9,596,116.27
<b>Obligatory provisions</b>	18	21,514,581.37	19,484,405.66
<b>LIABILITIES</b>			
Non-current liabilities	19	610,798,960.37	601,111,567.30
Current liabilities	20	1,204,394,031.45	1,339,181,522.81
<b>Total liabilities</b>		1,815,192,991.82	1,940,293,090.11
<b>Total equity and liabilities</b>		3,148,015,426.41	3,129,269,296.57

## KEMIRA OYJ CASH FLOW STATEMENT (FAS)

	2016	2015
<b>CASH FLOW FROM OPERATING ACTIVITIES</b>		
Net profit for the period	215,781,981.48	165,155,958.26
Adjustments for		
Depreciation, amortization and impairments	38,511,189.49	38,197,982.33
Income taxes	7,605,755.19	12,917,723.00
Finance expenses, net	-182,211,554.97	-104,816,107.86
Other non-cash items and expenses not involving cash flow	11,774,509.54	14,182,127.73
Operating profit before change in working capital	91,461,880.73	125,637,683.46
<b>Change in working capital</b>		
Increase (-) / decrease (+) in inventories	2,044,743.17	-8,106,386.66
Increase (-) / decrease (+) in trade and other receivables	30,500,627.07	-47,042,548.95
Increase (+) / decrease (-) in trade payables and other liabilities	-20,456,698.29	30,052,413.06
<b>Change in working capital</b>	<b>12,088,671.95</b>	<b>-25,096,522.55</b>
<b>Cash generated from operations before financing items and taxes</b>		
	103,550,552.68	100,541,160.91
Interest and other finance cost paid	-27,030,509.80	-40,242,953.02
Interest and other finance income received	21,655,705.11	9,273,523.73
Realized exchange gains and losses	-9,324,161.58	-5,553,184.83
Dividends received	173,072,698.42	134,536,455.90
Income taxes paid	-5,345,063.26	-1,141,217.06
<b>Net cash generated from operating activities</b>	<b>256,579,221.57</b>	<b>197,413,785.63</b>
<b>CASH FLOW FROM INVESTING ACTIVITIES</b>		
Acquisitions of subsidiaries and increases in subsidiaries	-19,906,487.93	-534,837,144.91
Acquisitions of associated companies, and other shares	0.00	-4,224,953.64
Purchases of intangible assets	-13,498,891.85	-45,749,471.95
Purchases of property, plant and equipment	-4,183,211.65	-10,927,742.35
Proceeds from sale of subsidiaries and other shares	38,649,269.00	134,852.81
Proceeds from sale of other plant, property and equipment and intangible assets	276,510.56	3,148.42
Change in loan receivables, net increase (-) / decrease (+)	-44,512,536.49	-84,058,933.99
<b>Net cash used in investing activities</b>	<b>-43,175,348.36</b>	<b>-679,660,245.61</b>
<b>Cash flow before financing</b>	<b>213,403,873.21</b>	<b>-482,246,459.98</b>
<b>CASH FLOW FROM FINANCING ACTIVITIES</b>		
Proceeds from non-current interest-bearing liabilities (+)	50,000,000.00	250,000,000.00
Repayment from non-current interest-bearing liabilities (-)	-40,312,606.93	-31,792,432.89
Short-term financing, net increase (+) / decrease (-)	-110,808,548.15	353,737,864.80
Dividends paid	-80,748,892.00	-80,587,227.16
Received group contribution	2,850,000.00	4,051,000.00
<b>Net cash used in financing activities</b>	<b>-179,020,047.08</b>	<b>495,409,204.75</b>
<b>Net increase (+) / decrease (-) in cash and cash equivalents</b>	<b>34,383,826.13</b>	<b>13,162,744.77</b>
Cash and cash equivalents at 31 Dec	127,789,156.37	94,305,789.80
Exchange gains (+) / losses (-) on cash and cash equivalents	-900,459.56	-4,503,177.80
Cash and cash equivalents at 1 Jan	94,305,789.80	85,646,222.83
<b>Net increase (+) / decrease (-) in cash and cash equivalents</b>	<b>34,383,826.13</b>	<b>13,162,744.77</b>



# NOTES TO KEMIRA OYJ FINANCIAL STATEMENTS

## 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). Changes in Finnish Accounting Act have been adopted and prior year has been reclassified accordingly. Kemira Group's financial statements have been prepared in accordance with the International Financial Reporting Standards (IFRS), and the parent company observes the Group's accounting policies according to FAS whenever it has been possible. Mainly the accounting policies are presented below, in which the practice differs from the Group's accounting policies. In other respects the Group's accounting policies are observed.

### REVENUE

Kemira Oyj's revenue consists of mainly revenues from the sale of goods and services. Revenue includes also inter-company service charges due to change in definition of Accounting Act effective 2016. Reclassifications have been applied also to comparison figures.

### 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 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, cash proportion of share-based incentive plans is recognized as an expense in the performance year and share proportion in the year 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

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 other derivatives used for hedging purposes, the efficient part of which is booked to a fair value reserve. Inefficient part of other derivative instruments used for hedging purposes is booked as profit or loss into the income statement.

The valuation methods of derivative instruments are described in the Group's accounting policies and in Note 28 in the Consolidated Financial Statements.

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Note

## 2. REVENUE

	2016	2015
<b>Revenue by segments</b>		
Pulp & Paper	724,290,860.70	722,951,092.02
Oil & Mining	121,216,154.43	107,914,648.61
Municipal & Industrial	278,400,094.75	282,421,395.13
Intercompany revenue	240,304,446.91	233,725,081.24
<b>Total</b>	<b>1,364,211,556.79</b>	<b>1,347,012,217.00</b>
<b>Distribution of revenue by geographical areas as a percentage of total revenue</b>		
Finland, domicile of the parent company	27	28
Other Europe, Middle East and Africa	59	59
Americas	7	7
Asia Pacific	7	6
<b>Total</b>	<b>100</b>	<b>100</b>

3. OTHER OPERATING INCOME <sup>1)</sup>

	2016	2015
Gain on the sale of property, plant and equipment	122,813.14	3,148.42
Rent income	975,904.36	1,184,262.09
Other income from operations	1,174,741.55	1,814,652.06
<b>Total</b>	<b>2,273,459.05</b>	<b>3,002,062.57</b>

1) Some items presented earlier in other operating income have been transferred to revenue due to change in definition of Accounting Act effective 2016. Reclassifications have been applied also to comparison figures.

## 4. COSTS

	2016	2015
<b>Change in inventories of finished goods</b>	<b>-2,755,294.03</b>	<b>-3,953,695.97</b>
Materials and services		
Materials and supplies		
Purchases during the financial year	840,073,110.26	857,552,177.95
Change in inventories of materials and supplies	1,690,639.92	-702,429.06
External services	9,876,443.97	9,591,817.12
<b>Total materials and services</b>	<b>851,640,194.15</b>	<b>866,441,566.01</b>
<b>Personnel expenses</b>	<b>47,003,676.91</b>	<b>42,156,568.73</b>
Other operating expenses		
Rents	9,586,333.83	5,970,972.97
Intercompany tolling manufacturing charges	179,941,960.81	179,054,783.95
Other intercompany charges	149,981,501.52	92,401,538.68
Other expenses	54,093,688.85	58,722,808.42
<b>Total other operating expenses</b>	<b>393,603,485.01</b>	<b>336,150,104.02</b>
<b>Total costs</b>	<b>1,289,492,062.04</b>	<b>1,240,794,542.79</b>

In 2016, the costs included a net increase in the obligatory provisions of EUR +2.0 million (personnel expenses EUR -0.3 million, rents EUR +2.4 million and other expenses EUR -0.1 million), and in 2015, the costs included a net decrease in the obligatory provisions of EUR -0.4 million (personnel expenses EUR -0.7 million, rents EUR -0.4 million and other expenses EUR +0.7 million).

## DELOITTE &amp; TOUCHE OY'S FEES AND SERVICES

	2016	2015
Audit fees	423,500.00	415,000.00
Tax services	130,530.00	50,000.00
Other services <sup>1)</sup>	412,554.00	445,000.00

1) In 2016, other services include fees mainly related to the internal rationalization projects and AkzoNobel's global paper chemicals business acquisition. In 2015, other services include fees mainly related to the AkzoNobel's global paper chemicals business acquisition.

## 5. PERSONNEL EXPENSES AND NUMBER OF PERSONNEL

	2016	2015
Emoluments of the Board of Directors, the CEOs and his Deputy <sup>1)</sup>	2,394,141.66	1,279,391.34
Other wages and salaries	35,867,385.14	32,508,815.66
Pension expenses	6,823,398.55	6,324,848.06
Other personnel expenses	1,918,751.56	2,043,513.67
<b>Total</b>	<b>47,003,676.91</b>	<b>42,156,568.73</b>

1) The emolument of the Kemira Oyj's CEO was EUR 1,494,177 (669,765) including bonuses and share-based payments of EUR 927,177 (109,965). The emolument of the Kemira Oyj's Deputy CEO was EUR 479,272 (225,242) including bonuses and share-based payments of EUR 297,619 (44,287).

Other transactions between related parties are presented in Note 31 in the Notes to the Consolidated Financial Statements.

	2016	2015
<b>Personnel at 31 Dec</b>		
Pulp & Paper	91	83
Oil & Mining	5	5
Municipal & Industrial	31	28
Other, of which	366	371
R&D and Technology	162	173
<b>Total</b>	<b>493</b>	<b>487</b>
<b>Personnel, average</b>	<b>495</b>	<b>483</b>

## 6. DEPRECIATION, AMORTIZATION AND IMPAIRMENTS

	2016	2015
<b>Depreciation according to plan and impairments</b>		
Intangible assets		
Intangible rights	12.268.318.14	10.452.379.69
Other intangible assets	19.154.619.82	21.147.260.08
Tangible assets		
Impairment of land and water	109.776.05	0.00
Buildings and constructions	351.731.82	346.416.22
Machinery and equipment	6.611.898.84	6.232.973.18
Other property, plant and equipment	14.844.82	18.953.16
<b>Total</b>	<b>38.511.189.49</b>	<b>38.197.982.33</b>

Note

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## 7. FINANCE INCOME AND EXPENSES

	2016	2015
<b>Dividend income</b>		
From the Group companies	172,934,588.42	134,501,680.90
From others	138,110.00	34,775.00
<b>Total</b>	<b>173,072,698.42</b>	<b>134,536,455.90</b>
<b>Interest income</b>		
From the Group companies	14,394,515.64	11,071,308.86
From others	436,754.97	765,614.19
<b>Total</b>	<b>14,831,270.61</b>	<b>11,836,923.05</b>
<b>Interest expenses</b>		
To the Group companies	-846,093.05	-696,132.31
To others	-16,928,675.43	-18,333,242.85
<b>Total</b>	<b>-17,774,768.48</b>	<b>-19,029,375.16</b>
<b>Other finance income</b>		
From the Group companies	3,841,440.59	894,798.55
From others	7,610,429.09	134,852.81
<b>Total</b>	<b>11,451,869.68</b>	<b>1,029,651.36</b>
<b>Other finance expenses</b>		
To the Group companies <sup>1)</sup>	0.00	-16,579,854.88
To others	-2,305,296.97	-8,397,520.47
<b>Total</b>	<b>-2,305,296.97</b>	<b>-24,977,375.35</b>
<b>Exchange gains and losses</b>		
From the Group companies	8,043,452.25	3,277,812.55
From others	-5,107,670.54	-1,857,984.49
<b>Total</b>	<b>2,935,781.71</b>	<b>1,419,828.06</b>
<b>Total finance income and expenses</b>	<b>182,211,554.97</b>	<b>104,816,107.86</b>
<b>Exchange gains and losses</b>		
Realized	-9,324,161.58	-5,553,184.83
Unrealized	12,259,943.29	6,973,012.89
<b>Total</b>	<b>2,935,781.71</b>	<b>1,419,828.06</b>

1) In 2016, other finance expenses from the Group companies include impairment of subsidiary shares of EUR 0.0 million (16.6).

## 8. APPROPRIATIONS

	2016	2015
<b>Change in difference between scheduled and actual depreciation (increase - / decrease +)</b>		
Intangible rights	14,493.48	-907,451.08
Other intangible assets	1,546,056.00	-588,848.12
Buildings and constructions	140,150.29	147,774.12
Machinery and equipment	983,870.47	735,433.53
Other property, plant and equipment	9,847.15	-1,089.50
<b>Total</b>	<b>2,694,417.39</b>	<b>-614,181.05</b>
<b>Group contribution</b>		
Group contributions received	0.00	2,850,000.00
<b>Total</b>	<b>0.00</b>	<b>2,850,000.00</b>
<b>Total appropriations</b>	<b>2,694,417.39</b>	<b>2,235,818.95</b>

## 9. INCOME TAXES

(income +, expense -)	2016	2015
Income taxes, current year	-4,699,620.09	-1,271,420.66
Income taxes, previous years	336,118.20	300,000.00
Deferred taxes	-1,134,094.13	-9,170,081.91
Other taxes	-2,108,159.17	-2,776,220.43
<b>Total</b>	<b>-7,605,755.19</b>	<b>-12,917,723.00</b>

## 10. INTANGIBLE ASSETS

2016	Intangible rights	Goodwill	Prepayments and non-current assets under constructions	Other intangible assets	Total
<b>Acquisition cost at 1 Jan</b>	72,758,028.28	6,181,419.27	12,496,146.08	183,989,932.81	<b>275,425,526.44</b>
Additions	5,300,284.73		3,861,735.49	394,355.93	<b>9,556,376.15</b>
Decreases	-599,633.99			-801,224.21	<b>-1,400,858.20</b>
Transfers	9,970,823.35		-12,444,146.08	6,415,838.43	<b>3,942,515.70</b>
<b>Acquisition cost at 31 Dec</b>	<b>87,429,502.37</b>	<b>6,181,419.27</b>	<b>3,913,735.49</b>	<b>189,998,902.96</b>	<b>287,523,560.09</b>
<b>Accumulated amortization at 1 Jan</b>	-26,295,330.61	-6,181,419.27	0.00	-142,067,781.60	<b>-174,544,531.48</b>
Accumulated amortization relating to decreases and transfers	599,633.99			801,224.21	<b>1,400,858.20</b>
Amortization and impairments during the financial year	-12,268,318.14			-19,154,619.82	<b>-31,422,937.96</b>
<b>Accumulated amortization at 31 Dec</b>	<b>-37,964,014.76</b>	<b>-6,181,419.27</b>	<b>0.00</b>	<b>-160,421,177.21</b>	<b>-204,566,611.24</b>
<b>Net book value at 31 Dec</b>	<b>49,465,487.61</b>	<b>0.00</b>	<b>3,913,735.49</b>	<b>29,577,725.75</b>	<b>82,956,948.85</b>
2015	Intangible rights	Goodwill	Prepayments and non-current assets under constructions	Other intangible assets	Total
<b>Acquisition cost at 1 Jan</b>	44,049,063.67	6,181,419.27	9,815,011.73	185,832,090.74	245,877,585.41
Additions	30,715,935.10		7,029,411.36	8,004,125.49	45,749,471.95
Decreases	-4,553,037.42			-11,648,493.50	-16,201,530.92
Transfers	2,546,066.93		-4,348,277.01	1,802,210.08	0.00
<b>Acquisition cost at 31 Dec</b>	<b>72,758,028.28</b>	<b>6,181,419.27</b>	<b>12,496,146.08</b>	<b>183,989,932.81</b>	<b>275,425,526.44</b>
<b>Accumulated amortization at 1 Jan</b>	-20,395,988.34	-6,181,419.27	0.00	-132,569,015.02	-159,146,422.63
Accumulated amortization relating to decreases and transfers	4,553,037.42			11,648,493.50	16,201,530.92
Amortization and impairments during the financial year	-10,452,379.69			-21,147,260.08	-31,599,639.77
<b>Accumulated amortization at 31 Dec</b>	<b>-26,295,330.61</b>	<b>-6,181,419.27</b>	<b>0.00</b>	<b>-142,067,781.60</b>	<b>-174,544,531.48</b>
<b>Net book value at 31 Dec</b>	<b>46,462,697.67</b>	<b>0.00</b>	<b>12,496,146.08</b>	<b>41,922,151.21</b>	<b>100,880,994.96</b>

Note

## 11. PROPERTY, PLANT AND EQUIPMENT

	Land and water areas	Buildings and constructions	Machinery and equipment	Other property, plant and equipment	Prepayments and non-current assets under construction	Total
<b>2016</b>						
<b>Acquisition cost at 1 Jan</b>	1,175,482.19	17,107,512.52	98,934,631.85	553,073.82	7,735,350.77	125,506,051.15
Additions		64,377.03	3,023,625.19		5,037,725.13	8,125,727.35
Decreases	-91,989.24	-38,411.60	-2,490,537.21			-2,620,938.05
Transfers		297,187.68	3,203,917.25		-7,443,620.63	-3,942,515.70
<b>Acquisition cost at 31 Dec</b>	1,083,492.95	17,430,665.63	102,671,637.08	553,073.82	5,329,455.27	127,068,324.75
<b>Accumulated depreciation at 1 Jan</b>	0.00	-13,156,663.18	-78,447,990.22	-467,177.61	0.00	-92,071,831.01
Accumulated depreciation relating to decreases and transfers		25,844.40	2,449,194.62			2,475,039.02
Depreciation and impairments during the financial year	-109,776.05	-351,731.82	-6,611,898.84	-14,844.82		-7,088,251.53
<b>Accumulated depreciation at 31 Dec</b>	-109,776.05	-13,482,550.60	-82,610,694.44	-482,022.43	0.00	-96,685,043.52
<b>Net book value at 31 Dec</b>	<b>973,716.90</b>	<b>3,948,115.03</b>	<b>20,060,942.64</b>	<b>71,051.39</b>	<b>5,329,455.27</b>	<b>30,383,281.23</b>
<b>2015</b>						
<b>Acquisition cost at 1 Jan</b>	1,179,973.51	17,051,549.47	91,824,049.57	567,573.82	5,122,363.77	115,745,510.14
Additions		6,652.37	5,917,852.48		5,001,901.24	10,926,406.09
Decreases	-4,491.32	-1,841.67	-1,145,032.09	-14,500.00		-1,165,865.08
Transfers		51,152.35	2,337,761.89		-2,388,914.24	0.00
<b>Acquisition cost at 31 Dec</b>	1,175,482.19	17,107,512.52	98,934,631.85	553,073.82	7,735,350.77	125,506,051.15
<b>Accumulated depreciation at 1 Jan</b>	0.00	-12,812,088.63	-73,336,030.88	-462,724.45	0.00	-86,610,843.96
Accumulated depreciation relating to decreases and transfers		1,841.67	1,121,013.84	14,500.00		1,137,355.51
Depreciation and impairments during the financial year		-346,416.22	-6,232,973.18	-18,953.16		-6,598,342.56
<b>Accumulated depreciation at 31 Dec</b>	0.00	-13,156,663.18	-78,447,990.22	-467,177.61	0.00	-92,071,831.01
<b>Net book value at 31 Dec</b>	<b>1,175,482.19</b>	<b>3,950,849.34</b>	<b>20,486,641.63</b>	<b>85,896.21</b>	<b>7,735,350.77</b>	<b>33,434,220.14</b>

## 12. INVESTMENTS

2016	Shares in subsidiaries	Other shares and holdings	Total
<b>Net book value at 1 Jan</b>	2,083,703,472.85	148,222,158.17	<b>2,231,925,631.02</b>
Additions	19,906,487.93		<b>19,906,487.93</b>
Decreases and transfers	-67,332.36	-29,647,610.34	<b>-29,714,942.70</b>
<b>Net book value at 31 Dec</b>	<b>2,103,542,628.42</b>	<b>118,574,547.83</b>	<b>2,222,117,176.25</b>

2015	Shares in subsidiaries	Other shares and holdings	Total
<b>Net book value at 1 Jan</b>	1,570,433,661.40	144,105,359.93	1,714,539,021.33
Additions	534,837,144.91	4,224,953.64	539,062,098.55
Decreases and transfers	-4,987,478.58		-4,987,478.58
Impairments	-16,579,854.88	-108,155.40	-16,688,010.28
<b>Net book value at 31 Dec</b>	<b>2,083,703,472.85</b>	<b>148,222,158.17</b>	<b>2,231,925,631.02</b>

## 13. INVENTORIES

	2016	2015
Raw materials and supplies	21,580,105.35	23,270,745.27
Finished goods	57,372,095.55	54,616,801.52
Prepayments	4,393,117.25	7,502,514.53
<b>Total</b>	<b>83,345,318.15</b>	<b>85,390,061.32</b>

Note

## 14. RECEIVABLES

	2016	2015
<b>1</b>	<b>Non-current receivables</b>	
<b>2</b>	Interest-bearing non-current receivables	
	Loan receivables	
<b>3</b>		
	From the Group companies	302,197,671.84 254,707,458.08
<b>4</b>	<b>Total interest-bearing non-current receivables</b>	<b>302,197,671.84 254,707,458.08</b>
<b>5</b>	Interest-free non-current receivables	
	Deferred taxes	8,624,902.31 11,602,579.58
<b>6</b>	<b>Total interest-free non-current receivables</b>	<b>8,624,902.31 11,602,579.58</b>
<b>7</b>		
<b>8</b>	<b>Total non-current receivables</b>	<b>310,822,574.15 266,310,037.66</b>
<b>9</b>	<b>Current receivables</b>	
	Interest-bearing current receivables	
<b>10</b>		
	From the Group companies	77,669,312.79 69,631,225.71
<b>11</b>	<b>Total interest-bearing current receivables</b>	<b>77,669,312.79 69,631,225.71</b>
<b>12</b>	Interest-free current receivables	
	Advances paid	
<b>13</b>		
	To the Group companies	18,836,395.50 18,836,395.50
<b>14</b>	<b>Total</b>	<b>18,836,395.50 18,836,395.50</b>
	Trade receivables	
<b>15</b>		
	From the Group companies	27,183,225.37 53,656,850.36
<b>16</b>		
	From others	127,246,884.44 133,153,754.73
<b>17</b>	<b>Total</b>	<b>154,430,109.81 186,810,605.09</b>
	Accrued income	
<b>18</b>		
	From the Group companies	4,828,844.62 6,324,773.43
<b>19</b>		
	From others	24,100,931.78 21,691,409.18
<b>20</b>	<b>Total</b>	<b>28,929,776.40 28,016,182.61</b>
<b>21</b>	Other short-term interest-free receivables	
	From the Group companies	525,573.92 266,006.46
<b>22</b>		
	From others	10,209,802.99 13,462,146.30
	<b>Total</b>	<b>10,735,376.91 13,728,152.76</b>
	<b>Total interest-free current receivables</b>	<b>212,931,658.62 247,391,335.96</b>
	<b>Total current receivables</b>	<b>290,600,971.41 317,022,561.67</b>
	<b>Total receivables</b>	<b>601,423,545.56 583,332,599.33</b>

	2016	2015
	<b>Accrued income</b>	
	Interests	7,597,612.88 6,779,178.07
	Taxes	2,318,381.95 16,780.32
	Exchange differences	10,891,391.47 7,082,391.10
	The Group contributions	0.00 2,850,000.00
	Other	8,122,390.10 11,287,833.12
	<b>Total</b>	<b>28,929,776.40 28,016,182.61</b>



## 15. MONEY-MARKET INVESTMENTS

	2016	2015
Money-market investments		
Book value	70,719,098.15	30,394,906.22
Fair value	70,719,098.15	30,394,906.22
Difference	0.00	0.00

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

## 16. EQUITY

	2016	2015
<b>Restricted equity</b>		
Share capital at 1 Jan	221,761,727.69	221,761,727.69
<b>Share capital at 31 Dec</b>	221,761,727.69	221,761,727.69
Share premium account at 1 Jan	257,877,731.94	257,877,731.94
<b>Share premium account at 31 Dec</b>	257,877,731.94	257,877,731.94
Fair value reserve at 1 Jan	-4,657,093.00	-2,963,940.82
<b>Fair value reserve at 31 Dec</b>	2,717,240.52	-4,657,093.00
<b>Total restricted equity at 31 Dec</b>	482,356,700.15	474,982,366.63
<b>Unrestricted equity reserve</b>		
Unrestricted equity reserve at 1 Jan	199,963,876.20	199,963,876.20
<b>Unrestricted equity reserve at 31 Dec</b>	199,963,876.20	199,963,876.20
Retained earnings at 1 Jan <sup>1)</sup>	484,949,441.70	400,262,709.85
Net profit for the period	215,781,981.48	165,155,958.26
Dividends paid	-80,748,892.00	-80,587,227.16
Share-based incentive plan		
Shares given	2,103,046.81	118,000.75
<b>Retained earnings and net profit for the period ending at 31 Dec</b>	622,085,577.99	484,949,441.70
<b>Total unrestricted equity at 31 Dec</b>	822,049,454.19	684,913,317.90
<b>Total equity at 31 Dec</b>	1,304,406,154.34	1,159,895,684.53
<b>Total distributable funds at 31 Dec</b>	822,049,454.19	684,913,317.90

1) The company owns 2.975.327 treasury shares, the acquisition value of which totals EUR 20.028.053.10.

Change in treasury shares	EUR	Number of shares
Acquisition value / number at Jan 1, 2016	22,082,955.54	3,280,602
Change	-2,054,902.44	-305,275
<b>Acquisition value / number at Dec 31, 2016</b>	20,028,053.10	2,975,327

## 17. ACCUMULATED APPROPRIATIONS

	2016	2015
<b>Appropriations</b>		
Appropriations in the property, plant and equipment by asset classes are as follows		
Buildings and constructions	821,792.60	961,942.89
Machinery and equipment	2,707,221.32	3,691,091.79
Other property, plant and equipment	23,048.75	32,895.90
Intangible rights	495,672.44	510,165.92
Other intangible assets	2,853,963.77	4,400,019.77
<b>Total</b>	<b>6,901,698.88</b>	<b>9,596,116.27</b>
<b>Change in appropriations</b>		
Appropriations at 1 Jan	9,596,116.27	8,981,935.22
Change in untaxed reserves in income statement	-2,694,417.39	614,181.05
<b>Appropriations at 31 Dec</b>	<b>6,901,698.88</b>	<b>9,596,116.27</b>

On December 31, 2016, deferred tax liabilities on accumulated appropriations were EUR 1.4 million (1.9).

## 18. OBLIGATORY PROVISIONS

	2016	2015
<b>Non-current provisions</b>		
<b>Pension provisions</b>	<b>6,062,164.00</b>	<b>6,223,992.00</b>
Other obligatory provisions		
Environmental provisions	10,227,914.39	10,032,827.51
Restructuring provisions	3,515,000.00	654,761.20
<b>Total other obligatory provisions</b>	<b>13,742,914.39</b>	<b>10,687,588.71</b>
<b>Total non-current provisions</b>	<b>19,805,078.39</b>	<b>16,911,580.71</b>
<b>Current provisions</b>		
Other obligatory provisions		
Personnel related provisions	694,011.93	1,018,072.95
Restructuring provisions	1,015,491.05	1,554,752.00
<b>Total current provisions</b>	<b>1,709,502.98</b>	<b>2,572,824.95</b>
<b>Total provisions</b>	<b>21,514,581.37</b>	<b>19,484,405.66</b>
<b>Change in obligatory provisions</b>		
Obligatory provisions at 1 Jan	19,484,405.66	19,907,801.98
Decrease of provisions during the year	-2,740,134.67	-3,634,335.32
Provisions reversed during the year	-326,291.05	-599,061.00
Increase during financial year	5,096,601.43	3,810,000.00
<b>Obligatory provisions at 31 Dec</b>	<b>21,514,581.37</b>	<b>19,484,405.66</b>

## 19. NON-CURRENT LIABILITIES

Note

	2016	2015
Loans from financial institutions	237,095,621.37	229,688,199.30
Other non-current liabilities	373,703,339.00	371,423,368.00
<b>Total</b>	<b>610,798,960.37</b>	<b>601,111,567.30</b>
Long-term liabilities maturing in		
2018 (2017)	22,295,621.37	35,524,028.48
2019 (2018)	212,179,971.00	26,610,139.60
2020 (2019)	204,900,000.00	209,900,000.00
2021 (2020) or later	171,423,368.00	329,077,399.22
<b>Total</b>	<b>610,798,960.37</b>	<b>601,111,567.30</b>
Liabilities maturing in 5 years or more		
Loans from financial institutions	0.00	157,654,031.22
Other non-current liabilities	171,423,368.00	171,423,368.00
<b>Total</b>	<b>171,423,368.00</b>	<b>329,077,399.22</b>

Other non-current liabilities include EUR 200 million bond, which matures on May 27, 2019 and EUR 150 million bond, which matures on May 13, 2022.

Note

## 20. CURRENT LIABILITIES

	2016	2015
<b>Interest-bearing current liabilities</b>		
Loans from financial institutions	31,009,515.48	35,626,179.89
Other interest-bearing current liabilities		
To the Group companies	959,043,155.65	1,070,240,243.20
To others	24,197,339.16	19,192,135.35
<b>Total interest-bearing current liabilities</b>	<b>1,014,250,010.29</b>	<b>1,125,058,558.44</b>
<b>Interest-free current liabilities</b>		
Prepayments received		
From the Group companies	0.00	136,764.13
From others	660,527.45	1,153,676.10
<b>Total</b>	<b>660,527.45</b>	<b>1,290,440.23</b>
Trade payables		
To the Group companies	42,095,195.21	60,861,950.95
To others	57,637,340.34	69,855,984.68
<b>Total</b>	<b>99,732,535.55</b>	<b>130,717,935.63</b>
Accrued expenses		
To the Group companies	7,883,757.27	4,512,263.86
To others	72,550,079.73	69,706,311.25
<b>Total</b>	<b>80,433,837.00</b>	<b>74,218,575.11</b>
<b>Total other interest-free liabilities</b>	<b>9,317,121.16</b>	<b>7,896,013.40</b>
<b>Total interest-free current liabilities</b>	<b>190,144,021.16</b>	<b>214,122,964.37</b>
<b>Total current liabilities</b>	<b>1,204,394,031.45</b>	<b>1,339,181,522.81</b>
<b>Accrued expenses</b>		
Salaries	10,893,082.28	11,452,788.92
Interests and exchange differences	12,759,960.24	19,710,404.59
Other	56,780,794.48	43,055,381.60
<b>Total</b>	<b>80,433,837.00</b>	<b>74,218,575.11</b>

## 21. COLLATERAL AND CONTINGENT LIABILITIES

	2016	2015
<b>Guarantees</b>		
On behalf of the Group companies		
For loans	401,271,034.00	388,809,015.00
For other obligations	54,437,160.00	52,920,895.00
On behalf of others	2,686,798.00	2,558,342.00
<b>Total</b>	<b>458,394,992.00</b>	<b>444,288,252.00</b>
<b>Leasing liabilities</b>		
Maturity within one year	4,968,769.00	4,699,217.00
Maturity after one year	17,907,785.00	17,215,651.00
<b>Total</b>	<b>22,876,554.00</b>	<b>21,914,868.00</b>

Environmental risks and liabilities are disclosed in Note 30 in the Notes to the Consolidated Financial Statements.

## 22. SHARES AND HOLDINGS OWNED BY KEMIRA OYJ

Shares in subsidiaries	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 KTM d.o.o.	100.00	100.00
Kemira Nederland Holding B.V.	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

Note

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# SHARES AND SHAREHOLDERS

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## SHARES AND SHARE CAPITAL

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On December 31, 2016 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

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At the end of 2016, Kemira Oyj had 32,622 registered shareholders (32,601). Foreign shareholding of Kemira Oyj shares increased 17% during the year and was 25.1% of the shares (21.4%), including nominee-registered holdings. Households owned 16% of the shares (16.1%). At year-end, Kemira held 2,975,327 treasury shares (3,280,602), representing 1.9% (2.1%) 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](http://www.kemira.com/investors).

## LISTING AND TRADING

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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 12.13 at the Nasdaq Helsinki at the end of 2016 (10.88). The share price increased 11% during the year while Helsinki Cap index increased 8%. STOXX Chemicals (Europe), chemical sector benchmark index for Kemira increased 5% in 2016 (2%). Shares registered a high of EUR 12.55 (12.27) and a low of EUR 8.92 (9.14). The average share price of Kemira was EUR 10.96 (10.86).

Kemira's market capitalization, excluding treasury shares, was EUR 1,848 million at the end of the year 2016 (1,654).

In 2016, Kemira Oyj's share trading volume on Nasdaq Helsinki was 65 million (75) shares. Share turnover value decreased 14% and was EUR 702.7 million (814.7). The average daily trading volume was 256,233 (298,313) 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 value of Kemira Oyj's share trading in 2016 was EUR 95 million (112), of which 32% (33%) was executed on other trading facilities than on Nasdaq Helsinki. Source: Kemira.com.

Up-to-date information on Kemira's share price is available on the company's website at [www.kemira.com/investors](http://www.kemira.com/investors).

## DIVIDEND POLICY AND DIVIDEND DISTRIBUTION

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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 (0.53) totaling EUR 81 million (81) be paid for the financial year 2016. The Annual General Meeting will be held on March 24, 2017. The dividend ex-date is March 27, 2017, dividend record date March 28, 2017, and payment date April 11, 2017.

In 2016, a dividend of EUR 0.53 per share was paid for the financial year that ended December 31, 2015. The dividend record date was March 23, 2016, and the payment (EUR 81 million in total) date April 6, 2016.

## BOARD AUTHORIZATIONS

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The Annual General Meeting on March 21, 2016 authorized the Board of Directors to decide upon repurchase of a maximum of 4,800,000 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, 2016.

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, 2017. The authorization from the AGM 2016 has been used in connection with the remuneration of Board of Directors and the authorization from the AGM 2015 has been used for the remuneration of key employees in 2016.

## MANAGEMENT SHAREHOLDING

The members of the Board of Directors as well as the President and CEO and his Deputy held 458,133 (406,691) Kemira Oyj shares on December 31, 2016, or 0.29% (0.26%) 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 40,000 shares on December 31, 2016. Board members are not covered by the share-based incentive plan. Members of the Management Board, excluding the President and CEO and his Deputy, held a total of 106,355 shares on December 31, 2016 (32,089), representing 0.07% (0.02%) 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](http://www.kemira.com/investors).

### LARGEST SHAREHOLDERS DECEMBER 31, 2016

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	8,164,836	5.3
4 Ilmarinen Mutual Pension Insurance Company	4,800,451	3.1
5 Nordea funds	1,783,056	1.2
6 Skagen Vekst Verdipapierfond	1,350,000	0.9
7 The State Pension Fund	1,190,000	0.8
8 Veritas Pension Insurance Company Ltd.	1,131,112	0.7
9 Etola Erkki Olavi	1,000,000	0.6
10 Etera Mutual Pension Insurance Company	609,331	0.4
11 Aktia Funds	470,000	0.3
12 LähiTapiola Funds	465,829	0.3
13 Alfred Berg Funds	455,325	0.3
14 Pohjola Funds Managment	428,594	0.3
15 OP-Henkivakuutus Ltd.	413,689	0.3
Kemira Oyj	2,975,327	1.9
Nominee registered and foreign shareholders	38,946,080	25.1
Others, total	36,984,623	23.6
<b>Total</b>	<b>155,342,557</b>	<b>100.0</b>

### SHAREHOLDING BY NUMBER OF SHARES HELD DECEMBER 31, 2016

Number of shares	Number of shareholders	% of shareholders	Shares total	% of shares and votes
1–100	7,598	23.3	463,931	0.3
101–500	13,998	42.9	3,819,909	2.5
501–1,000	5,135	15.8	3,923,221	2.5
1,001–5,000	4,934	15.1	10,247,683	6.6
5,001–10,000	500	1.5	3,612,609	2.3
10,001–50,000	350	1.1	6,643,382	4.3
50,001–100,000	43	0.1	3,291,981	2.1
100,001–500,000	49	0.2	10,583,444	6.8
500,001–1,000,000	3	0.0	2,118,813	1.4
1,000,001–	12	0.0	110,637,584	71.2
<b>Total</b>	<b>32,622</b>	<b>100.0</b>	<b>155,342,557</b>	<b>100.0</b>

# 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

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On December 31, 2016, Kemira Oyj's distributable funds are EUR 822,049,454 of which net profit for the period amounts to EUR 215,781,981.

The Board of Directors proposes to the Annual General Meeting to be held on March 24, 2017 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 152,367,230 shares are held outside the company, the total dividends paid would amount to EUR 80,754,632. The distributable funds of EUR 741,294,822 to be retained as equity.

There have been no material changes in the company's financial position since December 31, 2016. The liquidity of the company remains good, and the proposed dividend payment does not risk the solvency of the company.

Helsinki, February 7, 2017

Jari Paasikivi  
Chairman

Kerttu Tuomas  
Vice Chairman

Winnie Fok

Juha Laaksonen

Wolfgang Büchele

Timo Lappalainen

Kaisa Hietala

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, 2016. 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.

#### 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.

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.

#### KEY AUDIT MATTER

#### HOW OUR AUDIT ADDRESSED THE KEY AUDIT MATTER

##### Goodwill impairment testing

Consolidated financial statements as of 31.12.2016 includes Goodwill amounting to EUR 522,4 million.

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 31.12.2016.

Goodwill impairment testing requires substantial management judgment over the recoverable amounts over:

- estimations over the projected future cash flow.
- long term growth assumptions.
- applied discount rate.

For further details over the goodwill impairment testing conducted by the management is presented in the note 11 within the consolidated financial statements.

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.

We have assessed the impairment testing by:

- 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.

We have assessed the sensitivity analysis, which is disclosed in the consolidated financial statements note 11. We have also assessed those key assumptions, where material change could lead to substantial impairment of goodwill.

## KEY AUDIT MATTER

## HOW OUR AUDIT ADDRESSED THE KEY AUDIT MATTER

**Fair value measurement of available for sale financial instruments**

Consolidated financial statements as of 31.12.2016 includes Available for Sale Financial assets amounting to EUR 202,5 million. This item consist mainly from shares of Pohjolan Voima Oy (PVO) and Teollisuuden Voima Oyj (TVO) share which fair value is approximately EUR 201,0 million.

Fair value measurement of these shares require substantial management judgment relating to the following estimates:

- future electricity market prices in Finland.
- future electricity production costs.
- applied discount rate.

For further details over the fair value measurement conducted by the management is presented in the notes 14 and 15 within the consolidated financial statements.

Our audit procedures included assessment of the underlying electricity price and production cost assumptions used in the management's valuation model against the available third party information.

We have assessed the processes relating to fair value measurement and reasonableness of the valuation model applied by the management.

We have assessed the assumptions that management has applied in the Weighted Average Cost of Capital (WACC) rate which is used as discount rate.

We have compared the assumptions and estimates applied by management to other available third party estimates and assessed the reasonableness of these assumptions.

## 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

### 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 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 of 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 2017

Deloitte & Touche Oy  
Audit Firm

Jukka Vattulainen  
Authorised Public Accountant (KHT)

# QUARTERLY EARNINGS PERFORMANCE

(The figures are unaudited)

	2016					2015				
	1-3	4-6	7-9	10-12	Total	1-3	4-6	7-9	10-12	Total
<b>Revenue</b>										
Pulp & Paper	362.4	361.1	365.2	368.6	1,457.3	314.6	351.3	379.1	372.3	1,417.3
Oil & Mining	75.5	72.7	79.6	81.7	309.5	93.9	89.7	90.1	76.4	350.1
Municipal & Industrial	144.8	154.0	151.5	146.2	596.5	144.5	153.8	155.9	151.5	605.7
<b>Total</b>	<b>582.7</b>	<b>587.8</b>	<b>596.3</b>	<b>596.5</b>	<b>2,363.3</b>	<b>553.0</b>	<b>594.8</b>	<b>625.1</b>	<b>600.2</b>	<b>2,373.1</b>
<b>EBITDA <sup>1)</sup></b>										
Pulp & Paper	46.7	46.2	50.5	44.4	187.8	35.0	34.4	44.9	42.8	157.1
Oil & Mining	6.1	-0.4	3.6	2.3	11.6	11.0	9.5	7.0	3.3	30.8
Municipal & Industrial	18.3	23.5	24.2	18.8	84.8	19.2	22.2	22.9	11.6	75.9
<b>Total</b>	<b>71.1</b>	<b>69.3</b>	<b>78.3</b>	<b>65.5</b>	<b>284.2</b>	<b>65.2</b>	<b>66.1</b>	<b>74.8</b>	<b>57.7</b>	<b>263.8</b>
<b>EBIT <sup>1)</sup></b>										
Pulp & Paper	27.0	25.8	28.5	20.3	101.6	19.6	16.2	25.2	21.6	82.6
Oil & Mining	0.4	-7.4	-2.3	-2.8	-12.1	5.7	2.4	1.3	-6.5	2.9
Municipal & Industrial	11.8	16.5	17.5	11.7	57.5	12.5	15.7	16.2	2.7	47.1
<b>Total</b>	<b>39.2</b>	<b>34.9</b>	<b>43.7</b>	<b>29.2</b>	<b>147.0</b>	<b>37.8</b>	<b>34.3</b>	<b>42.7</b>	<b>17.8</b>	<b>132.6</b>
Finance costs, net	-6.0	-0.3	-6.9	-5.9	-19.1	-7.5	-9.3	-8.2	-5.8	-30.8
Share of the results of associates	0.1	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.3
<b>Profit before tax</b>	<b>33.3</b>	<b>34.6</b>	<b>36.8</b>	<b>23.3</b>	<b>128.0</b>	<b>30.5</b>	<b>25.1</b>	<b>34.5</b>	<b>12.0</b>	<b>102.1</b>
Income taxes	-7.6	-7.9	-9.5	-5.1	-30.1	-4.1	-5.8	-7.4	-7.6	-24.9
<b>Net profit for the period</b>	<b>25.7</b>	<b>26.7</b>	<b>27.3</b>	<b>18.2</b>	<b>97.9</b>	<b>26.4</b>	<b>19.3</b>	<b>27.1</b>	<b>4.4</b>	<b>77.2</b>
<b>Net profit attributable to</b>										
Equity owners of the parent	24.5	25.0	25.6	16.7	91.8	25.0	17.6	25.5	2.9	71.0
Non-controlling interests	1.2	1.7	1.7	1.5	6.1	1.4	1.7	1.6	1.5	6.2
<b>Net profit for the period</b>	<b>25.7</b>	<b>26.7</b>	<b>27.3</b>	<b>18.2</b>	<b>97.9</b>	<b>26.4</b>	<b>19.3</b>	<b>27.1</b>	<b>4.4</b>	<b>77.2</b>
Earning per share, basic and diluted, EUR	0.16	0.17	0.16	0.11	0.60	0.16	0.12	0.17	0.02	0.47
<b>NET WORKING CAPITAL</b>										
Inventories	215.4	214.0	214.0	216.9	216.9	220.0	236.0	226.1	207.0	207.0
Trade receivables and other receivables	404.6	404.9	398.9	386.1	386.1	365.4	404.8	399.8	389.8	389.8
Excluding financing items in other receivables	-26.0	-19.3	-15.3	-16.8	-16.8	-10.0	-7.9	-12.5	-13.1	-13.1
Trade payables and other liabilities	462.3	359.1	377.5	405.2	405.2	348.8	354.0	365.8	388.7	388.7
Excluding financing items in other liabilities	-119.1	-20.4	-16.7	-13.6	-13.6	-22.5	-16.7	-23.3	-22.8	-22.8
<b>Net working capital</b>	<b>250.8</b>	<b>260.9</b>	<b>236.8</b>	<b>194.6</b>	<b>194.6</b>	<b>249.1</b>	<b>295.6</b>	<b>270.9</b>	<b>217.8</b>	<b>217.8</b>
<b>INTEREST-BEARING NET LIABILITIES</b>										
Non-current interest-bearing liabilities	666.6	676.8	656.8	649.5	649.5	462.4	692.4	680.3	670.9	670.9
Current interest-bearing liabilities	133.7	167.4	170.7	157.9	157.9	224.9	128.3	134.8	122.7	122.7
<b>Interest-bearing liabilities</b>	<b>800.3</b>	<b>844.2</b>	<b>827.5</b>	<b>807.4</b>	<b>807.4</b>	<b>687.3</b>	<b>820.7</b>	<b>815.1</b>	<b>793.6</b>	<b>793.6</b>
Cash and cash equivalents	156.2	154.3	161.9	173.4	173.4	125.5	109.3	125.2	151.5	151.5
<b>Interest-bearing net liabilities</b>	<b>644.1</b>	<b>689.9</b>	<b>665.6</b>	<b>634.0</b>	<b>634.0</b>	<b>561.8</b>	<b>711.4</b>	<b>689.9</b>	<b>642.1</b>	<b>642.1</b>

1) Includes items affecting comparability.

	2016					2015				
	1-3	4-6	7-9	10-12	Total	1-3	4-6	7-9	10-12	Total
<b>ITEMS AFFECTING COMPARABILITY IN EBITDA AND EBIT</b>										
<b>Operative EBITDA</b>										
Pulp & Paper	47.9	49.3	51.8	46.3	195.3	36.1	41.3	46.7	46.9	171.0
Oil & Mining	6.5	4.5	4.2	3.2	18.4	11.1	11.4	7.4	3.6	33.5
Municipal & Industrial	18.4	25.1	24.8	20.5	88.8	19.2	22.0	24.1	17.5	82.8
<b>Total</b>	<b>72.8</b>	<b>78.9</b>	<b>80.8</b>	<b>70.0</b>	<b>302.5</b>	<b>66.4</b>	<b>74.7</b>	<b>78.2</b>	<b>68.0</b>	<b>287.3</b>
Total Items affecting comparability	-1.7	-9.6	-2.5	-4.5	-18.3	-1.2	-8.6	-3.4	-10.3	-23.5
<b>EBITDA</b>	<b>71.1</b>	<b>69.3</b>	<b>78.3</b>	<b>65.5</b>	<b>284.2</b>	<b>65.2</b>	<b>66.1</b>	<b>74.8</b>	<b>57.7</b>	<b>263.8</b>
<b>Operative EBIT</b>										
Pulp & Paper	28.2	28.9	30.0	24.5	111.6	20.7	23.2	27.0	25.9	96.8
Oil & Mining	0.8	-1.1	-1.6	-1.9	-3.8	5.8	6.0	1.7	-2.4	11.1
Municipal & Industrial	11.9	18.8	18.1	13.5	62.3	12.6	15.6	17.4	9.6	55.2
<b>Total</b>	<b>40.9</b>	<b>46.6</b>	<b>46.5</b>	<b>36.1</b>	<b>170.1</b>	<b>39.1</b>	<b>44.8</b>	<b>46.1</b>	<b>33.1</b>	<b>163.1</b>
Total Items affecting comparability	-1.7	-11.7	-2.8	-6.9	-23.1	-1.3	-10.5	-3.4	-15.3	-30.5
<b>EBIT</b>	<b>39.2</b>	<b>34.9</b>	<b>43.7</b>	<b>29.2</b>	<b>147.0</b>	<b>37.8</b>	<b>34.3</b>	<b>42.7</b>	<b>17.8</b>	<b>132.6</b>
<b>Operative EBITDA</b>										
Restructuring and streamlining programs	0.0	-4.3	-0.4	-1.1	-5.8	0.0	-0.7	-1.6	-3.4	-5.7
Transaction and integration expenses in acquisition	-1.4	-1.9	-0.5	-1.2	-5.0	-1.0	-6.9	-1.1	-4.0	-13.0
Divestment of businesses and other disposals	0.3	0.0	0.2	0.0	0.5	0.1	-0.2	-0.2	-1.5	-1.8
Other items	-0.6	-3.4	-1.8	-2.2	-8.0	-0.3	-0.8	-0.5	-1.4	-3.0
<b>Total Items affecting comparability</b>	<b>-1.7</b>	<b>-9.6</b>	<b>-2.5</b>	<b>-4.5</b>	<b>-18.3</b>	<b>-1.2</b>	<b>-8.6</b>	<b>-3.4</b>	<b>-10.3</b>	<b>-23.5</b>
<b>EBITDA</b>	<b>71.1</b>	<b>69.3</b>	<b>78.3</b>	<b>65.5</b>	<b>284.2</b>	<b>65.2</b>	<b>66.1</b>	<b>74.8</b>	<b>57.7</b>	<b>263.8</b>
<b>Operative EBIT</b>										
Total Items affecting comparability in EBITDA	-1.7	-9.6	-2.5	-4.5	-18.3	-1.2	-8.6	-3.4	-10.3	-23.5
Items affecting comparability in depreciation, amortization and impairments	0.0	-2.1	-0.3	-2.4	-4.8	-0.1	-1.9	0.0	-5.0	-7.0
<b>Operating profit (EBIT)</b>	<b>39.2</b>	<b>34.9</b>	<b>43.7</b>	<b>29.2</b>	<b>147.0</b>	<b>37.8</b>	<b>34.3</b>	<b>42.7</b>	<b>17.8</b>	<b>132.6</b>
<b>ROCE AND OPERATIVE ROCE</b>										
Operative EBIT	40.9	46.6	46.5	36.1	170.1	39.1	44.8	46.1	33.1	163.1
Operating profit (EBIT)	39.2	34.9	43.7	29.2	147.0	37.8	34.3	42.7	17.8	132.6
Share of profit or loss of associates	0.1	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.3
Capital Employed	1,697.8	1,709.6	1,711.5	1,718.2	1,718.2	1,466.2	1,534.0	1,601.6	1,659.5	1,659.5
Operative ROCE, %	9.7	9.8	9.8	9.9	9.9	11.0	11.0	10.6	9.8	9.8
ROCE, %	7.9	7.9	7.9	8.6	8.6	9.3	10.5	10.0	8.0	8.0

# INFORMATION FOR INVESTORS

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## FINANCIAL REPORTS IN 2017

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Kemira will publish three interim reports in 2017.

April 26, 2017: Interim report for January–March

July 21, 2017: Interim report for January–June

October 25, 2017: Interim report for January–September

The interim reports and related presentation material are available on Kemira's website at [www.kemira.com/investors](http://www.kemira.com/investors). Furthermore, Kemira's 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 press 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

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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

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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

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Kemira's Annual General Meeting will be held on Friday, March 24, 2017 at 10.00 a.m. in Marina Congress Center, Katajanokanlaituri 6, Helsinki, Finland. A shareholder who on the record date of the Annual General Meeting, March 14, 2017, 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 begins on February 23, 2017 and registration instructions will be published on that day as a stock exchange release and at Kemira's web site at [www.kemira.com](http://www.kemira.com) > Investors > Corporate Governance > Annual General Meeting > Annual General Meeting 2017.

Kemira will release a stock exchange release on the Annual General Meeting's decisions immediately after the meeting.

## DIVIDEND DISTRIBUTION

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For dividend proposal, please see page 86.

## CHANGE OF ADDRESS

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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. If the book-entry account is held by Finnish Central Securities Depository Ltd, changes of address should be reported there directly.

## INVESTOR RELATIONS

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Olli Turunen, Vice President, Investor Relations

tel. +358 10 862 1255

e-mail: [olli.turunen@kemira.com](mailto:olli.turunen@kemira.com)

## BASIC SHARE INFORMATION

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Listed on: Nasdaq Helsinki Ltd

Trading code: KEMIRA

ISIN code: FI0009004824

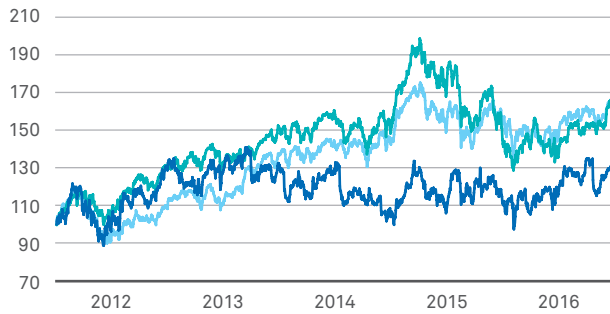
Industry group: Materials

Industry: Chemicals

Number of shares on December 31, 2016: 155,342,557

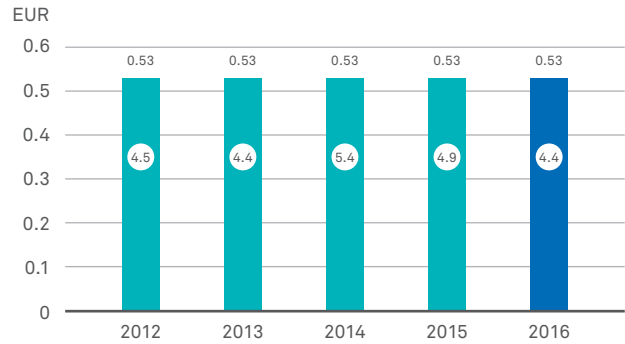
Listing date: November 10, 1994

### SHARE PRICE 2012–2016



- Kemira Oyj
- EURO STOXX Chemicals
- OMX Helsinki

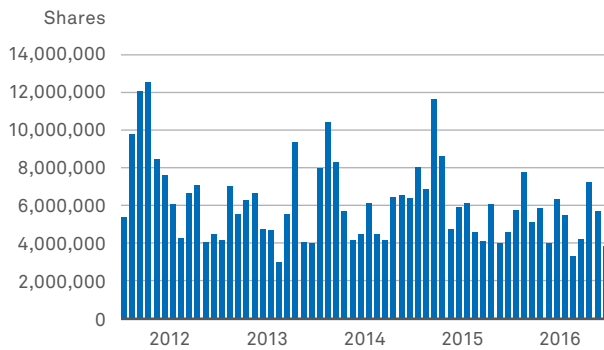
### DIVIDEND PER SHARE AND DIVIDEND YIELD<sup>1)</sup>



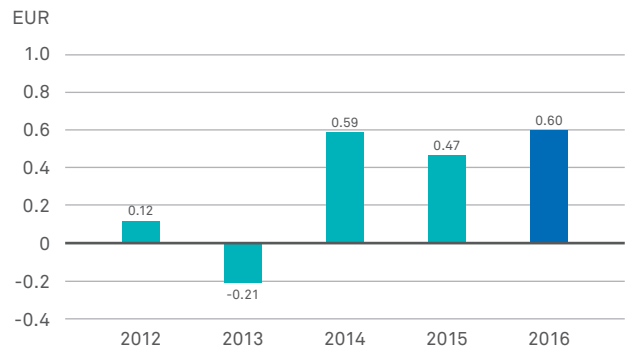
- Dividend per share<sup>1)</sup>
- Dividend yield, %<sup>1)</sup>

1) The dividend for 2016 is the Board of Directors' proposal to the Annual General Meeting.

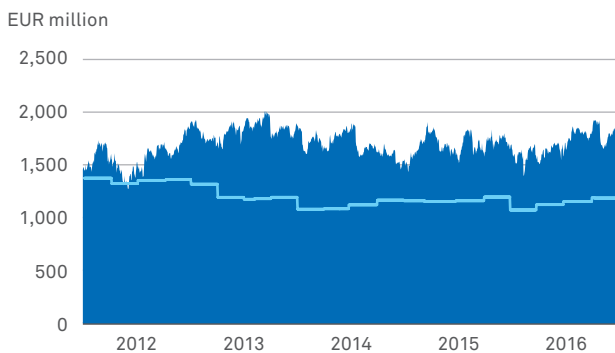
### MONTHLY TRADING VOLUME ON NASDAQ HELSINKI 2012–2016



### EARNINGS PER SHARE

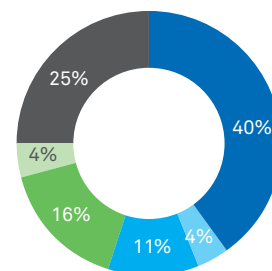


### MARKET VALUE AND EQUITY 2012–2016



- Market value
- Total equity

### OWNERSHIP DECEMBER 31, 2016



- Corporations
- Financial and insurance corporations
- General government
- Households
- Non-profit institutions
- Non-Finnish shareholders incl nominee register

# Kemira

Where water  
meets chemistry™

## Kemira Oyj

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Fax +358 10 862 1119  
[www.kemira.com](http://www.kemira.com)

Kemira is a global chemicals company serving customers in water intensive industries. We provide expertise, application know-how and chemicals that improve our customers' product quality, process and resource efficiency. Our focus is on pulp & paper, oil & gas, mining and water treatment. Kemira shares are listed on the Nasdaq Helsinki Ltd.



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