Review by the Board of Directors and Financial statements

outokumpu

Review by the Board of Directors

In 2019, the European steel industry continued to suffer from surging imports from Asia and strong price pressure caused by the US steel tariffs. In this challenging market environment, Outokumpu continued to focus on the execution of its strategic targets which led to a 4% productivity improvement, enhanced safety performance and organizational health as well as the significant reduction of net debt. These results demonstrate the strength of Outokumpu's strategy and ability to adapt to changing market conditions. In 2019, Outokumpu's adjusted EBITDA was strongly affected by low deliveries in all business areas. Despite hard price pressure, business area Europe's result was on a reasonable level, but Long Products' and business area Americas' results were in the red mainly due to low deliveries. Ferrochrome production was on a record-high level, but the lower benchmark price burdened profitability. In 2020, Outokumpu continues to pursue its must-win battles with a highlighted focus on sustainability, customer orientation and efficiency to further strengthen the company's leading position in the stainless steel market globally.

Market development

In 2019, global apparent consumption increased by 2.7% compared to the previous year. APAC contributed with a growth of 5.3% while EMEA and Americas shrank by 3.6% and 5.7%. Global real demand for stainless steel products amounted to 43.8 million tonnes in 2019, which is an increase of 1.5% from 43.2 million tonnes in 2018. The annual demand growth was strongest in the ABC & Infrastructure segment, increasing by 5% from prior year. Demand in Consumer Goods & Medical and Industrial & Heavy Industries grew by 3% and 1%, respectively. Meanwhile demand in Chemical, Petrochemical and Energy segment remained at same levels with 2018, whereas demand in Automotive & Heavy Transport shrank by 7% (Source: SMR, January 2020).

Financial performance

In 2019, Outokumpu's sales decreased to EUR 6,403 million compared to EUR 6,872 million in 2018. Stainless steel deliveries were 2,196,000 tonnes (2,428,000 tonnes), a decrease of 10% compared to 2018.

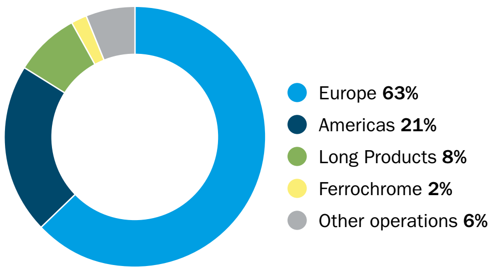
Sales

€ million	2019	2018	2017
Europe	**4,089**	4,267	4,156
Americas	**1,346**	1,715	1,546
Long Products	**642**	740	591
Ferrochrome	**461**	542	610
Other operations	**653**	587	503
Intra-group sales	**–788**	–980	–1,050
The Group	**6,403**	6,872	6,356

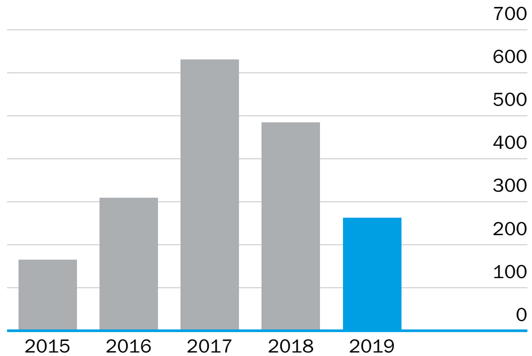
Adjusted EBITDA decreased to EUR 263 million in 2019 compared to EUR 485 million in 2018. The impact from lower stainless steel deliveries was partly offset by product mix which was significantly better in 2019 compared to 2018 for both business areas Europe and Americas. Business area Ferrochrome's profitability in 2019 was suffering from lower ferrochrome benchmark price compared to 2018, but production was above the 2018 level. Raw material-related inventory and metal derivative losses were EUR 64 million in 2019, and thus significantly higher than the losses of EUR 16 million in 2018.

Adjustments to EBITDA in 2019 included a gain of EUR 70 million on the sale of real estate in Benrath, Germany, restructuring costs of EUR 53 million in Germany resulting from agreed measures to improve competitiveness through cost reductions, and an expense of EUR 14 million resulting from a settlement between Outokumpu and ThyssenKrupp over tax consolidation in Italy and other earlier claims relating to Outokumpu's acquisition of Inoxum (2018: EUR 10 million gain on sale of PPE and release of provisions related to an earlier

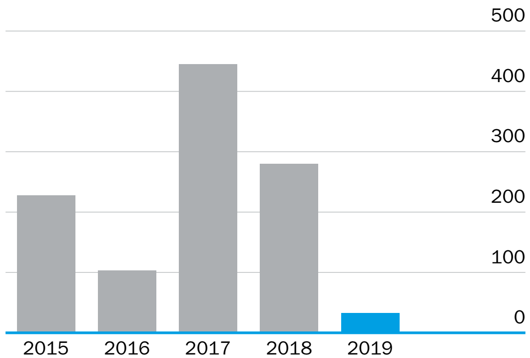
Sales, € 6,403 million



Adjusted EBITDA, € million



EBIT, € million



site closure). EBITDA amounted to EUR 266 million in 2019 (EUR 496 million), EBIT amounted to EUR 33 million (EUR 280 million) and the net result to EUR –75 million (EUR 130 million). The net result in 2019 did not include any material previously unrecognized deferred tax assets (EUR 34 million). Earnings per share was EUR –0.18 in 2019 compared to EUR 0.32 in 2018.

Profitability

€ million	2019	2018	2017
Adjusted EBITDA			
Europe	**216**	248	404
Americas	**–27**	–5	21
Long Products	**–7**	25	16
Ferrochrome	**96**	210	217
Other operations and intra-group items	**–15**	7	–27
Group adjusted EBITDA	**263**	485	631
Adjustments	**3**	10	31
EBITDA	**266**	496	663
EBIT	**33**	280	445
Share of results in associated companies and joint ventures	**6**	3	9
Financial income and expenses	**–80**	–107	–127
Result before taxes	**–41**	175	327
Income taxes	**–33**	–45	65
Net result for the financial year	**–75**	130	392
Adjusted EBITDA margin, %	**4.1**	7.1	9.9
EBIT margin, %	**0.5**	4.1	7.0
Return on capital employed, %	**0.8**	7.0	11.3
Earnings per share, €	**–0.18**	0.32	0.95
Diluted earnings per share, €	**–0.18**	0.32	0.90
Net cash generated from operating activities	**371**	214	328

Outokumpu has adopted IFRS 16 – Leases on January 1, 2019 using the modified retrospective approach. Comparative information has not been restated, but transition impacts of EUR 131 million have been recognized into January 1, 2019 property, plant and equipment, and non-current and current debt, respectively. More information on the changes to Outokumpu’s accounting principles and transition impacts is presented in the notes 2 and 13 to the consolidated financial statements.

Operating cash flow amounted to EUR 371 million in 2019 (EUR 214 million). Net working capital decreased by EUR 218 million compared to an increase of EUR 112 million in 2018. Net debt amounted to EUR 1,155 million at the end of 2019, a decrease from EUR 1,241 million at the end of 2018. Gearing remained at 45.1%, at the same level as the end of 2018.

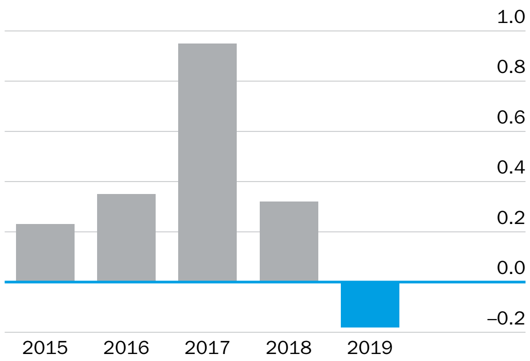
Net financial expenses were EUR 80 million in 2019 (EUR 107 million) and interest expenses were EUR 76 million (EUR 70 million). Cash and cash equivalents were at EUR 325 million at the end of 2019 (EUR 68 million) and the total liquidity reserves were EUR 1.0 billion (EUR 0.7 billion). In addition to these reserves, EUR 78 million of the EUR 120 million Kemi mine financing was unutilized.

Key financial indicators on financial position

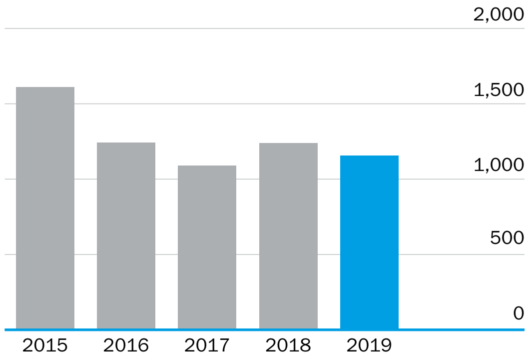
€ million	2019	2018	2017
Net debt			
Non-current debt	**1,053**	798	698
Current debt	**427**	511	505
Cash and cash equivalents	**325**	68	112
Net debt	**1,155**	1,241	1,091
Shareholders’ equity	**2,562**	2,750	2,721
Return on equity, %	**–2.8**	4.8	15.4
Debt-to-equity ratio, %	**45.1**	45.1	40.1
Equity-to-assets ratio, %	**42.5**	45.9	46.3
Interest expenses	**76**	70	92

Capital expenditure amounted to EUR 221 million in 2019 (EUR 260 million). The ongoing investments include the Kemi mine expansion and the digital transformation project Chorus, including the ERP renewal.

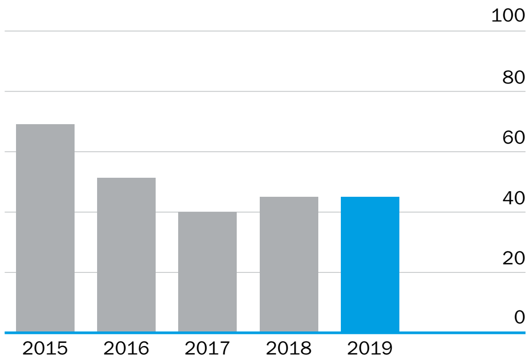
Earnings per share, €



Net debt, € million



Debt-to-equity ratio, %



Capital expenditure

€ million	2019	2018	2017
Europe	**44**	76	70
Americas	**20**	18	18
Long Products	**18**	30	8
Ferrochrome	**103**	79	34
Other operations	**35**	57	44
The Group	**221**	260	174
Depreciation and amortization	**230**	204	216

Business areas

Europe's sales decreased to EUR 4,089 million in 2019 compared to EUR 4,267 million in 2018 and adjusted EBITDA decreased to EUR 216 million (EUR 248 million). Stainless steel deliveries decreased by 6% in 2019 compared to previous year and amounted to 1,459,000 tonnes (1,547,000 tonnes). Realized base prices were lower in 2019 compared to 2018 due to high import pressure, but the negative impact was partly offset by significantly improved product mix and better raw material mix. The positive impact from lower costs in 2019 was partly offset by negative currency impacts. Raw material-related inventory and metal derivative losses were EUR 19 million in 2019 (losses of EUR 26 million). In 2019, the real demand in EMEA decreased by 4.3% compared to 2018. EU cold-rolled imports were at 29.2% in 2019, slightly down from 29.7% in 2018 (source: EUROFER, January 2020). Distributor inventories were above the long-term average levels at the end of November 2019.

Americas' sales amounted to EUR 1,346 million in 2019 compared to EUR 1,715 million in 2018. Adjusted EBITDA amounted to EUR –27 million (EUR –5 million). Stainless steel deliveries decreased by 21% in 2019 to 601,000 tonnes (762,000). Input costs were higher in 2019 compared to 2018, but the impact was partly offset by the significantly improved product mix and lower freight costs. Raw material-related inventory and metal derivative losses were EUR 40 million in 2019 compared to gains of EUR 20 million in 2018. Real demand decreased by 10% in 2019 compared to 2018. Cold-rolled imports into the US decreased to 14% in 2019 from 18% in 2018 (source: American Iron & Steel Institute, January 2020). Distributor inventories were above the average level in 2019 with a decreasing tendency over the last three months of the year (source: Metals Service Center Institute, January 2020).

Long Products' sales amounted to EUR 642 million in 2019 compared to EUR 740 million in 2018 and adjusted EBITDA amounted to EUR –7 million (EUR 25 million). Stainless steel deliveries decreased by 20% in 2019 compared to 2018 due to lower external and internal deliveries. Realized base prices were lower, as well. Raw material-related inventory and metal derivative losses were EUR 9 million in 2019 compared to EUR 0 million in 2018. Long products market was subdued in 2019, but demand in the US remained stable.

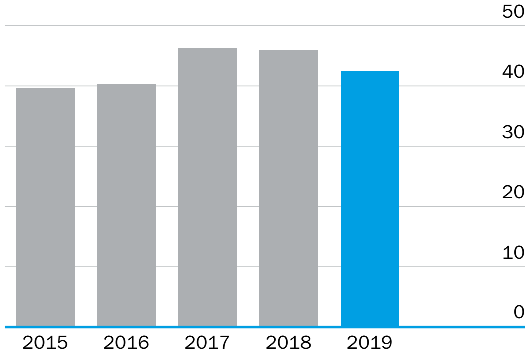
Ferrochrome's sales amounted to EUR 461 million in 2019 compared to EUR 542 million in 2018. Adjusted EBITDA amounted to EUR 96 million (EUR 210 million). Ferrochrome operations were stable with a record-high production of 505,000 tonnes in 2019 (497,000 tonnes), and deliveries were also higher, but profitability was negatively impacted by higher costs, mainly related to the mine. 2018 adjusted EBITDA included a EUR 32 million insurance compensation. Average ferrochrome benchmark price for 2019 was USD 0.21/lb. lower compared to 2018 having a negative impact on sales price.

Non-financial development at Outokumpu

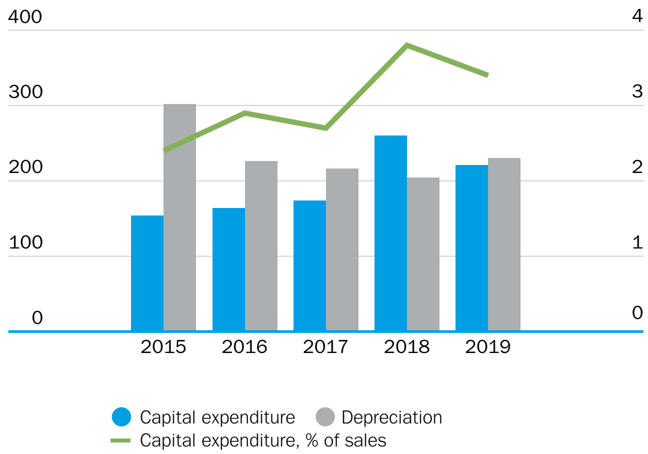
Outokumpu is a leading global producer of stainless steel with world-class production assets in its key markets in Europe and the Americas, and a global sales and service network close to its international customers. Stainless steel is a significant contributor to building a sustainable world. Stainless steel is used in building and construction, infrastructure, appliances, transportation, and heavy industries. It is a strong, corrosion-resistant, hygienic, and aesthetic material with a high strength-to-weight ratio and no need for maintenance.

Climate change is one of the three megatrends driving Outokumpu's business, together with economic and population growth and urbanization. The properties and the low carbon profile of Outokumpu's stainless steel can help customers to reduce their carbon footprint and to design solutions that enable low carbon society. Markets for solutions enabling the

Equity-to-assets ratio, %



Capital expenditure and depreciation, € million



transition to low carbon society will increase on the way to 2 degree or 1.5 degree scenarios for 2050.

Outokumpu acknowledges the recommendations from the Task Force on Climate-related Financial Disclosures (TCFD) and the underlying framework and acknowledges that there are financial impacts in a 2°C or lower transitions scenario as well as a 4°C physical scenario. Outokumpu has not yet performed a scenario analysis to the extent where the resilience of its strategies could be assessed in financial terms considering the transition and physical scenarios.

Outokumpu's business is based on a circular economy. Over 85% of the material used in Outokumpu's stainless steel production is recycled steel. By converting scrap and metal waste into new products the company also protects virgin resources. Throughout the process, Outokumpu aims to minimize the environmental impact of its production. At the end of its long life-cycle, stainless steel is fully recyclable, without any loss of quality. Outokumpu's production sites are often located in relatively small cities or towns. This means that Outokumpu is significant for the economies of small local communities and it is often one of the very few private-sector employers in the area.

Outokumpu has an integrated production process, including the company's own chrome mine for one of the main raw materials of stainless steel, ferrochrome operations, melting, hot rolling and cold rolling, and the finishing and services.

Policies and principles of sustainability management

On group level sustainability is managed by the Group's sustainability and environment team which reports to President, Business Area Long Products & Group Sustainability. The Group's sustainability strategy was renewed in 2019. It concentrates on three pillars: climate, environment and society.

The business areas and functions are responsible for ensuring that operations within their own organizations are conducted in a responsible manner and that monitoring, data collection and reporting are duly carried out. The established incentive systems support the achievement of strategic targets, such as safety which is the highest priority.

The most important policies guiding Outokumpu's Sustainability Management are the Group's Code of Conduct, Corporate Responsibility Policy and the Policy on Environment, Health, Safety and Quality (EHSQ), all available on Outokumpu's website. Outokumpu's Code of Conduct defines the common way of operating in the Group and sets principles for legal compliance and ethical conduct, including zero tolerance for corrupt practices and requiring compliance with competition laws.

The Corporate Responsibility Policy describes the main principles of the sustainable development of economic, environmental, and social aspects in the Group. Outokumpu's EHSQ policy describes the company's commitment to continuous improvement in these fields, compliance with legislation in all areas the company operates in, and the fulfilment of stakeholder requirements to which the company subscribes.

Outokumpu has also an Anti-Corruption Instruction providing detailed guidance on responsible business practices. In 2019, Outokumpu issued a Know Your Business Partner instruction detailing the principles and rules related to establishing and monitoring relationships with business partners and managing related risks.

In addition to the EHSQ policy, Outokumpu has strict guidelines for safety through the Outokumpu Safety Principles and Health and Safety Standard. Additionally, Outokumpu has ten Cardinal Safety Rules that are a part of the company's operating principles. Safety is one of the company's six must-win battles and is therefore a top priority across the company. The health and safety of the personnel is a precondition for successful day-to-day operations as well as for long-term competitiveness. Outokumpu works towards a goal of zero accidents.

Corporate statements, policies and instructions are the basis of the Outokumpu operating model in governance, risk, and compliance. Policies and instructions are implemented through internal communication, mandatory training and internal control mechanisms. Outokumpu has an on-going governance, risk and compliance project to further enhance and develop internal control processes. Outokumpu has currently five Key Corporate Policies, which need to be well known by everyone working for Outokumpu:

- Code of Conduct
- Cardinal Safety Rules
- Approval Policy
- Competition Law Compliance Policy
- Acceptable Use of IT Policy

The internal audit function flanked by external audits consistently monitors and tests adherence to corporate guidance and standards, while the sustainability organization follows-up on environmental performance and legality on a quarterly basis. In 2019, Outokumpu carried out self-assessments of raw material suppliers with production in countries who have high Environment, Social and Governance risks. Annual environmental audits are performed based on an internal risk assessment. In addition, majority of suppliers are going through a regular sanction screening.

Outokumpu has an approved Science Based Target following the below 2-degree scenario of the sectoral decarbonization approach for steel industry. Outokumpu contributes to the UN Sustainable Development Goals by developing production processes and the properties of its products.

Outokumpu complies with international, national, and local laws and regulations, and respects international agreements concerning human and labor rights, such as the United Nations' Universal Declaration of Human Rights and condemns the use of forced and child labor. All Outokumpu employees are free to join trade unions according to local rules and regulations. There is zero tolerance of any form of discrimination, whether it is based on ethnic origin, nationality, religion, political views, gender, sexual orientation, age or any other factor.

Outokumpu expects its suppliers and contractors to comply with applicable laws and regulations as well as Outokumpu's Code of Conduct or similar standards and principles, and to meet the company's supplier requirements. Outokumpu aims to ensure that modern slavery or human trafficking plays no part in our supply chain or in any part of our business.

Sustainability targets

The Group's targets are:

- Recycled content (all metallic input from waste streams, such as scrap, scales or metals from slag and dust treatment per tonne stainless steel) of 90% by 2020.
- Improvement of energy efficiency by 1% yearly until 2020 reported as improvement compared to base-period of 2007–2009.
- Reducing scope 1, 2 and 3 greenhouse gas emissions 20% per ton of stainless steel by 2023 from a 2014–2016 base-period.
- Top decile position in safety in the industry by 2020 and long-term target of zero incidents.

Outokumpu's emissions intensity trajectory includes the upstream emissions from raw material supply chain. Outokumpu aims to improve the Group's resource efficiency by minimizing the use of virgin materials and primary energy and by contributing to climate protection.

Environmental performance

The main environmental impacts from stainless steel production are the use of virgin materials, direct and indirect energy, dust emissions into the air, waste created in the production process and water discharges from production plants. The water withdrawal of Outokumpu's site in Mexico which is located in a dry, arid area, where groundwater is a scarce resource for people, is 0.5% of Outokumpu's total water withdrawal.

Outokumpu uses efficient dust-filtering systems that remove 99% of particles, and water is reused in production as much as possible and treated on production sites. In addition to material efficiency through using as much recycled material as possible, Outokumpu aims to reduce landfill waste and reuses waste from its production processes in its own production. Outokumpu also aims to increase the use of its by-product slag from its production outside the company for example in road construction, concrete production and water treatment.

In 2019, all used slag compared to the used and landfilled slag (use rate) slightly increased to 91%. On top of production waste, tailing sand from mining is the most significant waste item to be deposited in the mine site.

In 2019, Outokumpu could further increase the level of recycled content (all metallic input from waste streams, as scrap, scales or metals from slag and dust treatment per tonne stainless steel) to 89.6% (88.6%), close to the 2020 target of 90%. The change of the energy efficiency calculated as a sum of different process steps was 6.1% (2018: 8.9%) compared to the baseline of 2007–2009. Energy use from increased production and sold ferrochrome is also counted. There were no significant environmental incidents.

In 2019, CO_2 intensity reduced by about 13.8% from baseline period 2014–2016 and reached 72% of the targeted reduction by 2023. Landfilled waste decreased as production also decreased.

All Outokumpu sites have environmental permits that set the basic framework for production operations. In 2019, emissions and effluents remained within permitted limits, and the minor breaches that occurred were temporary, identified, and had only a minimal impact on the environment.

The EU Emissions Trading Scheme (ETS) is continuing with the third trading period 2013–2020. Outokumpu's operations under the EU ETS will continue to receive free emissions allocations according to efficiency-based benchmarks and historical activity. In 2019, free allocation for the group was slightly below the emissions.

Outokumpu is not a party to any significant legal or administrative proceedings concerning environmental issues, nor is it aware of any realized environmental risks that could have a material adverse effect on its financial position.

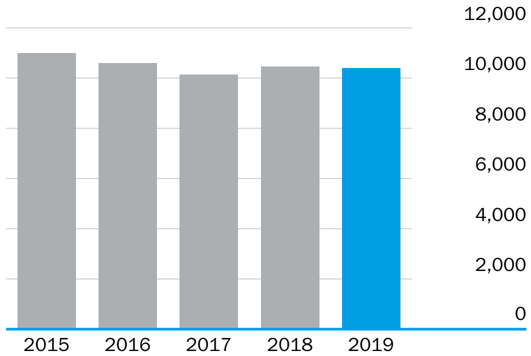
Environmental indicators

	2019	2018	2017
Scope 1, 2 and 3 (direct and indirect) CO_2 emission intensity, kg per tonne stainless steel	**1,606**	1,719	1,839 [1]
Energy intensity, GJ per tonne stainless steel	**10.9**	10.1	9.3
Use rate of slag, including slag from ferrochrome production, %	**90.8**	89.9 [2]	91.1
Total landfill waste intensity per tonne stainless steel	**0.500**	0.472	0.361

[1] 2014–2016 baseline 1,863 kg

[2] Restated

Personnel on December 31



Social performance

Outokumpu's main indicator for safety performance is the total recordable incident frequency rate (TRIFR), which includes fatal accidents, lost time injuries, restricted work injuries, and medically treated injuries per million working hours. Group TRIFR improved from the previous year and was 3.2 against the target of <3.5 (4.1).

Outokumpu's headcount decreased by 59 during the year and totaled 10,390 at the end of December 2019 (2018: 10,449, 2017: 10,141). Total wages and salaries amounted to EUR 568 million in 2019 (2018: EUR 541 million, 2017: EUR 549 million). Indirect employee benefit expenses totaled EUR 206 million in 2019 (2018: EUR 135 million, 2017: EUR 135 million).

Key social indicators

	2019	2018	2017
Diversity			
Employees			
male, %	**85**	85	86
female, %	**15**	15	14
Board of Directors			
male, %	**57**	67	71
female, %	**43**	33	29
Safety			
Total recordable injury frequency rate, per million working hours	**3.2**	4.1	4.4

To further strengthen its compliance culture Outokumpu implemented in 2019 SpeakUp, an externally operated communication channel, that offers the option to report serious misconduct confidentially and, if desired, anonymously. SpeakUp system is available both internally and for external stakeholders. The system is available as a communication channel in Outokumpu's reporting process if other reporting channels do not feel suitable. All the available reporting channels are detailed in the Code of Conduct. In 2019, Outokumpu recorded 16 alleged incidents of potential misconduct through the various reporting channels. All of these incidents were investigated in detail and proper corrective action has been taken as a consequence.

Raising awareness of and training on the Code of Conduct and its topics are central elements of Outokumpu's compliance program. As a part of these efforts, Outokumpu issued in 2019 several compliance-related e-learning courses. The Knowing Your Business Partner e-learning was mandatory for white-collar employees and achieved a completion rate of 96%. In the area of competition law, the mandatory Competition law compliance e-learning was re-issued for all white-collar employees and achieved a completion rate of 97%. Further, an e-learning on competition law compliance in trade associations was issued to Outokumpu representatives, achieving a completion rate of 96%. The Code of Conduct e-learning issued in 2018 for blue-collar employees was trained site by site in 2019 with last sites to be completed in 2020.

Research and development

Outokumpu's research and development (R&D) works closely together with sales, operations and customers to support the business and align R&D activities with customers' current and future needs. Outokumpu has three R&D centers located in Avesta in Sweden, in Krefeld in Germany and in Tornio in Finland. In 2019, Outokumpu's R&D expenditure totaled EUR 17 million, 0.3% of net sales (2018: EUR 15 million and 0.2%, 2017: EUR 13 million and 0.2%).

To further strengthen the R&D organization and to create a better foundation for future projects and market demands, R&D started working in a more functional Process and Product R&D teams in 2019. During 2019 the process R&D projects were focused on optimization of product quality, yield and production cost efficiency. Reduction of CO_2 footprint of our operations has also been further emphasized as an R&D topic. The product R&D projects focused on developing new steel grades, characterization and optimization of existing grades, as well as on use of stainless steels in new application areas. In 2019, the cooperation between Outokumpu's market development and R&D teams was further deepened to better align R&D activities with market needs and trends.

Risks and uncertainties

Outokumpu operates in accordance with the risk management policy approved by the company's Board of Directors. This defines the objectives, approaches and areas of responsibility in the Group's risk management activities. As well as supporting Outokumpu's strategy, the aim of risk management is identifying, evaluating and mitigating risks from the perspective of shareholders, customers, suppliers, personnel, creditors and other stakeholders.

Outokumpu has defined risk as anything that could have an adverse impact on achieving the Group's objectives. Risks can therefore be threats, uncertainties or lost opportunities connected with current or future operations.

The risk management process is an integral part of the overall management processes and is divided into four stages: 1) risk identification; 2) evaluation and prioritization; 3) mitigation and controls and 4) reporting. Key risks are assessed and updated on a regular basis. Risk mitigation actions are defined according to the risk identification and the impact/likelihood assessments.

Outokumpu's risk governance model includes quarterly reporting of the risks to the Audit Committee, as well as semi-annual updates on key risks and risk management, including strategic and business risks, operational risks and financial risks.

The focus in risk management in 2019 was on implementing the mitigation actions of the identified risks, supporting debt reduction mission in Outokumpu e.g. by focused working capital management and by improving the overall efficiency of the risk management process. Furthermore, the harsh market environment, especially in Europe, required several mitigating actions to protect Group's earnings and cash flows.

Outokumpu continued its systematic fire safety and loss prevention audit program, where focus was in execution of the mitigating actions. In total, some twenty fire safety loss prevention audits were carried out in 2019 using in-house expertise in cooperation with external advisors.

The main realized risks in 2019 were related to distortion of the stainless steel markets, originally caused by the US steel tariffs, which continued to have a negative impact on stainless steel base prices and deliveries in Europe throughout the year. Additionally, the fluctuation of the nickel price during the year lead to significant volatility (positive and negative impacts) on quarterly financials. Furthermore, inadequate profitability of business area Americas, mainly due to low deliveries, remained to be a realized risk in 2019. During 2019, the fair value of the investment in Fennovoima declined significantly, which has an adverse impact on Group's equity.

Strategic and business risks

Outokumpu's key strategic and business risks currently include: risks and uncertainties relating to the development of overcapacity of global stainless steel production and volatility of raw material and end product prices, risks and uncertainties in implementing the announced vision, including measures to implement new IT systems and processes, improve operational reliability, drive competitiveness and further improve financial performance; the risk of permanent safeguard measures initiated by EU not being effective; risks and uncertainties related to developments in the stainless steel and ferrochrome markets and competitor actions; changes in the prices of electrical power, fuels, nickel, iron and molybdenum impacting cash flow; fluctuations in exchange rates affecting the global competitive environment in stainless; and the risk of litigation or adverse political action affecting trade.

Operational risks

Key operational risks for Outokumpu are: a major fire or machinery breakdown and consequent business interruptions; IT dependency and cyber security risks; risks due to a fragmented system environment; risks related to supply chain and certain critical supplier dependencies; and investment and project implementation risks, especially related to implementation of new ERP systems. Operational risks also include inadequate or failed internal processes, employee actions, systems, or events such as natural catastrophes and misconduct or crime. These risks are often connected with production operations, logistics, financial processes, major investment projects, other projects or information technology and, should they materialize, can lead to personal injury, liability, loss of property, interrupted operations, or environmental impacts. Outokumpu's operational risks are partly covered by insurance. To minimize the possible damage to property and business interruptions that could result from a fire occurring at some of its major production sites, Outokumpu has systematic fire safety audit programs in place.

Environmental and climate change related risks

The main environmental accident risks at production sites relate to the use of acids, the production of hazardous waste and toxic gases, landfill activities, long-term contamination of soil or groundwater, and the long-term effects of hazardous pollutants. Outokumpu also has some potential environmental liabilities and risks at closed mines and production sites.

The main environmental business risks for Outokumpu are related to emissions trading schemes; new environmental and consumer protection demands, including changes in environmental legislation and their impact on Outokumpu's competitive position; as well as the risk of increased electricity prices and emissions costs due to the European Union's unilateral Emissions Trading System (ETS).

Outokumpu also evaluates annually its climate change related risks, including main production locations' exposures on several threats and risks driven by the climate change. These climate change threats and risks include e.g. flood, sea water level changes, exposures to hurricanes, tornadoes and severe storms, extreme weather conditions like lightning, rain or hail. The main climate change related risks to Outokumpu are driven by changes to climate policies, e.g. "low carbon" Climate agreement and Emission Trading Scheme (ETS), which can have adverse impact to Outokumpu's operating environment and financial position.

Safety and personnel-related risks

The main risks related to safety and personnel are the risk of fatalities and serious injuries to own employees and contractors, which would also have a significant impact on Outokumpu's safety culture and the company's reputation as an employer; the loss of key individuals or other employees who have specific knowledge of, or relationships with, trade customers in markets in which Outokumpu operates; and the risk of being unable to attract, retain, motivate, train, and develop qualified employees at all levels, which could have a material adverse effect on Outokumpu's business, financial condition, and operational results.

Risks related to compliance, crime and reputational harm

Outokumpu operates globally and its activities span multiple jurisdictions and complex regulatory frameworks at a time of increased enforcement activity globally in areas such as competition law, anti-corruption and bribery, anti-money laundering, data protection (including EU GDPR compliance) and trade restrictions, including sanctions. Outokumpu also faces the risk of fraud by its employees, external theft and crime, losses of critical research and development data, misconduct, as well as violations by its sales intermediaries or at its joint ventures and other companies.

Social responsibility related risks and uncertainties

Outokumpu aims to actively identify risks and uncertainties related to its exposures in social responsibility, including human rights related topics. This applies to Outokumpu's own operations globally as well into its supply chain and other business partners. Outokumpu takes seriously all labor practice violations and related threats as well as its full transparency and compliance on human rights topics. However, Outokumpu operates mainly in regions, where the risk related to social responsibility and human rights are not considered to be high.

Financial risks

Key financial risks for Outokumpu include: changes in the prices of nickel, iron, molybdenum, power, fuels and carbon emissions; currency developments affecting the euro, the US dollar, the Swedish krona, and the British pound; interest rate changes connected to the euro, the Swedish krona and the US dollar; interest margin changes applied for Outokumpu; constrained access to new financing; counterparty risks related to customers and other business partners, including suppliers and financial institutions; risks related to liquidity and refinancing; risks related to the fair value of shareholdings, e.g. investment in the Fennovoima project; the risk of breaching financial covenants or other terms and conditions of debt, leading to an event of default; and risks related to the prices of equities and fixed-income securities invested under defined benefit pension plans and risks related to valuation parameters, especially long-term interest rates, of defined benefit pension plans.

Short-term risks and uncertainties

Outokumpu is exposed to the following risks and uncertainties in the short term: risks and uncertainties in implementing the announced vision, including measures to implement new IT systems and processes, especially related to implementation of new ERP systems, improve operational reliability, drive competitiveness and further improve financial performance; the risk of permanent safeguard measures initiated by EU not being effective; risks and uncertainties related to global overcapacity in stainless steel, as well as to market development in stainless steel, ferrochrome and competitor actions; dependencies on certain critical suppliers; changes in the prices of ferrochrome, nickel, electrical power and carbon emissions; currency developments affecting the euro, US dollar, Swedish krona, and British pound; changes in interest margins applied for Outokumpu; risks related to the fair value of shareholdings, e.g. investment in the Fennovoima project; project and investment implementation risks, including the ongoing project in the Kemi mine; IT dependency and cyber security risks; refinancing risks; counterparty risks related to customers and other business partners, including suppliers and financial institutions.

Possible adverse changes in the global political and economic environment, including a severe global economic downturn, may have a significant negative impact on Outokumpu's overall business and access to financial markets. Outokumpu also considers recent events in its risk assessments, such as: slowing economic growth in our main market Europe, particularly in Germany; the UK's decision to leave the EU and possible risks related to trade relations; the possible effect of the rapidly evolving coronavirus situation on global trade flows and capital markets.

Significant legal proceedings

Claim in Spain related to the divested copper companies

Outokumpu divested all of its copper business in 2003–2008. One of the divested companies domiciled in Spain later faced bankruptcy. The administrator of the bankruptcy estate filed a claim against Outokumpu Oyj and two other non-Outokumpu companies for recovery of payments made by the bankrupt Spanish company in connection with the divestment. The court of first instance in Spain accepted the claim of EUR 20 million brought against Outokumpu and the two other companies. Outokumpu and the two other companies appealed the court's decision and in March 2018 the Court of Appeal ruled in favor of Outokumpu. In May 2018, the administrator of the bankruptcy estate filed an appeal before the Spanish Supreme Court, where the case is pending without progress during 2019.

Claim in Italy related to former tax consolidation group

In December 2015, Outokumpu Holding Italia and Acciai Speciali Terni (AST) entered into a dispute relating to the tax consolidation of the former ThyssenKrupp Tax Group in Italy. AST claimed payment of approximately EUR 23 million resulting from the former tax consolidation of the Italian tax group managed by ThyssenKrupp. Outokumpu Holding Italia is the former ThyssenKrupp holding company and was transferred to Inoxum as part of the carve-out in 2011. In July 2019, a final and conclusive settlement was reached between Outokumpu and ThyssenKrupp regarding the case and including also several other earlier claims from Outokumpu's acquisition of Inoxum. The financial impact of the settlement was reported in connection with the first quarter 2019 results.

Shares

On December 31, 2019, Outokumpu's share capital was EUR 311 million, and the total number of shares was 416,374,448. At the end of the year, Outokumpu held 4,599,733 treasury shares. The average number of shares outstanding in 2019 was 411,198,002.

Management shareholdings and share based incentive programs

On December 31, 2019, the members of the Board of Directors and the members of the Outokumpu Leadership Team (OLT) altogether held 2,554,134 shares, or 0.6% of the total number of shares.

Outokumpu has established share-based incentive programs for the OLT members, selected managers and key employees. Outokumpu's share-based incentive programs include Performance Share Plan, Restricted Share Pool, Matching Share Plans for the CEO and other key employees, and a Performance Share Plan for the CEO. In 2019, after deductions for applicable taxes, a total of 1,129,287 shares were delivered to the participants of the programs based on the achievements of the agreed targets and conditions of the programs. Outokumpu used its treasury shares for the reward payments.

The Performance Share Plan and the Restricted Share Pool Program are currently ongoing for the periods 2018–2020, 2019–2021, and their continuation for the period 2020–2022 was already approved by the Board of Directors in December 2019. The Performance Share Plan for the periods 2018–2020 and 2019–2021 focuses on earnings criteria that measures Outokumpu's profitability and the efficiency with which its capital is employed compared to a peer group.

More details on the share-based incentive programs can be found in the note 18 in the consolidated financial statements.

Corporate governance

Outokumpu's Corporate Governance Statement can be found on the Outokumpu website:
https://www.outokumpu.com/en/investors/governance

Annual General Meeting

The Annual General Meeting of Outokumpu Oyj was held on March 27, 2019. The Meeting approved the financial statements and discharged the management of the company from liability for the financial year 2018. The Meeting decided that a dividend of 0.15 euros per share be paid for 2018 and authorized the Board of Directors to repurchase the company's own shares and to decide on the issuance of shares as well as special rights entitling to shares. The Meeting also approved the proposals of the Shareholders' Nomination Board regarding the members of the Board of Directors and their remuneration and the revised Charter of the Shareholders' Nomination Board.

The Annual General Meeting decided in accordance with the proposal by the Nomination Board that the Board of Directors would consist of seven members. Kati ter Horst, Kari Jordan, Heikki Malinen, Eeva Sipilä and Pierre Vareille were re-elected, and Julia Woodhouse and Vesa-Pekka Takala were elected as new members for the term of office ending at the end of the next Annual General Meeting. Kari Jordan was re-elected as the Chairman and Heikki Malinen elected as the new Vice Chairman of the Board of Directors.

Changes in the Outokumpu Leadership Team

Olli-Matti Saksi was appointed President of business area Americas as of May 23, 2019.

Nomination Board

Outokumpu's Shareholders' Nomination Board consists of the representatives of the four largest shareholders registered in the shareholder register of the company following Nasdaq Helsinki's last trading day in August. In addition, Kari Jordan, Outokumpu's Chairman of the Board of Directors, acts as an expert member in the Nomination Board. The Nomination Board has been established to annually prepare proposals on the composition of the Board of Directors and director remuneration for the Annual General Meeting.

On September 2, 2019 the four largest shareholders of Outokumpu were Solidium Oy, Varma Mutual Pension Insurance Company, Ilmarinen Mutual Pension Insurance Company and The Social Insurance Institution of Finland, and they have appointed the following representatives to the Nomination Board:

- Antti Mäkinen, Managing Director at Solidium Oy
- Pekka Pajamo, CFO at Varma Mutual Pension Insurance Company
- Jouko Pölönen, President and CEO, at Ilmarinen Mutual Pension Insurance Company
- Tuula Korhonen, Investment Manager at The Social Insurance Institution of Finland

The Nomination Board submitted its proposals to Outokumpu’s Board of Directors on December 2, 2019.

Board of Directors’ proposal for profit distribution

According to Outokumpu’s dividend policy, the dividend pay-out ratio throughout a business cycle shall be in a range of 30–50 per cent of net income. According to the parent company’s financial statements on December 31, 2019 distributable funds totaled EUR 2,287 million, of which retained earnings were EUR 164 million.

The Board of Directors is proposing to the Annual General Meeting to be held on March 31, 2020 that a dividend of EUR 0.10 per share is paid for 2019.

Group key figures

		2019 1)	2018	2017 2)	2016	2015
Scope of activity						
Sales	€ million	**6,403**	6,872	6,356	5,690	6,384
– change in sales	%	**–6.8**	8.1	11.7	–10.9	–6.7
– exports from and sales outside Finland, of total sales *	%	**95.9**	96.7	96.5	96.4	96.6
Capital employed on Dec 31 3) *	€ million	**3,904**	4,086	3,929	3,816	4,133
Capital expenditure *	€ million	**221**	260	174	164	154
– in relation to sales	%	**3.4**	3.8	2.7	2.9	2.4
Depreciation and amortization	€ million	**230**	204	216	226	302
Impairments	€ million	**3**	12	1	26	1
Research and development costs	€ million	**17**	15	13	20	23
– in relation to sales	%	**0.3**	0.2	0.2	0.4	0.4
Personnel on 31 Dec 4)		**10,390**	10,449	10,141	10,600	11,002
– average for the year		**10,645**	10,468	10,485	10,977	11,833
Profitability						
Adjusted EBITDA *	€ million	**263**	485	631	309	165
– in relation to sales	%	**4.1**	7.1	9.9	5.4	2.6
EBITDA *	€ million	**266**	496	663	355	531
EBIT *	€ million	**33**	280	445	103	228
– in relation to sales	%	**0.5**	4.1	7.0	1.8	3.6
Result before taxes	€ million	**–41**	175	327	–13	127
– in relation to sales	%	**–0.6**	2.5	5.1	–0.2	2.0
Net result for the financial year	€ million	**–75**	130	392	144	86
– in relation to sales	%	**–1.2**	1.9	6.2	2.5	1.4
Return on equity 3) *	%	**–2.8**	4.8	15.4	6.4	3.9
Return on capital employed 3) *	%	**0.8**	7.0	11.3	2.6	5.3

		2019 1)	2018	2017 2)	2016	2015
Financing and financial position						
Net debt *	€ million	**1,155**	1,241	1,091	1,242	1,610
– in relation to sales	%	**18.0**	18.1	17.2	21.8	25.2
Net financial expenses *	€ million	**80**	107	127	121	149
– in relation to sales	%	**1.3**	1.6	2.0	2.1	2.3
Interest expenses *	€ million	**76**	70	92	105	130
– in relation to sales	%	**1.2**	1.0	1.5	1.9	2.0
Net debt to adjusted EBITDA *		**4.4**	2.6	1.7	4.0	9.8
Share capital	€ million	**311**	311	311	311	311
Total equity	€ million	**2,562**	2,750	2,721	2,416	2,329
Equity-to-assets ratio *	%	**42.5**	45.9	46.3	40.4	39.6
Debt-to-equity ratio *	%	**45.1**	45.1	40.1	51.4	69.1
Net cash generated from operating activities	€ million	**371**	214	328	389	–34

Alternative performance measures are marked with *. For more information, please see Alternative Performance Measures section.

1) IFRS 16 – Leases has been adopted on January 1, 2019 using the modified retrospective approach. Comparative information has not been restated.

2) Figures for 2017 have been restated due to IFRS 15 adoption in 2018. Figures for 2016 and 2015 have not been restated.

3) Key figure definition changed in 2016. Figures for 2015 have been restated.

4) Personnel reported as headcount.

Alternative performance measures

Certain financial key figures and ratios presented in Outokumpu's Annual Report are not measures of financial performance, financial position or cash flows under IFRS and are therefore considered as alternative performance measures. These measures are not defined by IFRS and therefore may not be directly comparable with financial measures and ratios used by other companies, including those in the same industry. The reason for presenting these measures is that either they are statutory requirements applicable to the Annual Report of the Group or the management believes that these measures provide meaningful supplemental information on the underlying business performance or financial position of the Group. These financial measures should not be considered in isolation from, or as a substitute for, financial information presented in compliance with IFRS. Alternative performance measures are marked with * in the Group key figures table.

Key figure	Definition of the key figure or source in the consolidated financial statements		2019	2018
Exports from and sales outside Finland				
Exports from and sales outside Finland is an indicator of the international nature of the Group's business.				
Sales	Consolidated statement of income	€ million	**6,403**	6,872
Sales by destination to Finland	Note 4. Geographical information	€ million	**264**	230
Exports from and sales outside Finland	Sales – Sales by destination to Finland	€ million	**6,139**	6,642
– exports from and sales outside Finland, of total sales	Comparison to sales	%	**95.9**	96.7
Capital employed				
Capital employed is a measure for the amount of capital invested in Group's operations.				
Capital employed is the sum of:				
Total equity	Consolidated statement of financial position	€ million	**2,562**	2,750
Net debt	Defined later in this section	€ million	**1,155**	1,241
Defined benefit and other long-term employee benefit obligations	Consolidated statement of financial position	€ million	**335**	318
Net interest rate derivative liabilities	Note 20. Fair values and nominal amounts of derivative instruments	€ million	**–5**	–2
Net accrued interest expenses	Note 28. Trade and other payables	€ million	**9**	5
Less:				
Defined benefit plan assets	Consolidated statement of financial position	€ million	**68**	72
Financial assets at fair value through other comprehensive income	Consolidated statement of financial position	€ million	**31**	86
Investments at fair value through profit or loss	Consolidated statement of financial position	€ million	**13**	13
Investments in associate companies and joint ventures	Consolidated statement of financial position	€ million	**38**	53
Capital employed on Dec 31		€ million	**3,904**	4,086

Capital expenditure

Capital expenditure indicates the investment in assets to generate future cash flows for the Group.

Key figure	Definition of the key figure or source in the consolidated financial statements		2019	2018
Capital expenditure	Additions in property, plant and equipment and intangible assets, other than right-of-use assets, asset retirement obligations and emission allowances; and investments in financial assets at fair value through OCI, associated companies and joint ventures, and business combinations	€ million	**221**	260
– in relation to sales	Comparison to sales	%	**3.4**	3.8

Adjusted EBITDA, EBITDA, and EBIT

Adjusted EBITDA is Outokumpu's main performance indicator in financial reporting. The adjustments to EBITDA relate to material income and expense items of unusual nature, and the purpose of these is to improve comparability of financial performance between reporting periods. EBITDA and EBIT are also measures of financial performance of the Group.

Key figure	Definition of the key figure or source in the consolidated financial statements		2019	2018
EBIT	Consolidated statement of income	€ million	**33**	280
– in relation to sales	Comparison to sales	%	**0.5**	4.1
Depreciation and amortization	Note 6. Income and expenses	€ million	**230**	204
Impairments	Note 6. Income and expenses	€ million	**3**	12
EBITDA	EBIT before depreciation, amortization and impairments	€ million	**266**	496
Adjustments to EBITDA	Note 6. Income and expenses	€ million	**3**	10
Adjusted EBITDA	EBITDA – Adjustments to EBITDA	€ million	**263**	485
– in relation to sales	Comparison to sales	%	**4.1**	7.1

Return on equity

Return on equity is an indicator of the value the Group generates to the capital the shareholders have invested in the Group.

Key figure	Definition of the key figure or source in the consolidated financial statements		2019	2018
Total equity on Dec 31 of previous year	Consolidated statement of financial position	€ million	**2,750**	2,721
Total equity on March 31		€ million	**2,656**	2,655
Total equity on June 30		€ million	**2,624**	2,686
Total equity on Sept 30		€ million	**2,602**	2,710
Total equity on Dec 31	Consolidated statement of financial position	€ million	**2,562**	2,750
Total equity (4-quarter average)	Average of the opening and 4 quarter-end values	€ million	**2,639**	2,704
Net result for the financial year	Consolidated statement of income	€ million	**–75**	130
Return on equity	Net result for the financial year / Total equity (4-quarter average)	%	**–2.8**	4.8

Return on capital employed

Return on capital employed is a measure for the value the Group generates to the capital invested in its operations.

Key figure	Definition of the key figure or source in the consolidated financial statements		2019	2018
Capital employed on Dec 31 of previous year	Defined earlier in this section	€ million	**4,086**	3,929
Capital employed on March 31		€ million	**4,135**	3,854
Capital employed on June 30		€ million	**4,048**	4,023
Capital employed on Sept 30		€ million	**4,096**	4,037
Capital employed on Dec 31	Defined earlier in this section	€ million	**3,904**	4,086
Capital employed (4-quarter average)	Average of the opening and 4 quarter-end values	€ million	**4,054**	3,986
EBIT	Consolidated statement of income	€ million	**33**	280
Return on capital employed	EBIT / Capital Employed (4-quarter average)	%	**0.8**	7.0

Key figure	Definition of the key figure or source in the consolidated financial statements		2019	2018

Net debt

Net debt is a measure for the level of debt financing in the Group. The reduction of net debt is a key priority for the Group.

Key figure	Definition of the key figure or source in the consolidated financial statements		2019	2018
Non-current debt	Consolidated statement of financial position	€ million	**1,053**	798
Current debt	Consolidated statement of financial position	€ million	**427**	511
Cash and cash equivalents	Consolidated statement of financial position	€ million	**325**	68
Net debt	Non-current + current debt – cash and cash equivalents	€ million	**1,155**	1,241
– in relation to sales	Comparison to sales	%	**18.0**	18.1

Net financial expenses and interest expenses

Net financial expenses and interest expenses are measures for the cost of Group's financing.

Key figure	Definition of the key figure or source in the consolidated financial statements		2019	2018
Net financial expenses	Total financial income and expenses in the Consolidated statement of income	€ million	**80**	107
– in relation to sales	Comparison to sales	%	**1.3**	1.6
Interest expenses	Consolidated statement of income	€ million	**76**	70
– in relation to sales	Comparison to sales	%	**1.2**	1.0

Net debt to Adjusted EBITDA

Net debt to Adjusted EBITDA is an indicator of the Group's indebtedness.

Key figure	Definition of the key figure or source in the consolidated financial statements		2019	2018
Net debt	Defined earlier in this section	€ million	**1,155**	1,241
Adjusted EBITDA	Defined earlier in this section	€ million	**263**	485
Net debt to Adjusted EBITDA	Net debt / Adjusted EBITDA		**4.4**	2.6

Equity-to-assets ratio

Equity-to-assets ratio shows the proportion the Group's assets financed with equity. The equity-to-assets ratio indicates the financial risk level of the Group.

Key figure	Definition of the key figure or source in the consolidated financial statements		2019	2018
Total equity	Consolidated statement of financial position	€ million	**2,562**	2,750
Total assets	Consolidated statement of financial position	€ million	**6,038**	5,998
Advances received	Note 28. Trade and other payables	€ million	**11**	10
Equity-to-assets ratio	Total equity / (Total assets – advances received)	%	**42.5**	45.9

Debt-to-equity ratio

Debt-to-equity ratio or gearing is an indicator of the financial risk level and the indebtedness of the Group.

Key figure	Definition of the key figure or source in the consolidated financial statements		2019	2018
Net debt	Defined above	€ million	**1,155**	1,241
Total equity	Consolidated statement of financial position	€ million	**2,562**	2,750
Debt-to-equity ratio	Net debt / Total equity	%	**45.1**	45.1

Share-related key figures

		2019	2018	2017	2016	2015
Earnings per share [1] [2]	€	**–0.18**	0.32	0.95	0.35	0.23
Diluted earnings per share [1] [2]	€	**–0.18**	0.32	0.90	0.35	0.23
Cash flow per share	€	**0.90**	0.52	0.79	0.94	–0.08
Equity per share [1] [2]	€	**6.22**	6.70	6.59	5.84	5.60
Dividend per share	€	**0.10** [3]	0.15	0.25	0.10	–
Dividend payout ratio [1] [2]	%	**neg.**	47.4	26.3	28.8	–
Dividend yield	%	**3.6**	4.7	3.2	1.2	–
Price/earnings ratio [1] [2]		**neg.**	10.00	8.15	24.31	11.85
Development of share price						
Average trading price	€	**3.01**	5.39	8.11	4.51	4.49
Lowest trading price	€	**2.23**	3.18	6.61	2.08	2.06
Highest trading price	€	**4.04**	8.26	10.05	8.51	7.76
Trading price at the end of the period	€	**2.81**	3.20	7.74	8.51	2.73
Change during the period	%	**–12.2**	–58.7	–9.0	211.3	–42.7
Change in the OMX Helsinki index during the period	%	**13.4**	–8.0	6.4	3.6	10.8
Market capitalization at the end of the period	€ million	**1,155**	1,312	3,223	3,541	1,138
Development in trading volume						
Trading volume [4]	1,000 shares	**884,254**	826,636	1,021,607	955,682	1,345,515
In relation to weighted average number of shares	%	**215.0**	201.1	247.7	230.6	323.9
Adjusted average number of shares [5]		**411,198,002**	411,065,622	412,363,204	414,411,287	415,473,976
Diluted average number of shares [5]		**446,209,235**	447,181,306	450,247,639	414,411,287	415,473,976
Number of shares at the end of the period [5]		**411,774,715**	410,563,719	412,671,549	413,860,600	415,489,308

[1] IFRS 16 – Leases has been adopted on January 1, 2019 using the modified retrospective approach. Comparative information has not been restated.

[2] Figures for 2017 have been restated due to IFRS 15 adoption in 2018. Figures for 2015 or 2016 have not been restated.

[3] The Board of Directors' proposal to the Annual General Meeting.

[4] Includes only Nasdaq Helsinki trading.

[5] Excluding treasury shares.

Definitions of share-related key figures

Earnings per share	=	$\frac{\text{Net result for the financial year attributable to the equity holders}}{\text{Adjusted average number of shares during the period}}$
Cash flow per share	=	$\frac{\text{Net cash generated from operating activities}}{\text{Adjusted average number of shares during the period}}$
Equity per share	=	$\frac{\text{Equity attributable to the equity holders}}{\text{Adjusted number of shares at the end of the period}}$
Dividend per share	=	$\frac{\text{Dividend for the financial year}}{\text{Adjusted number of shares at the end of the period}}$
Dividend payout ratio	=	$\frac{\text{Dividend for the financial year}}{\text{Net result for the financial year attributable to the equity holders}} \times 100$
Dividend yield	=	$\frac{\text{Dividend per share}}{\text{Adjusted trading price at the end of the period}} \times 100$
Price/earnings ratio (P/E)	=	$\frac{\text{Adjusted trading price at the end of the period}}{\text{Earnings per share}}$
Average trading price	=	$\frac{\text{EUR amount traded during the period}}{\text{Adjusted number of shares traded during the period}}$
Market capitalization at end of the period	=	Number of shares at the end of the period × Trading price at the end of the period
Trading volume	=	Number of shares traded during the period, and in relation to the weighted average number of shares during the period

Consolidated financial statements, IFRS

Parent company financial statements

Consolidated statement of income

€ million	Note	2019	2018
Sales	3, 4, 6	**6,403**	6,872
Cost of sales		**–6,108**	–6,398
Gross margin		**295**	474
Other operating income	6	**107**	99
Selling and marketing expenses		**–77**	–71
Administrative expenses		**–198**	–188
Research and development expenses		**–17**	–15
Other operating expenses	6	**–77**	–19
EBIT		**33**	280
Share of results in associated companies and joint ventures	15	**6**	3
Financial income and expenses	8		
Interest income		**4**	3
Interest expenses		**–76**	–70
Market price gains and losses		**4**	–15
Other financial expenses		**–13**	–26
Total financial income and expenses		**–80**	–107
Result before taxes		**–41**	175
Income taxes	9	**–33**	–45
Net result for the financial year		**–75**	130
Earnings per share for result attributable to the equity holders of the Company	10		
Earnings per share, EUR		**–0.18**	0.32
Diluted earnings per share, EUR		**–0.18**	0.32

Net result for the financial year is fully attributable to the equity holders of the company.

IFRS 16 – Leases has been adopted on January 1, 2019 using the modified retrospective approach. Comparative information has not been restated. For further information, see notes 2 and 13 to the consolidated financial statements.

Consolidated statement of comprehensive income

€ million	Note	2019	2018
Net result for the financial year		**–75**	130
Other comprehensive income			
Items that may be reclassified subsequently to profit or loss:			
Exchange differences on translating foreign operations			
Change in exchange differences		**25**	24
Reclassification adjustments from other comprehensive income to profit or loss		**3**	–
Cash flow hedges	20		
Fair value changes during the financial year		**12**	4
Reclassification adjustments from other comprehensive income to profit or loss		**–1**	–4
Reclassification adjustments from other comprehensive income to inventory		**–2**	–
Income tax relating to cash flow hedges	9	**–1**	–0
Items that will not be reclassified to profit or loss:			
Remeasurements of defined benefit plans	25		
Changes during the financial year		**–43**	–7
Income tax relating to remeasurements	9	**10**	–1
Financial assets at fair value through other comprehensive income	17		
Fair value changes during the financial year		**–55**	2
Income tax relating to financial assets at fair value through other comprehensive income	9	**1**	–1
Share of other comprehensive income in associated companies and joint ventures	15	**–0**	–0
Other comprehensive income for the financial year, net of tax		**–49**	18
Total comprehensive income for the financial year		**–124**	148

Total comprehensive income for the financial year is fully attributable to the equity holders of the company.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32

Consolidated statement of financial position

€ million	Note	2019	2018
ASSETS			
Non-current assets			
Intangible assets	11, 14	**607**	585
Property, plant and equipment	12, 13, 14	**2,767**	2,659
Investments in associated companies and joint ventures	15	**38**	53
Financial assets at fair value through other comprehensive income	17	**31**	86
Derivative financial instruments	20	**5**	2
Deferred tax assets	9	**229**	247
Defined benefit plan assets	25	**68**	72
Trade and other receivables	22	**2**	2
		3,747	3,706
Current assets			
Inventories	21	**1,424**	1,555
Investments at fair value through profit or loss		**13**	13
Derivative financial instruments	20	**15**	15
Trade and other receivables	22	**514**	640
Cash and cash equivalents	23	**325**	68
		2,291	2,292
TOTAL ASSETS		**6,038**	5,998

€ million	Note	2019	2018
EQUITY AND LIABILITIES			
Equity attributable to the equity holders of the Company			
Share capital		**311**	311
Premium fund		**714**	714
Invested unrestricted equity reserve		**2,103**	2,103
Other reserves		**–40**	5
Retained earnings		**–525**	–382
Total equity	24	**2,562**	2,750
Non-current liabilities			
Non-current debt	27	**1,053**	798
Derivative financial instruments	20	**–**	1
Deferred tax liabilities	9	**12**	12
Defined benefit and other long-term employee benefit obligations	25	**335**	318
Provisions	26	**85**	65
Trade and other payables	28	**29**	35
		1,514	1,229
Current liabilities			
Current debt	27	**427**	511
Derivative financial instruments	20	**17**	20
Provisions	26	**25**	5
Current tax liabilities		**17**	12
Trade and other payables	28	**1,475**	1,471
		1,962	2,019
TOTAL EQUITY AND LIABILITIES		**6,038**	5,998

IFRS 16 – Leases has been adopted on January 1, 2019 using the modified retrospective approach. Comparative information has not been restated. For further information, see notes 2 and 13 to the consolidated financial statements.

Consolidated statement of cash flows

€ million	Note	2019	2018
Cash flow from operating activities			
Net result for the financial year		**–75**	130
Adjustments for			
Depreciation and amortization	6, 11, 12	**230**	204
Impairments	6, 11, 12, 14	**3**	12
Net expenses on provisions, and defined benefit and other long-term employee benefit obligations		**75**	7
Gain/loss on sale of intangible assets and property, plant and equipment	6	**–81**	–14
Gain/loss on disposal of subsidiaries	5	**–1**	–
Gain/loss on sale of financial assets	8	**0**	1
Interest income	8	**–2**	–1
Interest expense	8	**65**	62
Taxes	9	**33**	45
Share of results in associated companies and joint ventures	15	**–6**	–3
Exchange rate differences		**2**	1
Other non-cash adjustments		**11**	–2
		330	313
Change in working capital			
Change in trade and other receivables		**100**	60
Change in inventories		**129**	–145
Change in trade and other payables		**–10**	–27
		218	–112
Provisions, and defined benefit and other long-term employee benefit obligations paid		**–53**	–60
Interest and dividends received		**12**	2
Interest paid		**–56**	–54
Income taxes paid		**–5**	–5
Net cash from operating activities		**371**	214

€ million	Note	2019	2018
Cash flow from investing activities			
Acquired businesses, net of cash	5	**–3**	–10
Investments in financial assets at fair value through other comprehensive income	17	**–**	–16
Purchases of property, plant and equipment	12	**–161**	–154
Purchases of intangible assets	11	**–28**	–76
Proceeds from the disposal of subsidiaries, net of cash	5	**9**	–
Proceeds from sale of property, plant and equipment	12	**99**	3
Proceeds from sale of intangible assets	11	**10**	19
Other investing cash flow		**10**	4
Net cash from investing activities		**–65**	–229
Cash flow before financing activities		**306**	–14
Cash flow from financing activities			
Dividends paid	24	**–62**	–103
Treasury share purchase	24	**–**	–17
Borrowings of non-current debt		**515**	329
Repayments of non-current debt		**–76**	–240
Change in current debt		**–396**	7
Repayments of lease liabilities		**–34**	–
Repayments of finance lease liabilities		**–**	–5
Other financing cash flow		**3**	1
Net cash from financing activities		**–49**	–29
Net change in cash and cash equivalents		**256**	–43
Cash and cash equivalents at the beginning of the financial year		**68**	112
Net change in cash and cash equivalents		**256**	–43
Foreign exchange rate effect on cash and cash equivalents		**0**	–1
Cash and cash equivalents at the end of the financial year	23	**325**	68

IFRS 16 – Leases has been adopted on January 1, 2019 using the modified retrospective approach. Comparative information has not been restated. For further information, see notes 2 and 13 to the consolidated financial statements.

Consolidated statement of changes in equity

€ million	Note	Share capital	Premium fund	Invested unrestricted equity reserve	Other reserves	Fair value reserve from financial assets at FV through OCI	Fair value reserve from derivatives	Cumulative translation differences	Remeasure-ments of defined benefit plans	Treasury shares	Other retained earnings	Total equity
Equity on Jan 1, 2018		**311**	**714**	**2,103**	**3**	**3**	**–3**	**–81**	**–72**	**–26**	**–225**	**2,728**
Net result for the financial year		–	–	–	–	–	–	–	–	–	130	130
Other comprehensive income		–	–	–	–	2	0	24	–8	–	–0	18
Total comprehensive income for the financial year		–	–	–	–	2	0	24	–8	–	130	148
Transactions with equity holders of the Company												
Contributions and distributions												
Dividends paid	24	–	–	–	–	–	–	–	–	–	–103	–103
Share-based payments	18	–	–	–	–	–	–	–	–	3	–8	–5
Treasury share purchase	24	–	–	–	–	–	–	–	–	–17	–	–17
Equity on Dec 31, 2018		**311**	**714**	**2,103**	**3**	**5**	**–3**	**–56**	**–80**	**–40**	**–207**	**2,750**
Net result for the financial year		–	–	–	–	–	–	–	–	–	–75	–75
Other comprehensive income		–	–	–	–	–54	9	29	–33	–	–0	–49
Total comprehensive income for the financial year		–	–	–	–	–54	9	29	–33	–	–75	–124
Transactions with equity holders of the Company												
Contributions and distributions												
Dividends paid	24	–	–	–	–	–	–	–	–	–	–62	–62
Share-based payments	18	–	–	–	–	–	–	–	–	7	–9	–3
Other		–	–	–	–	–	–	–	–3	–	3	–
Equity on Dec 31, 2019		**311**	**714**	**2,103**	**3**	**–49**	**6**	**–27**	**–116**	**–33**	**–350**	**2,562**

Total equity is fully attributable to the equity holders of the company.

Notes to the consolidated financial statements

1. Corporate information

Outokumpu Oyj is a Finnish public limited liability company organized under the laws of Finland and domiciled in Helsinki, Finland. The parent company, Outokumpu Oyj, has been listed on the Nasdaq Helsinki since 1988. A copy of the consolidated financial statements is available at the Group's website www.outokumpu.com, from Outokumpu Oyj/Corporate Communications, P.O. Box 245, 00181 Helsinki, Finland or via e-mail at corporate.comms@outokumpu.com.

Outokumpu is the global leader in stainless steel. We aim to be the best value creator in stainless steel through customer orientation and efficiency. The foundation of our business is our ability to tailor stainless steel into any form and for almost any purpose. Stainless steel is sustainable, durable and designed to last forever. Our customers use it to create civilization's basic structures and its most famous landmarks as well as products for households and various industries. Outokumpu employs 10,000 professionals in more than 30 countries.

In its meeting on February 5, 2020 the Board of Directors of Outokumpu Oyj approved the publishing of these consolidated financial statements. According to the Finnish Limited Liability Companies Act, shareholders have the right to approve or reject the financial statements in the Annual General Meeting held after the publication of the financial statements. The Annual General Meeting also has the right to decide to amend the financial statements.

2. Accounting principles for the consolidated financial statements

Basis of preparation

These consolidated financial statements of Outokumpu have been prepared on going concern basis for the financial year 2019 covering the period from January 1 to December 31, 2019.

The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (IFRSs) as adopted by the European Union. The consolidated financial statements have been prepared in compliance with the IAS and IFRS standards as well as the SIC and IFRIC interpretations in force on December 31, 2019. The consolidated financial statements also comply with the regulations of Finnish accounting and company legislation complementing the IFRSs.

The consolidated financial statements are presented in millions of euros and have been prepared under the historical cost convention, unless otherwise stated in the accounting principles. All figures presented have been rounded, and consequently the sum of individual figures may deviate from the presented aggregate figure. Key figures have been calculated using exact figures.

As of January 1, 2019, Outokumpu has applied the following new and amended standards.

- **IFRS 16 Leases** (effective for financial years beginning on or after January 1, 2019): The new standard replaced IAS 17 standard and related interpretations. IFRS 16 requires the lessees to recognize nearly all lease agreements as right-of-use assets and lease liabilities in the statement of financial position. The exceptions to this requirement are short-term contracts with a lease term of 12 months or less and leases of low value items.

  Outokumpu has adopted the IFRS 16 as of January 1, 2019 using the modified retrospective approach, where comparative financial information is not restated, but the transition impact is recognized to the balances of January 1, 2019. The accounting principles related to leases are described later in this note, and the transition impacts in note 13 of these financial statements.
- **IFRIC 23 Uncertainty over Income Tax Treatments** (effective for financial years beginning on or after January 1, 2019). IFRIC 23 adds to the requirements in IAS 12 Income Taxes by specifying how to reflect the effects of uncertainty in accounting for income taxes when it is unclear how tax law applies to a particular transaction or circumstance, or it is unclear whether a taxation authority will accept an entity's tax treatment. The interpretation did not have material impact on Outokumpu's consolidated financial statements.
- **Annual Improvements to IFRSs (2015–2017 Cycle):** The changes did not have material impact on Outokumpu's consolidated financial statements.

Other new or amended standards and interpretations had no impact on Outokumpu's consolidated financial statements.

Adoption of new and amended IFRS standards and interpretations

Outokumpu has not yet applied the following new and amended standards and interpretations already issued. The Group adopts them as of the effective date or, if the date is other than the first day of the financial year, from the beginning of the subsequent financial year.

- **Amendments to IAS 1 Presentation of financial statements** and **IAS 8 Accounting policies, changes in accounting estimates and errors** (effective for financial years beginning on or after January 1, 2020): The amendments clarify the definition of materiality and use it consistently throughout IFRSs and the Conceptual Framework of Financial Reporting. The amendments are not expected to have material impact on Outokumpu's consolidated financial statements.
- **Revised Conceptual Framework of Financial Reporting** (effective for financial years beginning on or after January 1, 2020): The International Accounting Standards Board has issued a revised Conceptual Framework which has been taken into use in decisions on standard setting. The current accounting standards will not be changed, but Framework is to be applied in determining accounting policies in situations that are not otherwise dealt with under the accounting standards. Key changes in the framework include: increasing the prominence of stewardship in the objective of financial reporting, reinstating prudence as a component of neutrality, revising the definitions of an asset and a liability, removing

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the probability threshold for recognition, adding guidance on derecognition and different measurement bases, and stating that profit or loss is the primary performance indicator. The amendments are not expected to have material impact on Outokumpu's consolidated financial statements.

Other new or amended standards and interpretations that are not yet effective are not expected to have a material impact on Outokumpu's consolidated financial statements.

Management judgements and use of estimates

The preparation of the financial statements in accordance with IFRSs requires management to make judgements, estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and contingent liabilities at the reporting date, as well as the reported amounts of income and expenses during the reporting period. The management estimates and judgements are continuously monitored and they are based on prior experience and other factors, such as future expectations assumed to be reasonable considering the circumstances. Although these estimates are based on management's best knowledge of the circumstances at the end of the reporting period, actual results may differ from the estimates and the assumptions. Management believes that the following accounting principles represent those matters requiring the exercise of judgement where a different opinion could result in significant changes to reported results.

Inventories

Inventories are stated at the lower of cost and net realizable value (NRV). Net realizable value is the estimated selling price in the ordinary course of business, less the estimated costs of completion and the estimated costs necessary to make the sale. The most important commodity price risk for Outokumpu is caused by fluctuation in nickel and other alloy prices. Significant part of stainless steel sales contracts include an alloy surcharge clause, with the aim of reducing the risk arising from the time difference between raw material purchase and product delivery. However, the risk is significant because the delivery cycle in production is longer than the alloy surcharge mechanism provides for. Thus, only the price for the products to be sold in the near future is known. That is why a significant part of the future price for each product to be sold is estimated according to management's best knowledge in NRV calculations. Due to fluctuations in nickel and other alloy prices, the realized prices can deviate significantly from what has been used in NRV calculations on the closing date. See note 21.

Property, plant and equipment and intangible assets and impairments

Management estimates relate to carrying amounts and useful lives of assets as well as other underlying assumptions. Different assumptions and assigned lives could have a significant impact on the reported amounts. Management estimates in relation to goodwill relate to the estimation of the value in use of the cash-generating units to which goodwill has been allocated. The value in use calculation requires management to estimate the future cash flows expected to arise from the cash-generating units and a suitable discount rate to calculate present value. The future projections of cash flows include, among other estimates, projections of future prices and delivery volumes, production costs and maintenance capital expenditures.

Carrying amounts of non-current assets are regularly reviewed to determine whether there is any evidence of impairment as described in these accounting principles. The estimation of future cash flows and definition of the discount rates for the impairment testing require management to make assumptions relating to future expectations (e.g. future product pricing, production levels, production costs, market supply and demand, projected maintenance capital expenditure and weighted average cost of capital). A pre-tax discount rate used for the net present value calculation of projected cash flows reflects the weighted average cost of capital. The key assumptions used in the impairment testing, including sensitivity analysis, are explained further in note 14.

Income taxes

Group operates and earns income in numerous countries and is subject to changing tax laws in multiple jurisdictions within the countries. Significant judgements are necessary in determining the worldwide income tax liabilities of the Group. Although management believes they have made reasonable estimates about the resolution of tax uncertainties, the final outcome of these uncertainties could have an effect on the income tax liabilities and deferred tax liabilities in the period.

At the end of reporting period, the management assesses whether the realization of future tax benefits is sufficiently probable to recognize deferred tax assets. This assessment requires judgement with respect to, among other things, benefits that could be realized from future taxable income, available tax strategies, as well as other positive and negative factors. The recorded amount of deferred tax assets could be reduced if estimates of taxable income and benefits from available tax strategies are lowered, or if current tax regulations are enacted that impose restrictions on the Group's ability to utilize future tax benefits. See note 9.

Fair values of non-derivative financial instruments

The fair value of financial instruments which cannot be determined based on quoted market prices and rates are based on different valuation techniques. The Group uses its judgement to select a variety of methods and make assumptions that are mainly based on market conditions existing at the end of each reporting period. Factors regarding valuation techniques and their assumptions could affect the reported fair values.

Relating to the valuation of Outokumpu's investment in Voimaosakeyhtiö SF, key management judgements relate to long-term market price for electricity, Fennovoima's capacity utilization rate, discount rates for cash flows and terminal value, and inflation rates for costs and electricity market price. See note 17.

Employee benefits

The present value of pension obligations is subject to actuarial assumptions which actuaries use in calculating these obligations. Actuarial assumptions include, among others, discount rate, the annual rate of increase in future compensation levels and inflation rate. The assumptions used are presented in note 25.

Provisions

The most significant provisions in the statement of financial position relate to restructuring programs and primarily include termination benefits to employees. The judgement applied

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32

mainly relates to the estimated amounts of termination benefits.

The Group has also made provisions for known environmental liabilities based on management's best estimate of the remediation costs. The precise amount and timing of these costs could differ significantly from the estimate. See note 26.

Principles of consolidation

Subsidiaries

The consolidated financial statements include the parent company Outokumpu Oyj and all those subsidiaries where over 50% of the subsidiary's voting rights are controlled directly or indirectly by the parent company. The Group controls an entity when it is exposed to, or has rights to, variable returns from its involvement with the entity and has ability to affect those returns through its power over the entity. The financial statements of subsidiaries are included in the consolidated financial statements from the date on which control commences until the date on which control ceases.

Acquired or established subsidiaries are accounted for by using the acquisition method. The consideration transferred, and the identifiable assets acquired and liabilities assumed in the acquired company are measured at fair value at the acquisition date. The consideration transferred includes any assets transferred by the acquirer, liabilities incurred by the acquirer to former owners of the acquiree, and the equity interests issued by the acquirer. Any contingent consideration related to the business combination is measured at fair value at the acquisition date and it is classified as either liability or equity. Contingent consideration classified as liability is remeasured at its fair value at the end of each reporting period, and the subsequent changes to fair value are recognized in profit or loss. Contingent consideration classified as equity is not subsequently remeasured. The consideration transferred does not include any transactions accounted for separately from the acquisition. All acquisition-related costs except costs to issue debt or equity securities, are recognized as expenses in the periods in which costs are incurred and services rendered.

Goodwill arising on an acquisition is recognized as the excess of the aggregate of the consideration transferred and the amount of any non-controlling interests or previously held equity interests in the acquiree, over the Group's share of the fair value of the identifiable assets acquired and liabilities assumed at the acquisition date. Non-controlling interest in the acquiree is measured acquisition-by-acquisition either at fair value or at value, which equals to the proportional share of the non-controlling interest in the identifiable net assets acquired. Changes in the parent company's ownership interest in a subsidiary are accounted for as equity transactions if the parent company retains control of the subsidiary.

To those business combinations, which have taken place before January 1, 2010 accounting principles effective at that time have been applied.

All intra-group transactions, receivables, liabilities and unrealized margins, as well as distribution of profits within the Group, are eliminated in the preparation of consolidated financial statements.

Associated companies and joint ventures

Companies, where Outokumpu generally holds voting rights of 20–50% and in which Outokumpu otherwise has significant influence, but not control are included in the consolidated financial statements as associated companies. Associated companies are consolidated by using the equity method from the date that significant influence was obtained until it ceases.

The Group's share of the associated company's result for the period is separately disclosed below EBIT in the consolidated statement of income. Outokumpu's share of changes recognized in the associated company's other comprehensive income is recognized in the Group's other comprehensive income. When Outokumpu's share of the associated company's losses exceeds the carrying amount of the investment, the investment is recognized at zero value in the statement of financial position and recognition of further losses is discontinued, except to the extent that the Group has incurred obligations in respect of the associated company. The interest in an associated company comprises the carrying amount of the investment under the equity method together with any long-term interest that, in substance, forms a part of the net investment in the associated company.

Joint ventures in which Outokumpu has contractually based joint control with a third party are also accounted for by using the equity method described above.

Non-current assets held for sale

Non-current assets or disposal groups are classified as held for sale if their carrying amounts are expected to be recovered primarily through sale rather than through continuing use. Classification as held for sale requires that the following criteria are met: the sale is highly probable, the asset or disposal group is available for immediate sale in its present condition subject to usual and customary terms, the management is committed to the sale and the sale is expected to be completed within one year from the date of classification.

Prior to classification as held for sale, the assets or assets and liabilities related to a disposal group in question are measured according to the respective IFRS standards. From the date of classification, non-current assets or a disposal group held for sale are measured at the lower of the carrying amount and the fair value less costs to sell, and the recognition of depreciation and amortization is discontinued.

Assets included in disposal groups but not in the scope of the measurement requirements of IFRS 5, as well as liabilities, are measured according to the related IFRS standards also after the date of classification.

Segment reporting

An operating segment is a component of the Group that engages in business activities from which it may earn revenues and incur expenses, and for which discrete financial information is available. Outokumpu's business is divided into four business areas, which are responsible for sales, profitability, production and supply chain management, and they are Outokumpu's operating segments under IFRS. The performance of the segments is reviewed based on segments' adjusted EBITDA, which is defined in these accounting principles. The review is done by the CEO who is Outokumpu's chief operating decision maker, on basis of regular internal management reporting based on IFRS.

Foreign currency transactions

Transactions of each subsidiary included in the consolidated financial statements are measured using the currency that best reflects the economic substance of the underlying events and circumstances relevant to that subsidiary ("the functional currency"). The consolidated financial statements are presented in euros which is the functional and presentation currency of the parent company. Group companies' foreign currency transactions are translated into local functional currencies using the exchange rates prevailing at the dates of the transactions. Receivables and liabilities in foreign currencies are translated into functional currencies at the exchange rates prevailing at the end of the reporting period. Foreign exchange differences arising from interest-bearing assets and liabilities and related derivatives are recognized in finance income and expenses in the consolidated statement of income. Foreign exchange differences arising in respect of other financial instruments are included in EBIT under sales, purchases or other operating income and expenses. The effective portion of exchange differences arisen from instruments designated as hedges of the net investments in foreign operations is recognized in other comprehensive income.

For those subsidiaries whose functional and presentation currency is not the euro, the income and expenses for the statements of income and comprehensive income, and the items for statement of cash flows, are translated into euro using the average exchange rates of the reporting period. The assets and liabilities for the statement of financial position are translated using the exchange rates prevailing at the reporting date. The translation differences arising from the use of different exchange rates explained above are recognized in Group's other comprehensive income. Any goodwill arising on the acquisition of foreign operations and any fair value adjustments to the carrying amounts of assets and liabilities arising on the acquisition of those foreign operations are treated as assets and liabilities of those foreign operations. They are translated into euro using the exchange rates prevailing at the reporting date. When a foreign operation is sold, or is otherwise partially or completely disposed of, the translation differences accumulated in equity are reclassified in profit or loss as part of the gain or loss on the sale.

Revenue from contracts with customers

Outokumpu generates revenue mainly from sales of stainless steel and ferrochrome. Outokumpu ships these goods to customers under a variety of Incoterms, and considers the transfers of physical possession and risks and rewards related to the ownership of the goods accordingly. Consequently, the performance obligations related to sales of stainless steel and ferrochrome are satisfied at a point of time.

With customer deliveries following the "C" Incoterms, whereby the control of the goods transfers to the customer before the delivery, Outokumpu remains responsible for organizing the transportation of the goods to the customer. In these cases, the transportation service is a separate performance obligation, which is satisfied over time of the transportation. Outokumpu has concluded that it acts as a principal with regards to the transportation service performance obligation.

Most of Outokumpu's revenue from contracts with customer is recognized at a point of time. Only revenue from transportation service is recognized over a period of time, and the period under which the revenue is recognized, is relatively short. Moreover, the sales of goods and transportation service are invoiced together from the customer. Consequently, the uncertainty associated with the cash flows does not differ with respect to the timing of revenue recognition.

Stainless steel and ferrochrome sales prices are mainly fixed before delivery, and volume discounts estimated and accrued in the revenue recognition are the only variable component in pricing. In individual cases, the sales price of ferrochrome is based on the period of time when the customer uses the purchased ferrochrome. The payment terms vary from advance payment to 90 days payment term, and they do not include any significant financing component.

Outokumpu also sells nickel and nickel warrants that relate to nickel sourced as part of a nickel supply agreement but is not needed for production of stainless steel. These sales are recognized to revenue when the title to the material is transferred to the buyer.

Income taxes

Current and deferred income taxes are determined in accordance with IAS 12 Income Taxes on entity level to the extent an entity is subject to income taxation. The Group's income tax in the consolidated statement of income includes current income taxes of the Group companies based on taxable profit for the period, together with tax adjustments for previous periods and the change in deferred income taxes. In several countries (Germany, the UK, Italy, the Netherlands, Sweden and the USA) Outokumpu companies are included in income tax consolidation groups / group taxation systems. The share of results in associated companies is reported in the statement of income based on the net result and thus including the income tax effect.

Deferred income taxes are stated using the balance sheet liability method to reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities in the financial statements and the corresponding tax basis at the reporting date, as well as for unused tax losses or credits carry forward. Deferred tax assets are recognized for all deductible temporary differences to the extent that it is probable that future taxable profits will be available, against which deductible temporary differences can be utilized. A valuation allowance is recognized against a deferred tax asset if the realization of the related tax benefit is not probable. The ability to recognize deferred tax assets is reviewed at the end of each reporting period. Deferred tax liabilities are usually recognized in the statement of financial position in full except to the extent that the deferred taxes arise from the initial recognition of an asset or liability in a transaction which is not a business combination and at the time of the transaction, affects neither accounting profit nor taxable profit.

Deferred taxes are calculated at the enacted or substantially enacted tax rates that are expected to apply by the end of the reporting period. Generally, deferred tax is recognized to the statement of income, except if the taxes are related to items of other comprehensive income or to transactions or other events recognized directly in equity, in which case the related income taxes are also recognized either in other comprehensive income or directly in equity, respectively.

Research and development costs

Research costs are expensed in the reporting period in which they are incurred. Development costs are capitalized when it is probable that the development project will generate future economic benefits for the Group, and certain criteria related to commercial and technological feasibility are met. These costs relate to the development of new or substantially improved products or production processes and to transformation projects with the target of developing and improving business processes. Capitalized development costs mainly comprise materials and supplies and direct labour costs as well as related overhead costs. Development costs recognized as expenses are not subsequently capitalized.

Subsequent to initial recognition, capitalized development costs are measured at cost less accumulated amortization and impairment losses. Capitalized development costs are amortized on a straight-line basis over their estimated useful lives which is generally five years. Recognition of amortization is commenced as the asset is ready for use. The accounting treatment of the government grants received for research and development activities is described below under Government grants.

Goodwill and other intangible assets

Goodwill arising on a business combination is recognized at the acquisition date at an amount representing the excess of the consideration transferred in an acquisition over the fair value of the identifiable assets acquired, liabilities assumed and any non-controlling interest and any previously held equity interests in the acquiree, if any. Goodwill is not amortized but tested for impairment. Goodwill is measured at cost less accumulated impairment losses.

Intangible assets other than goodwill include capitalized development costs, patents, licenses and software. An intangible asset is recognized only if it is probable that the future economic benefits attributable to the asset will flow to the Group and the cost of the asset can be measured reliably. All other expenditure is expensed as incurred. Intangible assets are recognized initially at cost. After initial recognition, assets are measured at cost less accumulated amortizations and impairment losses if the intangible asset has a finite useful life. Cost comprises the purchase price and all costs directly attributable to bringing the asset ready for its intended use. Intangible assets acquired in a business combination are measured at fair value at the acquisition date.

Borrowing costs (mainly interest costs) directly attributable to the acquisition of an intangible asset are capitalized in the statement of financial position as part of the carrying amount of the asset, when it takes a substantial period of time to get the asset ready for its intended use.

Intangible assets are amortized on a straight-line basis over their expected useful lives. Assets tied to a certain fixed period are amortized over the contract term. Amortization periods used for intangible assets are the following:

Software	up to 10 years
Capitalized development costs	up to 10 years
Intangible rights	up to 20 years

Recognition of amortization is discontinued when the intangible asset is classified as held for sale. The estimated useful lives and residual values are reviewed at least at the end of each financial year. If they differ substantially from previous estimates, the useful lives are adjusted accordingly.

Gains and losses on disposal of intangible assets are included in other operating income and expenses.

Emission allowances

Emission allowances are intangible assets measured at cost. Allowances received free of charge are recognized at nominal value, i.e. at zero carrying amount. A provision to cover the obligation to return emission allowances is recognized at fair value at the end of the reporting period if the emission allowances held by the Group do not cover the actual emissions. The purchased emission allowance quotas recognized in intangible rights are derecognized against the actual emissions or, when the emission allowances are sold. The obligation to deliver allowances equal to emissions is recognized under other operating expenses. Gains from the sale of allowances are recognized as other operating income in the statement of income.

Property, plant and equipment

Property, plant and equipment acquired by the Group companies are measured at cost. The cost includes all expenditure directly attributable to the acquisition of the asset. Government grants received are deducted from the cost. Property, plant and equipment acquired in business combinations are measured at fair value at the acquisition date.

Borrowing costs (mainly interest costs) directly attributable to the acquisition or construction of an asset are capitalized in the statement of financial position as part of the carrying amount of the asset, when it takes a substantial period of time to get the asset ready for its intended use or sale.

Property, plant and equipment are carried in the statement of financial position at cost less accumulated depreciation and impairment losses. Property, plant and equipment are depreciated on a straight-line basis over their expected useful lives. Depreciation is based on the following estimated useful lives:

Buildings	25–40 years
Heavy machinery	15–30 years
Light machinery and equipment	3–15 years

Land is not depreciated, except for leased land, as the useful life of land is assumed to be indefinite. Mine properties include preparatory work to utilize an ore body or part of it, such as shafts, ramps and ventilation and are depreciated using the units-of-production method based on the depletion of ore reserves over their estimated useful lives. Recognition of depreciation on an item of property, plant and equipment is discontinued when the item is classified as held for sale. Expected useful lives and residual values are reviewed at least at the end of each financial year and, if they differ significantly from previous estimates, the useful lives are revised accordingly.

Ordinary repairs and maintenance costs are expensed during the reporting period in which they are incurred. The cost of major renovations is included in the asset's carrying amount when it is probable that the Group will derive future economic benefits in excess of the originally assessed standard of performance of the existing asset and the cost can be reliably measured. Costs arising on such major renovations are accounted for as capital expenditure and depreciated on a straight-line basis over their estimated useful lives.

Gains and losses on sales and disposals of property, plant and equipment are determined by the difference between the received net proceeds and the carrying amount of the asset. Gains and losses on sales and disposals are presented in other operating income or expenses.

Government grants

Government or other grants are recognized as income on a systematic basis over the periods necessary to match them with the related costs which they are intended to compensate. Investment grants related to acquisitions of property, plant and equipment and intangible assets are deducted from the cost of the asset in question in the statement of financial position and recognized as income on a systematic basis over the useful life of the asset in the form of reduced depreciation or amortization expense.

Impairment of property, plant and equipment and intangible assets

Carrying amounts of non-current assets are regularly reviewed to determine whether there is any evidence of impairment. If any such evidence of impairment emerges, the asset's recoverable amount is estimated. Goodwill is tested at least annually, irrespective of whether there is any evidence of impairment.

The recoverable amount of an asset is the higher of fair value less costs to sell and value in use. For goodwill testing purposes, the recoverable amount is based on value in use which is determined by reference to discounted future net cash flows expected to be generated by the asset. In Outokumpu, goodwill is tested on operating segment level. The discount rate used is a pre-tax rate that reflects the current market view on the time value of money and the asset-specific risks. An impairment loss is the amount by which the carrying amount of an asset exceeds its recoverable amount. An impairment loss is recognized immediately in profit or loss. The estimated useful life of the asset that is subject to depreciation or amortization is also reassessed when an impairment loss is recognized.

A previously recognized impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. However, the reversal must not cause that the adjusted carrying amount is higher than the carrying amount that would have been determined if no impairment loss had been recognized in prior years. Impairment losses recognized for goodwill are not reversed.

Leases

Group as a lessee

Outokumpu leases land, buildings, machinery and equipment for its operations. Outokumpu has also entered into service and supply contracts that contain lease elements. Contracts are typically with a fixed term and a fixed rental amount. Rents for contracts on land and buildings are typically linked to an index or a rate. For some contracts, the rental payments are variable based on the use of the asset.

According to IFRS 16, Outokumpu recognizes lease liabilities measured at the present value of future lease payments to its statement of financial position. In determining the present value of the lease liabilities, the fixed and index/rate-based lease payments are discounted with the interest rate implicit to the lease when available, or with the incremental borrowing rate of the company. Incremental borrowing rates for Group companies are defined as part of the process to determine interest rates for intra-group lending, in which Outokumpu defines a synthetic rating for subsidiaries. The incremental borrowing rate takes into account the currency, the maturity of the lease liability, and the credit risk of the lessee, which is based on the synthetic rating, and country risk.

Lease payments are divided into interest expense and repayment of the lease liability. Lease contracts may include options to extend the contract term or purchase the leased asset at the end of the lease term. An option is considered when determining the lease liability when it is highly probably that the option will be used.

Right-of-use assets recognized to the statement of financial position are measured at the amount of lease liability and lease payments made in advance, less accumulated depreciation and impairments. Right-of-use assets are depreciated on a straight-line basis over the lease term, or over the expected useful life of the asset in case the asset will transfer to Outokumpu at the end of the lease term or it is highly probable that a purchase option will be used.

Lease liabilities are presented in non-current and current debt and right-of-use assets are presented in property, plant and equipment in consolidated statement of financial position.

Outokumpu does not apply the accounting practice of recognizing lease liabilities or right-of-use assets to short-term leases, leases of low value items, or intangible assets. Instead, related payments, as well as variable lease payments are recognized as expense to the profit or loss.

Outokumpu transitioned to IFRS 16 using the modified retrospective approach where comparative information is not restated, but transition impacts are recognized to the consolidated statement of financial position of January 1, 2019. In transition, Outokumpu used the following practical expedients allowed by the standard: (1) leases with remaining lease term of 12 months or less on January 1, 2019 have been accounted as short-term leases, and thus excluded from the lease liability and right-of-use asset amounts recognized to the statement of financial position, and (2) initial direct costs of lease contracts already in place on December 31, 2018 have been excluded from the right-of-use asset value. Transition impacts are presented in note 13.

In 2018, leases were accounted in accordance with IAS 17 and related interpretations. According to those guidelines, lease contracts of property plant and equipment, in which the Group had substantially all the rewards and risks of ownership, were classified as finance leases. Related assets were recognized as property, plant and equipment in the statement of financial position at the commencement of the lease term at the lower of fair value or the present value of minimum lease payments. The present value of lease payments was included in non-current and current debt. Lease payments were divided to interest expense and the repayment of the outstanding liability. Assets acquired under finance lease were depreciated over the shorter of the useful life of the asset or the lease term. If a sale and leaseback transaction resulted in a finance lease, any excess of sales proceeds over the sold asset's carrying amount was not to be immediately recognized but deferred and amortized over the lease term.

At inception of significant other arrangements, the Group determined whether these arrangements were or contained a lease component. At inception of an arrangement that contained a

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lease the Group separated payments and other consideration required by the arrangement into those for the lease and those for other elements. Lease accounting principles were applied to lease payments.

The accounting treatment of contracts classified as finance leases under IAS 17 did not change in transition to IFRS 16.

Leases of assets where the lessor retained substantially all the risks and benefits of ownership were classified as operating leases. Payments made under operating lease contracts were expensed on a straight-line basis over the lease terms.

Group as a lessor

Rental income received from property, plant and equipment leased out by the Group under operating leases is recognized on a straight-line basis over the lease term. Rental income is presented under other operating income.

Financial instruments

Financial assets

The Group's financial assets are classified as financial assets at fair value through profit or loss, financial assets at fair value through other comprehensive income and financial assets at amortized cost. The classification is based on Group's business model for financial assets and their contractual cash flow characteristics.

If an item is not measured at fair value through profit or loss, significant transaction costs are included in the initial carrying amount of the financial asset. Financial assets are derecognized when the Group loses the rights to receive the contractual cash flows on the financial asset or it transfers substantially all the risks and rewards of ownership outside the Group.

Financial assets at fair value through profit or loss

The category of financial assets at fair value through profit or loss includes derivatives, to which hedge accounting is not applied, as well as other financial items at fair value through profit or loss held for trading purposes. A financial asset, such as an investment in debt instrument or money market fund is classified in this category if it has been acquired with the main purpose of selling the asset within a short period of time. In some cases, also share investments can be classified in this category.

These financial assets are recognized at the trade date at fair value and subsequently remeasured at fair value at the end of each reporting period. The fair value measurement is based on quoted rates and market prices as well as on appropriate valuation methodologies and models.

Realized and unrealized gains and losses arising from changes in fair values are recognized in profit or loss in the reporting period in which they are incurred. The changes in fair value of other financial items measured at fair value are recognized in market price gains and losses under financial income and expenses. Accounting of derivatives is described in more detail in section Derivatives and hedge accounting.

Financial assets at fair value through other comprehensive income

Financial assets at fair value through other comprehensive income includes share investments in listed and unlisted companies. The purchases and sales of these items are recognized at the trade date. These investments are included in non-current assets, unless the Group has the intention to dispose of the investment within 12 months from the reporting date.

Investments in shares are measured at fair value. The fair value measurement is based on quoted rates and market prices at the end of the reporting period, as well as on appropriate valuation techniques, such as recent transaction prices and cash flow discounting. These valuation techniques use observable market data when it is available but rely also on entity-specific estimates made by the Group. Fair value changes of share instruments measured at fair value are recognized in other comprehensive income and presented in equity within fair value reserve, net of tax. Dividends are recognized in profit or loss. When the shares are disposed, the accumulated changes in fair value are reclassified from fair value reserve to retained earnings.

Financial assets measured at amortized cost

Financial assets measured at amortized cost include non-derivative financial assets with fixed or determinable payments and are not quoted in active markets. This category includes trade and other receivables and cash and cash equivalents.

Financial assets measured at amortized cost are measured initially at fair value. After initial recognition, they are measured at amortized cost by using the effective interest rate method less accumulated impairments.

Outokumpu uses factoring for working capital management. Factored trade receivables have been derecognized from the statement of financial position when the related risks and rewards of ownership have materially been transferred.

Outokumpu has adopted simplified model in assessing and recognizing expected credit losses on trade receivables. The calculation model is based on overdue statistics and counterparty-specific credit rating linked with loss probabilities for each rating. Impairment losses are recognized in selling and marketing expenses.

Cash and cash equivalents

Cash and cash equivalents comprise cash in hand, deposits held at call with banks and other highly liquid investments with original maturities of three months or less. These are readily convertible to a known amount of cash and the risk of changes in value is low. Bank overdrafts are included in current liabilities in the statement of financial position.

Financial liabilities

Financial liabilities at fair value through profit or loss

The category of financial liabilities at fair value through profit or loss includes derivatives that do not meet the criteria of hedge accounting. Realized and unrealized gains and losses arising from changes in fair value of derivatives are recognized in profit or loss in the reporting period in which they are incurred.

Financial liabilities at amortized cost

Financial liabilities recognized at amortized cost include the loans, bonds, finance lease liabilities and trade and other payables. Loans and trade and other payables are recognized at the settlement date and measured initially at fair value. After initial recognition, they are carried at amortized cost using the effective interest rate method. Transaction costs are included in the original carrying amount. A financial liability (or part of the liability) is not derecognized until the liability has ceased to exist, that is, when the obligation identified in a contract has been fulfilled or cancelled or is no longer effective.

Significant costs related to revolving credit facilities are amortized over the expected loan term.

Convertible bonds

The Group classifies convertible bonds as compound instruments. The component parts of the bonds are classified separately as financial liabilities and equity in accordance with the substance of the arrangement.

The liability component is recognized initially at fair value of a similar liability. The equity component is recognized initially at the difference between the fair value of the bond as a whole and the fair value of the liability component. Transaction costs are allocated to the liability and equity components in proportion to their initial carrying amounts.

Subsequent to initial recognition, the liability component is measured at amortized cost using the effective interest method. The equity component of the bond is not remeasured to initial recognition except on conversion or expiry.

Derivative instruments and hedge accounting

Derivatives

Derivatives are initially recognized at fair value on the trade date, on which the Group becomes a contractual counterparty, and are subsequently measured at fair value. Gains and losses arising on fair value measurement are accounted for depending on the purpose of use of the derivative contract. The gains and losses arising from fair value changes of derivative contracts, to which hedge accounting is applied and which are effective hedging instruments, are presented congruent with the hedged item. Changes in fair value of derivative contracts not qualifying for hedge accounting are recognized in EBIT in other operating income and expenses. If a derivative is designated for financing activities, the gain or loss effects arising from the instrument are recognized within financial income and financial expenses.

The fair value measurement of derivatives is based on quoted market prices and rates as well as on discounted cash flows at the end of the reporting period. The fair values of currency, interest rate and metal options are determined by utilising commonly applied option valuation models, such as Black-Scholes-Merton model. Fair values of derivatives can in certain cases be based on valuations of external counterparties.

Hedge accounting

Outokumpu applies cash flow hedge accounting to certain currency and nickel derivatives which fulfil the IFRS 9 hedge accounting requirements. In the beginning of each hedging arrangement, the Group documents the relationship between the hedging instrument and the hedged item, as well as the objectives of risk management and strategy of the hedging arrangement. Effectiveness of the hedge relationship is documented and assessed when hedging is started and at least in the end of each reporting period. Hedge effectiveness is calculated and assessed between the changes in the fair value or cash flows of the hedged item that are attributable to a hedged risk are offset by changes in the fair value or cash flows of the hedging instrument. Hedge accounting is discontinued when the requirements of hedge accounting are no longer met.

Fair value changes of derivatives designated to hedge forecasted cash flows are recognized in other comprehensive income and presented within the fair value reserve in equity to the extent that the hedge is effective. Such fair value changes accumulated in equity are reclassified in profit or loss in the period in which the hedged cash flows affect profit or loss. In the certain hedge accounted transaction, the realized part of the nickel derivatives is first reclassified from other comprehensive income to inventory for certain period and finally reclassified in profit and loss. The fair value changes related to the ineffective portion of the hedging instrument are recognized immediately in profit or loss.

The Group has in earlier years hedged equities of the subsidiaries located outside the euro area against changes in exchange rates with the aim to reduce the effects of changes in exchange rates on the Group's equity. Accumulated fair value changes of qualifying financial instruments designated as hedges are reported in equity. They will be reclassified to profit or loss as part of the gain or loss on disposal if the corresponding foreign operation is sold or otherwise disposed of, partly or in full.

Measurement of fair values

A number of the Group's accounting policies and disclosures require the measurement of fair values, for both financial and non-financial assets and liabilities. Fair value hierarchy is based on the source of inputs used in determining fair values. In level one, fair values are based on public quotations for identical instruments. In level two, fair values are based on market rates and prices, discounted future cash flows and, in respect of options, on valuation models. For assets and liabilities in level three, there is no reliable market source available and thus the fair value measurement cannot be based on observable market data. Therefore, the measurement methods are chosen so that the information available for the measurement and the characteristics of the measured objects can be adequately taken into account.

Inventories

Inventories are stated at the lower of cost and net realizable value. The cost of raw material is determined by actual cost defined as monthly weighted average. The cost of self-produced finished goods and work in progress comprises raw materials, direct labour, other direct costs and related production and procurement overheads, but excludes borrowing costs. Cost of purchased products includes all purchasing costs including direct transportation, handling and other costs. Net realizable value is the estimated selling price in the ordinary course of business, less the estimated costs of completion and the estimated costs necessary to make the sale. Spare parts are carried as inventory and their cost is recognized in profit or loss as consumed. Major spare parts are recognized in property, plant and equipment when they are expected to be used over more than one financial year.

Treasury shares

When the parent company or its subsidiaries purchase the company's own shares, the consideration paid, including any attributable transaction costs, net of taxes, is deducted from the parent company's equity as treasury shares until the shares are cancelled. When such shares are subsequently sold or reissued, any consideration received is recognized directly in equity.

Provisions and contingent liabilities

A provision is recognized when Outokumpu has a present legal or constructive obligation as a result of a past event, and it is probable that an outflow of economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. The Group's provisions mainly relate to restructuring plans, onerous contracts, environmental liabilities, litigation and tax risks. The amount recognized as a provision corresponds to the management's best estimate of the costs required to fulfil an existing obligation at the end of the reporting period. If part of the obligation may potentially be compensated by a third party, the compensation is recognized as a separate asset when it is virtually certain that the compensation will be received. Non-current provisions are discounted to net present value at the end of the reporting period using risk-free discount rates.

The cost of an item of property, plant and equipment also comprises the initial estimate of costs of dismantling and removing the item and restoring the site on which it is located at the end of the useful life of the item on a present value basis. Such a liability may exist for decommissioning a plant, rehabilitating environmental damage, landscaping or removing equipment. A provision presenting the asset retirement obligation is recognized in the same amount at the same date. Adjustments to the provision due to subsequent changes in the estimated timing or amount of the outflow of resources, or in the change in the discount rate are deducted from or added to the cost of the corresponding asset in a symmetrical manner. The costs will be depreciated over the asset's remaining useful life.

Environmental provisions are based on the interpretation of the effective environmental laws and regulations related to the Group at the end of the reporting period. Such environmental expenditure, that arises from restoring the conditions caused by prior operations are recognized as expenses in the period in which they are incurred. A restructuring provision is recognized when a detailed restructuring plan has been prepared and its implementation has been started or the main parts of the plan have been communicated to those, who are impacted by the plan. Restructuring provision mainly comprise employee termination benefits.

A contingent liability is a possible obligation that arises from past events and whose existence will be confirmed only by the occurrence of uncertain future events not wholly within the control of the entity. Such present obligation that probably does not require settlement of a payment obligation and the amount of which cannot be reliably measured is also considered to be a contingent liability. Contingent liabilities are disclosed in the notes to the financial statements.

Employee benefits

Post-employment and other long-term employee benefits

Group companies in different countries have various post-employment benefit plans in accordance with local conditions and practices. The plans are classified as either defined contribution plans or defined benefit plans.

The fixed contributions to defined contribution plans are recognized as expenses in the period to which they relate. The Group has no legal or constructive obligation to pay further contributions if the receiving party is not able to pay the benefits in question. All such arrangements that do not meet these requirements are defined benefit plans.

Defined benefit plans are funded with payments to the pension funds or insurance companies. The present value of the defined benefit obligations is determined separately for each plan by using the projected unit credit method. The plan assets are measured at fair value at the end of the reporting period. The liability recognized in the statement of financial position is the defined benefit obligation at the closing date less the fair value of plan assets. Current service costs, past service costs and gains or losses on settlements are recognized in functional costs above EBIT. Net interest expense or income is recognized in financial items under interest expense or interest income. All remeasurements of the net defined benefit liability (asset) are recognized directly in other comprehensive income.

For other long-term employee benefits, all service costs and remeasurements are recognized immediately in the statement of income. Interest expenses are recognized in financial items under interest expenses.

Share-based payment transactions

The share-based payments are settled net of tax withholdings, and they are accounted as fully equity-settled. The expense of the programs recognized over vesting periods is based on the grant date fair value.

Applicable statistical models are used in valuation. The impact of non-market-based vesting conditions is assessed at the end of each reporting period. The programs include maximum limits for the pay-outs and the limits have been taken into account in the valuation of the benefits.

EBIT and EBITDA

Outokumpu's EBIT is the net sum which is formed by adding other operating income to sales and then deducting the cost of purchase adjusted by change in the inventory and the cost of manufacture for own use, the cost of employee benefits, depreciation, amortization, any impairments, and other operating expenses. All other items of the statement of income are presented below EBIT. Exchange gains and losses and fair value changes of derivatives are included in EBIT, if they arise from business-related items. Otherwise they are recognized in financial items. EBITDA is formed by adding the deducted depreciation, amortization and impairments back into EBIT.

Adjusted EBITDA

Adjusted EBITDA is Outokumpu's main performance indicator in financial reporting, including segment reporting. Adjusted EBITDA presented in the notes to the consolidated financial statements excludes such material income and expense items which affect the comparability between periods because of their unusual nature, size or incidence resulting for example from group-wide restructuring programs or disposals of assets or businesses.

Dividends

The dividend proposed by the Board of Directors is not deducted from distributable equity until approved by the Annual General Meeting of Shareholders.

Earnings per share

Basic earnings per share is calculated by dividing the net result attributable to the equity holders of the company by the weighted average number of shares in issue during the period, excluding shares purchased by Outokumpu and held as treasury shares.

Diluted earnings per share is calculated by adjusting the weighted average number of ordinary shares outstanding with the assumption that convertible instrument is converted. The profit or loss used in the calculation is adjusted for the interest expense related to the instrument and recognized in the period, net of tax. In addition, the shares estimated to be delivered based on the share-based incentive programs are taken into account. However, potential ordinary shares are only dilutive if the adjustments decrease the earnings per share ratio.

3. Operating segment information

Outokumpu's business is divided into four business areas which are Europe, Americas, Long Products and Ferrochrome. In addition to the business area structure, Business Support Functions cover Finance and Business Services, Communications and IR, Business Transformation and IT, Legal, Corporate Affairs and Compliance, Safety, Health and Environment, Internal Audit, and HR and Organization Development.

Business areas have responsibility for sales, profitability, production and supply chain management and they are Outokumpu's operating segments under IFRS. The performance of the segments is reviewed based on segment's adjusted EBITDA, which is defined in the accounting principles for the consolidated financial statements. The review is done regularly by the CEO based on internal management reporting which is based on IFRS. Below is a description of the activities of the four operating segments:

Europe consists of both coil and plate operations in Europe. The high-volume and tailored standard stainless steel grades are primarily used for example in architecture, building and construction, transportation, catering and appliances, chemical, petrochemical and energy sectors, as well as other process industries. The production facilities are located in Finland, Germany and Sweden. The business area has extensive service center and sales network across Europe, Middle East, Africa and APAC region.

Americas produces standard austenitic and ferritic grades as well as tailored products. Its largest customer segments are automotive and transport, consumer appliances, oil and gas, chemical and petrochemical industries, food and beverage processing, as well as building and construction industry. The business area has production units in the US and Mexico, as well as a service center in Argentina.

Long Products are used in a wide range of applications such as springs, wires, surgical equipment, automotive parts and construction. The manufacturing is concentrated in the integrated sites in the UK, Sweden and the US.

Ferrochrome produces charge grade of ferrochrome. The business area has a chrome mine in Kemi, Finland and ferrochrome smelters in Tornio, Finland.

					Reconciliation			
2019 € million	Europe	Americas	Long Products	Ferro-chrome	Operating segments total	Other operations	Eliminations	Group
External sales	4,023	1,343	505	168	6,040	363	–	6,403
Inter-segment sales	66	3	137	293	498	290	–788	–
Sales	4,089	1,346	642	461	6,538	653	–788	6,403
Adjusted EBITDA	216	–27	–7	96	278	–21	6	263
Adjustments to EBITDA								
Gain on the sale of real estate in Benrath, Germany	70	–	–	–	70	–	–	70
Restucturing costs in Germany	–53	–	–	–	–53	–	–	–53
Settlement with ThyssenKrupp	–	–	–	–	–	–14	–	–14
EBITDA	233	–27	–7	96	295	–35	6	266
Depreciation and amortization	–134	–56	–8	–29	–226	–4	–	–230
Impairments	–1	–1	–	–0	–2	–0	–	–3
EBIT	99	–84	–16	67	66	–39	6	33
Share of results in associated companies and joint ventures	–	–	–	–	–	–	–	6
Financial income	–	–	–	–	–	–	–	8
Financial expenses	–	–	–	–	–	–	–	–89
Result before taxes	–	–	–	–	–	–	–	–41
Income taxes	–	–	–	–	–	–	–	–33
Net result for the financial year	–	–	–	–	–	–	–	–75
Assets in operating capital	2,876	1,209	296	854	5,235	292	–201	5,327
Other assets	–	–	–	–	–	–	–	483
Deferred tax assets	–	–	–	–	–	–	–	229
Total assets	–	–	–	–	–	–	–	6,038
Liabilities in operating capital	975	295	139	163	1,571	262	–194	1,640
Other liabilities	–	–	–	–	–	–	–	1,824
Deferred tax liabilities	–	–	–	–	–	–	–	12
Total liabilities	–	–	–	–	–	–	–	3,476
Operating capital	1,901	914	157	692	3,664	30	–7	3,687
Net deferred tax asset	–	–	–	–	–	–	–	217
Capital employed	–	–	–	–	–	–	–	3,904

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Other operations consist of activities outside the four operating segments described above, as well as industrial holdings. Such business development and Corporate Management expenses that are not allocated to the business areas are also reported under Other operations. Sales of Other operations consist of sales of electricity to Group's production facilities in Finland and in Sweden, nickel procured under Group's sourcing contract that exceed the production needs, and internal commissions and services.

Outokumpu does not have individual significant customers as defined in IFRS 8.

					Reconciliation			
2018 € million	Europe	Americas	Long Products	Ferro-chrome	Operating segments total	Other operations	Eliminations	Group
External sales	4,169	1,670	521	197	6,557	314	–	6,872
Inter-segment sales	97	45	220	345	707	273	–980	–
Sales	4,267	1,715	740	542	7,264	587	–980	6,872
Adjusted EBITDA	248	–5	25	210	478	–4	11	485
Adjustments to EBITDA								
Gain on the sale of PPE and release of provisions related to EMEA restructuring	10	–	–	–	10	–	–	10
EBITDA	259	–5	25	210	489	–4	11	496
Depreciation and amortization	–114	–51	–6	–30	–201	–3	–	–204
Impairments	–0	–	–	–1	–2	–10	–	–12
EBIT	144	–56	18	179	286	–17	11	280
Share of results in associated companies and joint ventures	–	–	–	–	–	–	–	3
Financial income	–	–	–	–	–	–	–	3
Financial expenses	–	–	–	–	–	–	–	–110
Result before taxes	–	–	–	–	–	–	–	175
Income taxes	–	–	–	–	–	–	–	–45
Net result for the financial year	–	–	–	–	–	–	–	130
Assets in operating capital	2,922	1,357	331	772	5,383	275	–202	5,455
Other assets	–	–	–	–	–	–	–	296
Deferred tax assets	–	–	–	–	–	–	–	247
Total assets	–	–	–	–	–	–	–	5,998
Liabilities in operating capital	988	273	152	132	1,546	245	–188	1,604
Other liabilities	–	–	–	–	–	–	–	1,632
Deferred tax liabilities	–	–	–	–	–	–	–	12
Total liabilities	–	–	–	–	–	–	–	3,248
Operating capital	1,934	1,084	179	640	3,837	29	–15	3,851
Net deferred tax asset	–	–	–	–	–	–	–	235
Capital employed	–	–	–	–	–	–	–	4,086

4. Geographical information

External sales by destination

€ million	Finland	Other Europe	North America	APAC region	Other countries	Group
2019						
Business area						
Europe	254	3,277	96	349	47	4,023
Americas	–	0	1,277	13	52	1,343
Long Products	1	265	200	39	0	505
Ferrochrome	8	56	–	104	1	168
Other operations	–	–	–	–	363	363
	264	**3,598**	**1,573**	**506**	**462**	**6,403**
2018						
Business area						
Europe	219	3,477	74	349	50	4,169
Americas	0	40	1,551	12	67	1,670
Long Products	0	283	195	42	–	521
Ferrochrome	10	150	–	37	–	197
Other operations	–	–	–	–	314	314
	230	3,951	1,820	440	431	6,872

Non-current assets

€ million	Finland	Other Europe	North America	APAC region	Other countries	Group
2019	**1,762**	**764**	**834**	**11**	**2**	**3,374**
2018	1,623	754	851	14	2	3,244

Non-current assets are presented by the locations of the Group companies. Non-current assets exclude investments in associated companies and joint ventures, financial instruments, deferred tax assets and defined benefit plan assets.

5. Acquisitions and divestments

Acquisitions in 2019

Outokumpu did not have any acquisitions in 2019.

However, in 2019 Outokumpu paid a EUR 3 million final consideration relating to the 2018 acquisition of 50% of shares in Fagersta Stainless AB to increase Outokumpu's ownership in the company to 100%. The cash consideration of the transaction was EUR 18 million, of which EUR 14 million, representing 80% of the total, was paid at closing in 2018 and the remaining EUR 3 million, representing 20% of the total, was paid in 2019. Outokumpu did not present any non-controlling interest related to Fagersta Stainless AB in its statement of financial position as the terms regarding the acquisition had already been agreed upon, and the final consideration had been reported in current trade and other payables.

Divestments in 2019

In May 2019, Outokumpu signed an agreement regarding the sale of its real estate in Benrath, Germany for EUR 90 million. The property had been unused since 2016 when Outokumpu closed its cold rolling operations there. The sale was completed in the fourth quarter and resulted in a gain of EUR 70 million, which was excluded from Group adjusted EBITDA for the year.

In December 2019, Outokumpu divested its coil service center Outokumpu Pty Ltd in Australia. The service center was part of the Europe segment. The divestment did not have any material impact on the consolidated statement of income or the consolidated statement of financial position.

6. Income and expenses

Timing of revenue recognition related contracts with customers

Outokumpu recognizes revenue from sales of stainless steel and ferrochrome at a point of time. The revenue recognized over time relates to the performance obligation of organizing the transport of sold goods to the customer, which is a minor source of revenue compared to the material sales, and the period of transport, over which it is recognized, is relatively short. Moreover, the sales of goods and transportation service are invoiced together from the customer. Consequently, the uncertainty associated with the cash flows do not differ with respect to the timing of revenue recognition.

Depreciation and amortization by function

€ million	2019	2018
Cost of sales	**–217**	–194
Selling and marketing expenses	**–2**	–0
Administrative expenses	**–11**	–9
Research and development expenses	**–1**	–1
	–230	–204

Other operating income

€ million	2019	2018
Exchange gains and losses from foreign exchange derivatives	**–**	1
Market price gains and losses from commodity derivatives	**–**	24
Market price gains and losses from derivative financial instruments	**–**	25
Gains from disposal of subsidiaries	**1**	–
Gains on sale of intangible assets and property, plant and equipment	**82**	15
Insurance compensation	**4**	32
Other income items	**20**	28
	107	99

In 2018, Outokumpu received an insurance compensation regarding the property damage and business interruption at Tornio ferrochrome production in Finland in 2017.

Other operating expenses

€ million	2019	2018
Exchange gains and losses from foreign exchange derivatives	**–18**	–
Market price gains and losses from commodity derivatives	**–35**	–
Market price gains and losses from derivative financial instruments	**–52**	–
Impairments	**–3**	–12
Losses on sale of intangible assets and property, plant and equipment	**–1**	–0
Other expense items	**–21**	–6
	–77	–19

Adjustments to EBITDA and EBIT

€ million	2019	2018
Gain on the sale of real estate in Benrath	**70**	–
Restructuring costs in Germany	**–53**	–
Settlement with ThyssenKrupp	**–14**	–
Gain on the sale of PPE and release of provisions related to EMEA restructuring	**–**	10
Adjustments to EBITDA	**3**	10
Impairment related to Group's digital transformation project	**–**	–10
Adjustments to EBIT	**3**	0

In 2019, Outokumpu sold real estate in Benrath, Germany. The sold property had been unused since 2016 when Outokumpu closed its cold rolling operations in Benrath. The gain on the sale amounted to EUR 70 million.

In 2019, Outokumpu carried out restructuring negotiations in Germany targeting to improve competitiveness through cost reductions. The agreed measures resulted in restructuring costs of EUR 53 million.

In 2019, Outokumpu and ThyssenKrupp settled a claim relating to tax consolidation in Italy, as well as other earlier claims relating to Outokumpu's acquisition of Inoxum. The settlement resulted in a EUR 14 million expense in Outokumpu.

In 2018, Outokumpu sold property, plant and equipment in Sweden relating to a site that had been closed earlier under the EMEA restructuring plan. Outokumpu also released provisions related to the site closures under the restructuring plan. These items amounted to a gain of EUR 10 million.

In 2018, Outokumpu adjusted the scope of its digital transformation program, which resulted in an impairment loss of EUR 10 million.

Auditor fees

PricewaterhouseCoopers

€ million	2019	2018
Audit	**–2.4**	–2.2
Audit-related services	**–0.0**	–0.1
Tax advisory	**–0.3**	–
Other services	**–0.4**	–0.1
	–3.1	–2.4

PricewaterhouseCoopers Oy has provided non-audit services to Outokumpu in total of EUR 0.7 million during 2019. These services comprised of tax services and consultation in business transformation projects and sustainability reporting.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32

7. Employee benefit expenses

€ million	2019	2018
Wages and salaries	**–568**	–541
Termination benefits	**–61**	–6
Social security costs	**–84**	–81
Post-employment and other long-term employee benefits		
Defined benefit plans	**–7**	–2
Defined contribution plans	**–40**	–39
Other long-term employee benefits	**–9**	–1
Expenses from share-based payments	**–0**	1
Other personnel expenses	**–6**	–6
	–774	–676

Profit-sharing bonuses based on the Finnish Personnel Funds Act were not paid in 2019 (2018: EUR 2 million).

More information on employee benefits for key management can be found in note 31 and in Corporate Governance Statement's chapter Remuneration.

8. Financial income and expenses

€ million	2019	2018
Interest income	**4**	3
Interest expenses		
Debt at amortized cost	**–48**	–45
Factoring expenses	**–10**	–10
Lease liabilities	**–13**	–
Finance lease arrangements	**–**	–9
Interest expense on defined benefit and other long-term employee benefit obligations	**–6**	–5
Interest expenses	**–76**	–70
Capitalized interests	**5**	3
Loss from the sale of financial asset	**–0**	–1
Fees related to committed credit facilities	**–14**	–11
Other fees	**–4**	–17
Other financial expenses	**–13**	–26
Exchange gains and losses		
Derivatives	**–0**	–21
Cash, loans and receivables	**–4**	8
Other market price gains and losses		
Derivatives	**3**	2
Other	**5**	–4
Market price gains and losses	**4**	–15
Total financial income and expenses	**–80**	–107

In 2018, the other fees consisted of expenses related to the redemption of the notes due 2021.

Exchange gains and losses in the consolidated statement of income

€ million	2019	2018
In sales	**9**	15
In purchases [1]	**–16**	–29
In other income and expenses [1]	**–18**	1
In financial income and expenses [1]	**–4**	–13
	–29	–26

[1] Includes exchange gains and losses on elimination of intra-group transactions.

Exchange gains and losses include EUR 18 million of net exchange loss on derivative financial instruments (2018: EUR 20 million net exchange loss) of which a loss of EUR 18 million has been recognized in other operating expenses and a loss of EUR 0 million in financial items.

9. Income taxes

Income taxes in the consolidated statement of income

€ million	2019	2018
Current taxes	**–5**	–4
Deferred taxes	**–28**	–41
	–33	–45

Reconciliation of income taxes at statutory tax rate in Finland and income taxes recognized in the consolidated income statement

€ million	2019	2018
Result before taxes	**–41**	175
Hypothetical income taxes at Finnish tax rate of 20% on consolidated result before tax	**8**	–35
Difference between Finnish and foreign tax rates	**4**	–2
Tax effect of non-deductible expenses and tax exempt income	**–8**	–11
Current year losses for which no deferred tax asset recognized	**–29**	–29
Recognition of previously unrecognized deferred tax assets	**1**	34
Taxes for prior years [1]	**–9**	–2
Tax effect of tax rate changes and other changes in tax laws	**0**	–1
Income taxes in the consolidated statement of income	**–33**	–45

[1] Prior year taxes consist of expected changes in deferred tax assets due to ongoing tax audits.

Deferred tax assets and liabilities

€ million	Jan 1, 2019 Deferred tax assets	Jan 1, 2019 Deferred tax liabilities	Movements: Recognized in profit or loss	Movements: Recognized in other comprehensive income	Movements: Translation differences	Dec 31, 2019 Deferred tax assets	Dec 31, 2019 Deferred tax liabilities
Intangible assets	7	–4	3	–	–	8	–3
Property, plant and equipment	29	–214	–27	–	0	16	–228
Inventories	20	–12	–17	–	0	10	–18
Net derivate financial assets	4	–13	5	1	–0	1	–4
Other financial assets	–16	–10	40	–1	–0	19	–6
Defined benefit and other long-term employee benefit obligations	75	–33	–11	10	–1	51	–11
Other financial liabilities	88	–14	32	–	0	112	–6
Provisions	22	–20	–10	–	0	5	–13
Tax losses and tax credits	326	–	–43	–	0	283	–
	555	–320	–28	11	0	**505**	**–288**
Offset	–308	308				–277	277
Deferred taxes in the statement of financial position	247	–12				**229**	**–12**

€ million	Jan 1, 2018 Deferred tax assets	Jan 1, 2018 Deferred tax liabilities	Movements: Recognized in profit or loss	Movements: Recognized in other comprehensive income	Movements: Translation differences	Movements: Acquired subsidiaries	Dec 31, 2018 Deferred tax assets	Dec 31, 2018 Deferred tax liabilities
Intangible assets	6	–4	–0	–	0	–	7	–4
Property, plant and equipment	28	–195	–16	–	–1	–1	29	–214
Inventories	19	–10	–0	–	–0	–	20	–12
Net derivate financial assets	5	–17	3	–0	–0	–	4	–13
Other financial assets	4	–7	–22	–1	–0	–	–16	–10
Defined benefit and other long-term employee benefit obligations	53	–33	23	–1	0	–	75	–33
Other financial liabilities	78	–3	–2	–	0	–0	88	–14
Provisions	27	–22	–3	–	–0	1	22	–20
Tax losses and tax credits	352	–	–23	–	–3	–	326	–
	572	–290	–41	–1	–4	–1	555	–320
Offset	–280	280					–308	308
Deferred taxes in the statement of financial position	292	–10					247	–12

Deferred taxes have been reported as a net balance of those Group companies that file a consolidated tax return, or that may otherwise be consolidated for current tax purposes.

Aggregate deferred taxes recognized in equity through other comprehensive income

€ million	2019	2018
Fair value reserve from financial assets at FV through OCI	–	–1
Fair value reserve from derivatives	–	–0
Net investment hedging	–4	–4
Remeasurements of the net defined benefit liability	58	52
	54	47

Tax losses carried forward

€ million	2019	2018
Expire in 5 years	358	186
Expire later than in 5 years	1,759	1,941
Never expire	1,344	1,272
	3,461	3,400

As of December 31, 2019 tax loss carry forwards amount to EUR 3,461 million (Dec 31, 2018: EUR 3,400 million), of which EUR 447 million (Dec 31, 2018: EUR 487 million) in Finland, EUR 314 million (Dec 31, 2018: EUR 320 million) in Sweden, EUR 2,077 million (Dec 31, 2018: EUR 1,864 million) in the US and EUR 354 million (Dec 31, 2018: EUR 476 million) in Germany. Deferred tax assets are recognized only to the extent that the utilization of related tax benefits is considered probable. In the determination of whether the utilization is probable, all positive and negative factors, including prospective results, are taken into consideration in order to estimate whether sufficient taxable income will be generated to realize deferred tax assets. These estimates can change depending on the future course of events. As of December 31, 2019 tax attributes of the Outokumpu Group for which no deferred tax asset has been recognized amount to EUR 2,079 million (Dec 31, 2018: EUR 1,940 million). In 2019, no material previously unrecognized deferred tax assets were recognized (2018: EUR 34 million). The recognition decision in 2018 was impacted by positive earnings before taxes and positive taxable results. No deferred tax liabilities were recorded on undistributed profits on foreign subsidiaries, as such profits are not to be distributed in the foreseeable future.

10. Earnings per share

	2019	2018
Result attributable to the equity holders of the Company, € million	–75	130
Weighted average number of shares, in thousands	411,198	411,066
Diluted average number of shares, in thousands	446,209	447,181
Earnings per share for result attributable to the equity holders of the Company		
Earnings per share, €	–0.18	0.32
Diluted earnings per share, €	–0.18	0.32

11. Intangible assets

€ million	Goodwill	Other intangible assets [1]	Total
Historical cost on Jan 1, 2019	489	332	821
Translation differences	–2	–0	–2
Additions	–	36	36
Disposals	–	–7	–7
Reclassifications	–	1	1
Historical cost on Dec 31, 2019	**487**	**361**	**848**
Accumulated amortization and impairment on Jan 1, 2019	–22	–214	–236
Translation differences	2	1	2
Amortization	–	–7	–7
Disposals	–	1	1
Accumulated amortization and impairment on Dec 31, 2019	**–21**	**–220**	**–241**
Carrying value on Dec 31, 2019	**466**	**141**	**607**
Carrying value on Jan 1, 2019	467	118	585
Historical cost on Jan 1, 2018	491	276	767
Translation differences	–2	–2	–3
Additions	–	77	77
Disposals	–	–20	–20
Reclassifications	–	1	1
Historical cost on Dec 31, 2018	489	332	821
Accumulated amortization and impairment on Jan 1, 2018	–24	–207	–232
Translation differences	2	2	4
Disposals	–	10	10
Impairments	–	–10	–10
Amortization	–	–8	–8
Accumulated amortization and impairment on Dec 31, 2018	–22	–214	–236
Carrying value on Dec 31, 2018	467	118	585
Carrying value on Jan 1, 2018	467	68	535

[1] Other intangible assets include land-use rights, emission allowances, capitalized development costs, patents, licenses and software.

During 2019, borrowing costs amounting to EUR 4 million were capitalized on investment projects (2018: EUR 2 million). Total interest capitalized on December 31, 2019 was EUR 6 million (Dec 31, 2018: EUR 3 million). Outokumpu determinates separate capitalization rates for each quarter. The average rate used during 2019 was 3.9%.

Intangible assets mainly comprise acquired assets.

Emission allowances

Outokumpu had seven active sites operating under EU's Emissions Trading Scheme (ETS) in 2019. These include the production plants in Tornio, Finland; Avesta, Degerfors, Fagersta and Nyby in Sweden; Sheffield in the UK; as well as Krefeld together with Dillenburg in Germany.

The pre-verified carbon dioxide emissions under ETS were approximately 1.0 million tonnes in 2019 (2018: 1.0 million tonnes). For the trading period 2013–2020, all relevant Outokumpu sites have applied free emission allowances according to efficiency-based benchmarks and historical activity. Preliminary allocation for year 2020 is estimated to be some 1.0 million tonnes. Considering the Group's operations and the Group's current emission allowance position, the overall amount of allowances is foreseen to be sufficient for compliance. Position is regularly monitored and optimized according to the definitions set in corporate risk policies. See note 19 for information on the management of the emission allowance price risk.

12. Property, plant and equipment

€ million	Land	Mine properties	Buildings	Machinery and equipment	Other tangible assets	Advances paid and construction work in progress	Total
Historical cost on Jan 1, 2019 before IFRS 16 transition	136	71	1,243	4,511	137	235	6,332
IFRS 16 transition impact	13	–	40	77	0	–	131
Translation differences	1	–	3	7	–0	1	10
Additions	–	1	3	58	1	142	205
Disposals	–20	–	–6	–43	–3	–1	–73
Disposed subsidiaries	–	–	–1	–4	–0	–	–6
Reclassifications	–	–	5	76	1	–79	3
Other	–	–	–	7	–	–2	5
Historical cost on Dec 31, 2019	**128**	**72**	**1,286**	**4,691**	**135**	**294**	**6,606**
Accumulated depreciation and impairment on Jan 1, 2019	–14	–33	–676	–2,868	–80	–2	–3,673
Translation differences	–0	–	0	5	0	0	5
Disposals	–	–	5	42	3	–	49
Disposed subsidiaries	–	–	1	3	0	–	4
Depreciation	–1	–6	–48	–164	–4	–	–223
Impairments	–0	–	–1	–2	–0	–	–2
Accumulated depreciation and impairment on Dec 31, 2019	**–15**	**–39**	**–719**	**–2,983**	**–82**	**–2**	**–3,840**
Own property, plant and equipment	74	33	532	1,581	53	293	2,566
Right-of-use assets	38	–	35	126	0	–	200
Carrying value on Dec 31, 2019	**112**	**33**	**567**	**1,708**	**53**	**293**	**2,767**
Carrying value on Jan 1, 2019	121	37	567	1,644	56	233	2,659

More information on leases and the IFRS 16 transition impact in note 13.

€ million	Land	Mine properties	Buildings	Machinery and equipment	Other tangible assets	Advances paid and construction work in progress	Total
Historical cost on Jan 1, 2018	135	66	1,233	4,440	128	158	6,160
Translation differences	1	–	2	–4	–1	1	–2
Additions	0	2	2	34	4	146	189
Acquired subsidiaries	0	–	1	4	1	3	9
Disposals	–0	–	–	–22	–0	–0	–23
Reclassifications	–	2	6	59	4	–73	–2
Historical cost on Dec 31, 2018	136	71	1,243	4,511	137	235	6,332
Accumulated depreciation and impairment on Jan 1, 2018	–14	–27	–639	–2,768	–77	–3	–3,527
Translation differences	0	–	4	25	0	0	30
Disposals	–	–	3	19	0	0	22
Reclassifications	–	–	–	–1	–	1	0
Depreciation	–0	–7	–43	–140	–4	–0	–195
Impairments	–	–	–	–2	–	–	–2
Accumulated depreciation and impairment on Dec 31, 2018	–14	–33	–676	–2,868	–80	–2	–3,673
Carrying value on Dec 31, 2018	121	37	567	1,644	56	233	2,659
Carrying value on Jan 1, 2018	121	40	594	1,672	52	155	2,633

During 2019, EUR 2 million of borrowing costs were capitalized on investment projects (2018: EUR 1 million). Total interest capitalized on December 31, 2019 was EUR 24 million (Dec 31, 2018: EUR 25 million). Outokumpu determines separate capitalization rates for each quarter. The average rate used during 2019 was 1.2%.

13. Leases

Outokumpu leases land, buildings, and machinery and equipment used in Group's operations. Contracts include typically fixed rental amounts, and for land and buildings, rents are linked to an index. The terms of new vehicle leases are typically 3 to 5 years, and lease terms for other machinery and equipment range up to 15 years. Lease terms for land and buildings can be significantly longer with remaining terms for individual contracts on land of appr. 45–90 years.

Leases for machinery and equipment include also contracts with variable lease payments based on usage of the equipment. Machinery and equipment is also hired with daily rates for temporary use and thus reported as short-term leases. Outokumpu applies the recognition exemption for short-term leases and leases of low-value assets. Leases of low value assets typically include office equipment.

Transition impacts

Outokumpu has adopted the IFRS 16 using the modified retrospective approach, where comparative financial information is not restated, but the transition impact is recognized to the consolidated statement of financial position of January 1, 2019. In transition to IFRS 16 on January 1, 2019, Outokumpu has recognized right-of-use assets of EUR 131 million to property, plant and equipment, and lease liabilities of EUR 101 million to non-current debt and EUR 29 million to current debt. The reconciliation between the operating lease payments of EUR 90 million reported on Dec 31, 2018 financial statements and the recognized IFRS 16 transition impact of EUR 131 million is presented in the following table. The contracts not recognized as leases earlier under IAS 17 relate mainly to industrial gas supply contracts in Group's facilities in Finland and Sweden and marine transportation contracts between Finland and the Netherlands. The weighted average discount rate applied to lease liabilities recognized to the statement of the financial position is 3.1%.

Reconciliation of lease liabilities

€ million	
Operating lease commitments on Dec 31, 2018	90
Contracts not classified as lease under IAS 17	80
Short-term and low value leases not recognized as a liability	–2
IFRS 16 transition impact before discounting	168
Discount impact using incremental borrowing rate	–37
IFRS 16 transition impact on Jan 1, 2019	131
Finance lease liabilities under IAS 17	85
Lease liability on Jan 1, 2019	**216**
Non-current lease liabilities	184
Current lease liabilities	32

Lease liabilities

€ million	2019
Non-current	**176**
Current	**30**
	206

Maturity analysis of lease liabilities is presented in note 19.

Right-of-use assets

€ million	Land	Buildings	Machinery and equipment	Advances paid	Total
Historical cost on Jan 1, 2019 before IFRS 16 transition	28	1	100	2	131
IFRS 16 transition impact	13	40	77	–	131
Additions	–	0	19	1	19
Other changes	–	–	7	–2	5
Historical cost on Dec 31, 2019	**41**	**42**	**204**	**–**	**286**
Accumulated depreciation on Jan 1, 2019	–1	–0	–52	–	–53
Depreciation	–1	–6	–26	–	–33
Accumulated depreciation on Dec 31, 2019	**–2**	**–6**	**–77**	**–**	**–85**
Carrying value on Dec 31, 2019	**38**	**35**	**126**	**–**	**200**

Amounts recognized in the statement of income

€ million	2019
Depreciation of right-of-use assets	–33
Interest expenses on lease liabilities	–13
Expenses related to short-term leases	–13
Expenses related to leases of low-value items	–1
	–59

Amounts recognized in the statement of cash flows

€ million	2019
Repayments of lease liabilities	–34
Interest paid on lease liabilities	–13
	–46

Comparability between financial information of 2019 and 2018

The transition to IFRS 16 affected the presentation of Outokumpu's consolidated statement of income and consolidated statement of cash flows, which in turn impacts the comparability of financial information between years 2019 and 2018. The following paragraph describes these differences and related comparability impacts. The figures differ from the ones in the above tables as the following paragraph includes only impacts from those contracts that were recognized to the consolidated statement of financial position in transition, and exclude contracts classified earlier as finance leases according to IAS 17 as the accounting treatment of those contracts is comparable between 2019 and 2018.

In the statement of income, the cost of leasing in 2019 is presented as depreciation of EUR 29 million in EBIT and as interest expense of EUR 4 million in finance expenses instead of rental and lease expenses of EUR 35 million in EBITDA. In the statement of cash flows, the repayments of lease liabilities of EUR 31 million in 2019 are presented in the cash flow from financing activities whereas interest payments of EUR 4 million remain in the cash flow from operating activities.

Assets leased by finance lease agreements in 2018

€ million	Land	Buildings	Machinery and equipment	Total
Historical cost	28	1	100	129
Accumulated depreciation	–1	–0	–52	–53
Carrying value on Dec 31, 2018	27	1	49	76

Finance lease liabilities in 2018

Minimum lease payments

€ million	2018
Not later than 1 year	12
Between 1 and 5 years	74
Later than 5 years	147
Future finance charges	–147
Present value of minimum lease payments	85

Present value of minimum lease payments

€ million	2018
Not later than 1 year	3
Between 1 and 5 years	54
Later than 5 years	28
Present value of minimum lease payments	85

Minimum lease payments on operating leases in 2018

€ million	2018
Not later than 1 year	13
Between 1 and 5 years	32
Later than 5 years	44
	90

14. Impairment of intangible assets and property, plant and equipment

Intangible assets and property, plant and equipment by operating segment

	Goodwill		Other intangible assets		Property, plant and equipment	
€ million	**2019**	2018	**2019**	2018	**2019**	2018
Europe	**343**	343	**4**	5	**1,220**	1,197
Americas	**–**	–	**1**	2	**811**	829
Long Products	**9**	9	**3**	3	**98**	79
Ferrochrome	**114**	114	**0**	0	**615**	537
Other operations	**–**	–	**133**	109	**24**	17
	466	467	**141**	118	**2,767**	2,659

Impairment testing

Impairment testing is carried out on operating segment level, which are the Group's cash-generating units. Europe represents 74% of the total goodwill and 44% of the total property, plant and equipment of the Group, Americas represents 29% of the total property, plant and equipment of the Group, and Ferrochrome represents 24% of the total goodwill and 22% of the total property, plant and equipment of the Group. During the year 2019, impairment needs were assessed on a quarterly basis.

The recoverable amounts of the cash-generating units are based on value-in-use calculations which are prepared using discounted cash flow projections. Key assumptions used in the value-in-use calculations are discount rate, terminal value growth rate, average global growth in end-use consumption of stainless steel and base price development. The values assigned to the key assumptions are conservative, and cash flow projections are based on the plans approved by the management for 2020–2022 after which cash flows are further projected for a period of 3 years before calculating the terminal value.

Discount rate is the weighted average pre-tax cost of capital (WACC), as defined for Outokumpu. The components of WACC are risk-free yield rate, Outokumpu credit margin, market risk premium, equity beta, and the Group target capital structure. The pre-tax WACC used for both Europe and Ferrochrome was 7.6% (2018: 7.2%), and for Americas 10.7% (2018: 9.8%).

In the terminal value, growth rate assumptions of 0.5% (2018: 0.5%) for Europe and Ferrochrome, and 1.0% (2018: 1.0%) for Americas are used. Management believes these to be prudent based on current economic circumstances, although historical growth rates and forecasts of independent market analysts indicate higher long-term growth rates.

Growth rate assumption used for stainless steel deliveries is conservative, and generally lower than independent analysts' view on long-term market development. Base price forecast is based on conservative assumptions. In addition, committed investments and expected cost savings have been included in the cash flow projections.

The estimated recoverable amount of Europe exceeds its carrying amount by approximately EUR 1,930 million. Increase of 5.9 percentage points in after-tax WACC would cause the recoverable amount to equal the carrying amount. Also, 34% decrease in EBITDA would cause the recoverable amount to equal the carrying amount. Terminal growth rate of 0% would not lead to impairment.

The estimated recoverable amount of Americas exceeds its carrying amount by approximately EUR 51 million. Increase of 0.5 percentage points in after-tax WACC would cause the recoverable amount to equal the carrying amount. Also, 3% decrease in EBITDA would cause the recoverable amount to equal the carrying amount. Terminal growth rate of 0% would lead to an impairment loss of EUR 21 million.

The estimated recoverable amount of Ferrochrome exceeds its carrying amount by approximately EUR 894 million. Increase of 6.8 percentage points in after-tax WACC would cause the recoverable amount to equal the carrying amount. Also, 42% decrease in EBITDA would cause the recoverable amount to equal the carrying amount. Terminal growth rate of 0% would not lead to impairment.

As a result of the performed impairment test to Group's cash-generating units, no impairment losses were recognized in 2019 or 2018. However, impairment losses of EUR 3 million related to asset obsolence in Europe and Americas were recognized in 2019. (2018: impairment losses of EUR 10 million related to Group's digital transformation project and EUR 2 million related to asset obsolence in Ferrochrome and Europe).

15. Investments in associated companies and joint ventures

Outokumpu has the following associated companies and joint ventures which are all equity accounted. Based on the amounts reported in the Group's consolidated financial statements, it is concluded that the investments are immaterial.

Associated companies

	Domicile	Ownership, %
OSTP Holding Oy	Finland	49
Rapid Power Oy	Finland	33
Manga LNG Oy	Finland	45

Summarized financial information on associated companies

€ million	2019	2018
Carrying value of investments in associated companies	**38**	53
Group's share of total comprehensive income	**6**	5

Joint ventures

In 2019, Outokumpu did not have any joint ventures. In June 2018, Outokumpu acquired full ownership of Fagersta Stainless AB, previously a joint venture of Outokumpu in Sweden. Group's share of total comprehensive income of EUR –2 million included in Outokumpu's 2018 consolidated financial statements comprised of the net result and the other comprehensive income of Fagersta Stainless AB from January 1, 2018 to June 30, 2018, and the fair valuation impact related to the valuation of Outokumpu's original 50% share prior the acquisition.

16. Carrying values and fair values of financial assets and liabilities by measurement category

	Measured at					
2019 € million	Amortized cost	Fair value through other comprehensive income	Fair value through profit or loss	Carrying amount	Fair value	Fair value hierarchy level
Non-current financial assets						
Investments in equity	–	31	–	31	31	3
Trade and other receivables	2	–	–	2	2	–
Hedge accounted derivatives	–	0	–	0	0	2
Derivatives held for trading	–	–	5	5	5	2
Current financial assets						
Other investments	–	–	13	13	13	1
Trade and other receivables	359	–	–	359	359	–
Hedge accounted derivatives	–	7	–	7	7	2
Derivatives held for trading	–	–	8	8	8	2
Cash and cash equivalents	325	–	–	325	325	–
	686	38	26	750	750	
Non-current financial liabilities						
Non-current debt	1,053	–	–	1,053	1,068	2
Current financial liabilities						
Current debt	427	–	–	427	431	2
Trade and other payables	1,291	–	–	1,291	1,291	–
Hedge accounted derivatives	–	1	–	1	1	2
Derivatives held for trading	–	–	16	16	16	2
	2,771	1	16	2,788	2,807	

The fair value of non-current debt is determined by using discounted cash flow method and taking into consideration the market credit spread applied for Outokumpu. The fair value of the convertible bonds, which are reported as current debt, is EUR 251 million (carrying amount EUR 248 million) and it includes the value of the conversion rights. For other financial instruments the carrying amount is a reasonable approximation of fair value.

2018 € million	Measured at Amortized cost	Fair value through other comprehensive income	Fair value through profit or loss	Carrying amount	Fair value	Fair value hierarchy level
Non-current financial assets						
Investments in equity	–	86	–	86	86	3
Trade and other receivables	2	–	–	2	2	–
Derivatives held for trading	–	–	2	2	2	2
Current financial assets						
Other investments	–	–	13	13	13	1
Trade and other receivables	482	–	–	482	482	–
Hedge accounted derivatives	–	0	–	0	0	2
Derivatives held for trading	–	–	15	15	15	2
Cash and cash equivalents	68	–	–	68	68	–
	552	86	30	668	668	
Non-current financial liabilities						
Non-current debt	798	–	–	798	814	2
Derivatives held for trading	–	–	1	1	1	2
Current financial liabilities						
Current debt	511	–	–	511	511	2
Trade and other payables	1,256	–	–	1,256	1,256	–
Hedge accounted derivatives	–	0	–	0	0	2
Derivatives held for trading	–	–	19	19	19	2
	2,565	0	21	2,586	2,602	

Accounting principles contain information on how fair values are defined on different levels in the fair value hierarchy. There were no transfers between level 1, 2 and 3 during the years. A major part of financial assets at fair value through other comprehensive income at hierarchy level 3 relate to investments in unlisted energy producing companies. The movement in the carrying amounts of financial assets at fair value through other comprehensive income presented in note 17 represents also the reconciliation of level 3 changes.

17. Financial assets at fair value through other comprehensive income

€ million	2019	2018
Carrying value on Jan 1	**86**	68
Additions	**–**	16
Fair value changes	**–55**	2
Carrying value on Dec 31	**31**	86

Fair value reserve in equity

€ million	2019	2018
Fair value on Dec 31	**31**	86
Fair value at initial recognition	**80**	80
Fair value reserve before tax	**–49**	6
Deferred tax liability	**–**	–1
Fair value reserve	**–49**	5

Financial assets at fair value through other comprehensive income consists of equity securities which are not held for trading, and which the Group has irrevocably elected at initial recognition to recognize in this category. These are mainly strategic investments and the Group considers this classification to be relevant. All equity securities at fair value through other comprehensive income are unlisted. Investments include EUR 12 million holding in Voimaosakeyhtiö SF providing ownership to Fennovoima Oy and EUR 18 million of holdings in other energy companies in which Outokumpu does not have control, joint control or significant influence. By the end of 2019 Outokumpu has invested EUR 79 million in the shares of Voimaosakeyhtiö SF. The reduction in fair value of Voimaosakeyhtiö SF is caused mainly due to decline in estimated long-term prices of electricity.

Valuation model of energy producing companies is based on discounted cash flow model, which takes into account the market and forecasted long-term prices of electricity, discount rate, inflation rate, the estimated amount of electricity to be received and estimated production costs.

Additional parameters for Voimaosakeyhtiö SF valuation include e.g. the expected purchase price of electricity under the Mankala principle, expected project completion date and cost of debt in Fennovoima Oy. The fair value of Voimaosakeyhtiö SF shares is highly sensitive to the valuation parameters and especially to long-term price of electricity, Fennovoima's capacity utilization rate, discount rates for cash flows and the terminal value, inflation rate and project completion date.

Long-term prices for electricity have been estimated by the management, and the estimate assumes an increase compared to the current price level. The long time period to complete the Fennovoima project and to operate the plant affect the reliability of such estimate, and reasonable changes in the electricity price estimate or in other valuation parameters can significantly impact the fair value of the investment. In general, the project risk is considered high with the estimated completion of the project in the early part of 2029, and the range of potential fair values is wide.

18. Share-based payment plans

During 2019, Outokumpu's share based payment programs included Performance Share Plan 2012 (Plans 2017–2019, 2018–2020 and 2019–2021), Restricted Share Pool Program 2012 (Plans 2017–2019, 2018–2020 and 2019–2021), Matching Share Plans for the CEO and the key management and Performance Share Plan 2019–2020 for the CEO. Share-based programs are part of the Group's incentive and commitment-building system for key employees. The objective of the programs is to retain, motivate and reward selected employees for good performance which supports Outokumpu's strategy.

The Performance Share Plan 2016–2018 ended and after deductions for applicable taxes, altogether 645,783 shares were delivered to 94 persons. Regarding the Restricted Share Pool Program plan 2016–2018, after deductions for applicable taxes, in total 16,513 shares were delivered to 14 participants based on the conditions of the plan.

In December 2018, the Board of Directors approved the commencement of the new plan (plan 2019–2021) of the Performance Share Plan as of the beginning of 2019. At the end of the reporting period 134 persons participated in the plan and they had been allocated in total 2,461,890 gross shares (payout at maximum performance level).The plan's earnings criterion is Outokumpu's return on operating capital compared to a peer group.

In February 2019, the Board of Directors approved the commencement of the new plan (plan 2019–2021) of Restricted Share Pool Program as of the beginning of 2019. Restricted share grants are approved annually by the CEO on the basis of the authorization granted by the Board of Directors, with the exception of any allocations to Leadership Team members, which will be approved by the Board of Directors. At the end of the reporting period 68 persons participated in the plan and they have been allocated in total 207,900 gross shares.

In February 2019, the Board of Directors approved new share incentive schemes for the CEO. The Matching Share Plan 2019–2020 matches CEO's own investment of 56,296 shares with three matching shares. The total number of matching shares will be 168,888 from which applicable taxes will be deducted, and the delivery will take place in December 2020 subject to a restruction that the CEO keeps his own investment in Outokumpu shares unchanged until the end of 2020. The Performance Share Plan has two years vesting 2019–2020 and the maximum number of gross shares is 120,000. The net amount after deduction of applicable taxes will be delivered in March 2021, if the performance criteria set by the Board of Directors are met.

In December 2015, the Board of Directors approved the commencement of Matching Share Plan for the CEO at the beginning of 2016, according to which the CEO was entitled to receive in total 1,157,156 gross shares including taxes on the condition that he personally invested EUR 1 million into Outokumpu shares by February 20, 2016. The matching shares were delivered in four equal installments at the end of 2016, 2017, 2018 and 2019, respectively. The CEO is required to keep at least all the shares he acquired and the first vesting portion, i.e. 25% of the net amount of the received matching shares throughout his service with Outokumpu. In December 2019, the Board of Directors approved the delivery of the last reward share tranche to the CEO from the Matching Share Plan. After deduction for applicable taxes, the net number of shares delivered to the CEO was 185,077.

In April 2016, the Board of Directors approved the commencement of Matching Share Plan for the management for the years 2016–2020. According to the plan, the participants invested 30–120% of their annual gross base salary into Outokumpu shares by December 31, 2016. Outokumpu will match each share acquired by the participant with two gross shares from which applicable taxes will be deducted and the remaining net number of shares will be delivered in four equal installments at the end of 2017, 2018, 2019 and 2020, respectively. In order to receive the matching shares, the participants are required to keep all the shares they have acquired until the vesting of each matching share tranche. In 2019, the Board of Directors approved the delivery of the third reward tranches from the plan. After deduction of applicable taxes, the net number of shares delivered was 199,851. At the end of the reporting period 25 persons participated in the plan.

In addition, after deduction of applicable taxes, 82,063 shares were delivered as rewards in 2019. Outokumpu used its treasury shares for all share reward payments.

In December 2019, the Board of Directors approved the commencement of plan 2020–2022 of the Performance Share Plan 2012 and the Restricted Share Pool Program 2012 as of the beginning of 2020.

For the financial year 2019, the share-based payment expenses included in the employee benefit expenses were EUR 0 million (2018: income of EUR 1 million). The total estimated value of the share-based payment plans is EUR 4 million on December 31, 2019. This value is recognized as an expense in the statement of income during the vesting periods.

Detailed information of the share-based incentive programs can be found in Outokumpu's home page www.outokumpu.com.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32

The general terms and conditions of the share-based incentive programs

	Performance Share Plan		
Grant date	Feb 10, 2017	Feb 2, 2018	Feb 20, 2019
Vesting period	Jan 1, 2017–Dec 31, 2019	Jan 1, 2018–Dec 31, 2020	Jan 1, 2019–Dec 31, 2021
Share price at grant date	9.80	6.61	3.55
Exercised	In shares and cash	In shares and cash	In shares and cash
Vesting conditions			
Non-market	Outokumpu's return on operating capital compared to a peer group		
Other relevant conditions	A salary-based limit for the maximum benefits		

	Restricted Share Pool Program		
Grant date	April 26, 2017	June 1, 2018	April 18, 2019
Vesting period	Jan 1, 2017–Dec 31, 2019	Jan 1, 2018–Dec 31, 2020	Jan 1, 2019–Dec 31, 2021
Share price at grant date	9.80	5.76	3.72
Exercised	In shares and cash	In shares and cash	In shares and cash
Vesting conditions	Continuation of employment until the shares are delivered, a salary-based limit for the maximum benefits		

	Matching Share Plan for the CEO	
Grant date	Dec 17, 2015	Feb 7, 2019
Vesting period	Jan 1, 2016–Dec 31, 2019	Jan 1, 2019–Dec 31, 2020
Share price at grant date	2.50	3.50
Exercised	In shares and cash	In shares and cash
Vesting conditions	Personal investment of EUR 1 million into Outokumpu shares; requirement to keep at least the personal investment and the first vesting portion, i.e. 25% of the net amount of the received matching shares throughout service with Outokumpu.	Personal investment of 56,296 shares; requirement to keep own investment in Outokumpu shares unchanged until the end of 2020.

	Matching Share Plan for the management	Performance Share Plan for the CEO
Grant date	April 27, 2016	Feb 7, 2019
Vesting period	Jan 1, 2017–Dec 31, 2020	Jan 1, 2019–Dec 31, 2020
Share price at grant date	5.35 [1)]	3.50
Exercised	In shares and cash	In shares and cash
Vesting conditions	Personal investment of 30–120% of annual gross base salary into Outokumpu shares; requirement to keep the personal investment until the vesting of each matching share tranch; continuation of employment until the matching shares are delivered.	Outokumpu's return on operating capital compared to a peer group

[1)] Incentive fair value at the grant date reported as the average fair value based on the share purchase dates.

19. Financial risk management, capital management and insurances

The main objectives of financial risk management are to reduce earnings volatility and to secure acceptable liquidity to avoid financial distress. Other objectives include reduction of cash flow volatility and maintaining debt-to-equity ratio as well as leverage according to set targets. The objective of capital management is to secure the ability to continue as a going concern and to optimize cost of capital in order to enhance value to shareholders. The main objectives of insurance management are to provide mitigation against catastrophe risks and to reduce earnings variation.

The Board of Directors has approved the risk management policy, which defines responsibilities, process and other main principles of risk management. The Board of Directors oversees risk management on a regular basis and the Chief Financial Officer is responsible for implementation and development of financial risk management. Financial risk management is regularly monitored and reviewed by the Risk Management Steering Group, led by the CFO.

Financial risks consist of market, country, credit, liquidity and refinancing risks. Subsidiary companies hedge their currency and commodity price risk with Outokumpu Oyj, which does most of the Group's foreign exchange and commodity derivative contracts with banks and other financial institutions. Treasury and Risk Management function ("Treasury") is responsible for managing foreign exchange, metal, interest rate, liquidity and refinancing risk as well as emission allowance price risk. Credit risk management has been mostly centralized to Global Business Services, and Treasury coordinates credit control. The Supply Chain functions of the relevant Business Areas are responsible for managing electricity and fuel price risks.

Treasury sources all global insurances. The most important insurance lines are property damage and business interruption (PDBI), liability, marine cargo and credit risk. The captive insurance company Visenta Försäkringsaktiebolag is used in insurance management.

Exposure to financial risk is identified in connection with the risk management process. This approach aims to secure that any emerging risk is identified early and that each significant risk is described, quantified, managed and communicated properly. Eventually, the impacts of key financial risks are quantified in terms of changes to income, free cash flow, net debt and equity.

Market risk

Market risk categories include foreign exchange, interest rates, interest margins as well as metal, energy, emission and security price risk. These price changes may have a significant impact on Group's earnings, cash flow and capital structure.

The strategy for market risk management is based on identifying, assessing and mitigating relevant risk in committed business transactions and balance sheet items for each of the market risk categories. In interest rate, energy price, emission price risk the forecasted items are included in the underlying exposure. Outokumpu uses matching strategies and derivative contracts to partially mitigate impacts of market price changes. The use of derivatives may cause timing differences between derivative gains/losses and the earnings impact of the underlying exposure. In order to reduce earnings variations, hedge accounting is applied selectively as part of the nickel hedging activities. Most of the derivatives are short-term, however interest rate hedges typically have a maturity in excess of one year.

Stainless steel business is cyclical, which may result in significant changes in the underlying exposures to different market risk factors, especially US dollar and nickel price. Consequently, the cyclicality may lead to significant changes in the amounts of derivate contracts. Nominal amounts and fair values of derivatives are presented in note 20. Sensitivity of financial instruments to market prices is described in the table.

Foreign exchange rate risk

A major part of the Group's sales is in euros and US dollars. In this context, the local currency denominated production costs in the UK and Sweden cause foreign exchange risk. Foreign exchange cash flow risk related to firm commitments, e.g. price fixed sales and purchase orders, is usually hedged whereas forecasted and probable cash flows are not typically hedged but can be hedged selectively. As from the second quarter of 2019, the main operating entity in Sweden significantly reduced hedging of fixed price sales orders, and discontinued hedging of purchase orders based on approved exception to hedging policy.

The main dollar cash flow risk origins from ferrochrome operations as a consequence of chromium being priced in US dollars. Another significant dollar cash flow risk is embedded in sales margins due to dollar-linked stainless scrap purchase

Sensitivity of financial instruments to market risks

	Dec 31, 2019		Dec 31, 2018	
€ million	In profit or loss	In other comprehensive income	In profit or loss	In other comprehensive income
+/–10% change in EUR/USD exchange rate	+5/–6	–	+7/–8	–
+/–10% change in EUR/SEK exchange rate	–9/+11	–	–14/+17	–3/+3
+/–10% change in nickel price in USD	–3/+3	+0/–0	–2/+4	–
+/–1% parallel shift in interest rates	–6/+7	–	–10/+10	–

The sensitivity analyses apply to financial assets and liabilities only. Other assets and liabilities, including defined benefit pension plan assets and liabilities, as well as off-balance sheet items such as sales and purchase orders, are not in the scope of these analyses. The calculations are net of tax. During the year the volatility for nickel price has been in the range of 20–32%. With +/–30% change in dollar denominated price, the effect in profit or loss is about EUR –5/+10 million and in other comprehensive income EUR +1/–1 million for nickel derivatives.

discounts, which continued to increase towards the end of the year.

Fair value risk consists of currency denominated accounts receivable, accounts payable, debt, cash, loan receivables and commodity derivatives. Outokumpu aims to hedge most of the identified fair value risk with derivative contracts. Internal Swedish krona denominated financing causes significant fair value exchange rate risk, which is hedged with forward contracts and, if possible, with matching of external debt. The Group's fair value foreign exchange position is presented in a more detailed level in the table.

Outokumpu's net income and net investment translation risk is mainly in US dollars, Swedish kronas and British pounds. Based on the policy this risk can be hedged selectively and in 2019 there were no hedges related to net income or net investment exposures. The effective portion of gains (EUR 17 million, net of tax) on earlier financial years' net investment hedges is recognized in other comprehensive income.

Changes in currency rates cause translation differences in debt and have therefore impact on Group's capital structure. The largest debt translation risk relates to Swedish krona denominated internal loans. In the second quarter 2019, the translation risk related to internal dollar financing was significantly reduced by increasing equity of business area Americas.

Interest rate risk

The Group's interest rate risk is monitored as cash flow risk i.e. impact of interest rate changes on net interest expenses, and fair value risk i.e. impact of interest rate changes on fair value of monetary assets and liabilities. In order to manage the balance between risk and cost in an optimal way, significant part of debt has effectively short-term interest rate as a reference rate. This approach typically helps to reduce average interest rate of debt while it may also provide some mitigation against a risk of adverse changes in business environment, which tends to result to decrease in interest rates. In 2019 these conditions existed, which have positive impact on financial income and expenses.

Swedish krona, euro and US dollar have substantial contribution to the overall interest rate risk. Approximately 64% (2018: 40%) of the Group's debt has an interest period of less than

Foreign exchange positions of EUR-based companies

	Dec 31, 2019				Dec 31, 2018			
€ million	SEK	USD	GBP	Other	SEK	USD	GBP	Other
Trade receivables and payables	0	–248	12	11	15	–246	16	11
Loans and bank accounts [1]	525	59	–7	17	545	270	–7	–29
Derivatives	–525	183	–14	–29	–515	–1	–21	16
Net position	**0**	**–7**	**–9**	**–1**	46	22	–12	–3

Foreign exchange positions of SEK-based companies

	Dec 31, 2019				Dec 31, 2018			
€ million	EUR	USD	GBP	Other	EUR	USD	GBP	Other
Trade receivables and payables	69	–17	4	18	67	–27	–9	18
Loans and bank accounts [1]	26	8	0	1	29	14	2	3
Derivatives	–217	–49	–11	–29	–284	–116	–1	–63
Net position	**–121**	**–58**	**–7**	**–9**	–188	–129	–8	–42

[1] Includes cash and cash equivalents, loan receivables and debt.

Currency distribution and re-pricing of outstanding net debt

€ million	**Dec 31, 2019**				
Currency	Net debt [1]	Derivatives [2]	Average rate, % [1]	Duration. year [3]	Rate sensitivity [4]
EUR	1,292	–587	5.6	2.8	3.5
SEK	–9	581	–0.1	0.2	5.7
USD	–77	6	1.0	0.0	–0.7
Others	–50	5	0.8	0.0	–0.5
	1,155	**5**			**8.0**

€ million	Dec 31, 2018				
Currency	Net debt [1]	Derivatives [2]	Average rate, % [1]	Duration year [3]	Rate sensitivity [4]
EUR	1,264	–737	4.1	3.1	–0.6
SEK	21	549	2.2	0.0	5.7
USD	–19	241	1.7	0.1	2.2
Others	–25	–44	1.8	0.0	–0.7
	1,241	9			6.6

[1] Includes cash and cash equivalents and debt.

[2] Net derivative liabilities include nominal value of interest rate and currency forwards earmarked to net debt. Currency forwards are not included in average rate calculation.

[3] Duration calculation includes both net debt and derivatives.

[4] The effect of one percentage point increase in interest rates to financial expenses over the following year.

one year and the average interest rate of non-current debt on December 31, 2019 was 4.5% (Dec 31, 2018: 5.8%). Interest rate position is presented on a more detailed level in the table. Outokumpu is also exposed to variation of credit margins, mainly in regards of any new financing, e.g. in connection with issue of commercial papers and new long-term debt. Furthermore, interest expenses and other financing expenses are somewhat affected by development of the leverage ratio due to margin grid definition in some of the loan agreements.

Changes in interest rates impact pension plan asset and liability values. The net liability of defined benefit plans and other long-term employee benefits was EUR 249 million at year end and an increase in long-term interest rates would typically be expected to decrease the net liability of the plans.

Metal and energy price risk

Outokumpu uses a substantial amount of raw materials and energy for which prices are determined in regulated markets, such as London Metal Exchange ("LME") and Nasdaq Commodities. Timing differences between alloy metal purchases and pricing of stainless steel; changes in inventory levels; and the capability to pass on price changes in raw materials to end-product prices affect metal risk. Furthermore, the volumes and discounts related to stainless scrap purchases have major impact on alloy metal price risk. Since there is no established financial derivative market for chromium, this risk is categorized as business risk.

Apart from chromium, changes in nickel price is the most important metal price risk for Outokumpu. Significant part of stainless steel sales contracts includes an alloy surcharge clause, with the aim of reducing the risk arising from the timing difference between alloy metal purchase and stainless steel delivery. Outokumpu's nickel position consists of price fixed purchase orders, inventories of nickel-containing materials and price fixed sales orders. Based on financial risk policy the identified nickel price risk, excluding the risk related to the base stock, must be hedged. Nickel forwards and options are used to manage impacts of nickel price changes on earnings, whereas efficient working capital management helps to reduce cash flow variations caused by metal prices.

In the early part of 2019 a new definition of the base stock was adopted, which resulted to higher amount of alloy metals being classified as part of the base stock. In 2019 the hedging ratio has been between zero and one third of the base stock. During the reporting year an increasing share of the sales contracts in Europe were fixed price based rather than alloy surcharge based. Furthermore, the changes in LME nickel price were not perfectly passed to the new stainless steel prices applied in the fixed price sales contracts. The correlation between the LME nickel price and the price of metal as part of the stainless steel had been compromised and this was taken into account in the application of the hedging policy during the year.

Hedge accounting was adopted in 2019 in connection with hedging of some 700 to 2,000 tons of the alloy surcharge based sales of business area Americas and in connection with hedging purchases of some 2,000 to 4,000 tons linked to fixed priced sales of business area Europe. The hedge accounting has covered meaningful part of group sales contracts and has reduced volatility of the underlying nickel linked earnings. For further details on hedge accounting please see Note 20.

Outokumpu's exposure to iron price is much similar to that of nickel, except for the value of the exposure being lower and secondly, Outokumpu produces some iron in connection with the Kemi chromite mining.

Outokumpu's main production sites in Europe are participating in the EU Emissions Trading Scheme (ETS). The amounts of realized and forecasted carbon dioxide emissions and granted emission allowances are monitored at Group level. Emission allowance price risk is managed with the aim of securing and optimizing the cost of compliance for the current trading period. In certain situations, the market price of power can be partially based on price of carbon emissions. This indirect exposure to emission prices can be significant for Outokumpu due to energy intensive processes using power and fuels. At year end, Outokumpu had adequate amount of emission allowances to cover all forecasted needs of the current (phase III) emission trading period, ending in 2020.

Outokumpu manages energy price risk centrally. The electricity price risk is reduced with fixed price supply contracts and partial ownerships in power utilities.

Security price risk

Outokumpu has investments in equity and fixed income securities. On December 31, 2019, the biggest investments were in OSTP Holding Oy (investment in associated company of EUR 23 million) and Voimaosakeyhtiö SF.

The investment in Voimaosakeyhtiö SF provides Outokumpu with appr. 14% indirect stake in the Fennovoima Oy nuclear power plant project. This stake gives Outokumpu access to estimated 170 MW power capacity once the project has been completed. Information on the valuation of the investment is presented in note 17.

The captive insurance company Visenta Försäkringsaktiebolag has investments totaling EUR 13 million in highly rated and liquid fixed income securities as well as fixed income and equity funds in order to optimize return for assets and to manage the risk prudently.

Outokumpu has a defined benefit pension plan in the UK. This plan has assets approximately EUR 0.5 billion, most of which have been invested in fixed income securities and almost one third to return seeking assets. Changes in security prices would therefore impact the net asset reported on this plan. Based on the locally applied technical provisions the plan assets cover nearly in full the plan liabilities at year end. For more information please see note 25.

Country and credit risk

Outokumpu's sales have been covered by approved credit limits or secured payment terms. Most of the outstanding trade receivables have been secured by trade credit insurances, which typically cover some 95% of the insured amount. Part of the credit risk related to trade receivables is managed with letters of credit, advance payments and guarantees.

On December 31, 2019, the maximum exposure to credit risk of trade receivables was EUR 359 million (2018: EUR 482 million). The portion of unsecured receivables has varied between 3–12% of all trade receivables. For significant part of trade receivables Outokumpu uses factoring, which transfers most risks and rewards to the buyer of the receivables. At the end of the year, most of the receivables were generated by a large number of customers and there were only a few risk concentrations. Age analysis of accounts receivables is presented in note 22.

Treasury monitors credit risk related to financial institutions. Outokumpu seeks to reduce these risks by limiting the counter-parties to banks and other financial institutions with good credit standing. For the derivative transactions, Outokumpu prefers to have ISDA framework agreements in place. Exposure to country risk is monitored and at year-end such risk included e.g. Argentina due to Outokumpu's local and cross-border business activities there. In 2019, the country risk profile of Argentina continued very weak.

Liquidity and refinancing risk

Outokumpu raises most of its debt centrally. The Group seeks to reduce liquidity and refinancing risk by having sufficient amount of cash and long-term committed credit lines available, by having balanced maturity profile of debt and by diversifying sources of funding. Daily liquidity is optimized by issuance of commercial papers and by doing currency swaps. Efficient cash and liquidity management is also reducing liquidity risk. Finance plans are prepared and reviewed regularly with a focus on forecasted cash flow, projected funding requirements, planned funding transactions during the forecast period and financial covenant headroom. The adequacy of liquidity reserves, the amounts of scheduled annual repayments of non-current debt compared to EBITDA as well as forecasted debt-to-equity and leverage ratios are key measurements in the planning.

In 2019, weakened profitability shifted the focus to improve the weighted average maturity (WAM) of debt, which had some negative implication for financing costs during the second half of the year Debt structure improvement efforts included a maturity extension for EUR 574 million of the Revolving Facility amount, arrangement for a new EUR 400 million secured sustainability linked term loan due 2023 and a significant reduction in the amount of commercial papers issued. Furthermore, the use of the EUR 120 million Kemi mine facility started by drawing some EUR 42 million new long-term capital expenditure funding for the project.

Net debt development

€ million	2019	2018
Net cash flow from operating activities	**371**	214
Net cash flow from investing activities	**–65**	–229
Cash flow before financing activities	**306**	–14
Dividends paid	**–62**	–103
Treasury shares purchased	**–**	–17
Other financing cash flow	**3**	1
Cash flow impact on net debt	**248**	–134
Opening net debt	**1,241**	1,091
IFRS 16 transition impact	**131**	–
Cash flow impact on net debt	**–248**	134
Change in net debt, non-cash	**32**	16
Closing net debt	**1,155**	1,241

In 2019 the Moody's corporate family rating for Outokumpu decreased from B1 to B2 and the rating for secured notes decreased from Ba3 to B1. Both ratings have stable outlook at the end of the year.

The main funding programs and credit facilities are: a committed revolving credit facility of EUR 650 maturing in May 2021 (EUR 76 million) and May 2022 (EUR 574 million); a committed Kemi mine investment facility of EUR 78 million remaining undrawn and having the final maturity of drawn loans of EUR 42 million in 2030; and an uncommitted Finnish commercial paper program totalling EUR 800 million. The revolving credit facility, the sustainability linked term loan, a bilateral bank loan and the notes due in 2024 are secured by a comprehensive security package, which includes pledges on real estate in Tornio and Calvert, pledges of shares of certain material subsidiary companies and guarantees issued by many of the material subsidiary companies. Outokumpu and its secured lenders have signed an intercreditor agreement in February 2014, when the security package was originally created. More information on liquidity and refinancing risk is presented in the following table.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32

Contractual cash flows

2019 € million	2020	2021	2022	2023	2024	2025–
Bonds	–	–	–	–	250	–
Convertible bonds	250	–	–	–	–	–
Loans from financial institutions	8	4	4	405	5	30
Pension loans	40	48	62	28	22	24
Lease liabilities	30	64	11	9	8	84
Commercial papers	101	–	–	–	–	–
Trade payables	1,180	–	–	–	–	–
Interest payments and facility charges	66	55	42	27	12	148
Currency derivatives						
Outflows	1,816	–	–	–	–	–
Inflows	−1,813	–	–	–	–	–
Interest derivatives	−1	−1	−1	−1	−1	–
	1,678	**171**	**118**	**467**	**296**	**285**

On December 31, 2019, the Group had cash and cash equivalent amounting to EUR 325 million and committed available long-term credit facilities totaling EUR 650 million. In addition, the EUR 78 million long-term facility is available for financing the Kemi mine investment.

2018 € million	2019	2020	2021	2022	2023	2024–
Bonds	–	–	–	–	–	250
Convertible bonds	–	250	–	–	–	–
Loans from financial institutions	45	6	4	1	–	–
Pension loans	3	47	55	59	16	40
Finance lease liabilities	3	3	51	0	0	28
Commercial papers	460	–	–	–	–	–
Trade payables	1,200	–	–	–	–	–
Interest payments and facility charges	47	40	29	22	14	126
Currency derivatives						
Outflow	2,292	–	–	–	–	–
Inflow	−2,287	–	–	–	–	–
Interest derivatives	−1	−1	−1	−1	−1	−1
Metal derivatives	4	1	–	–	–	–
	1,766	346	138	82	29	443

On December 31, 2018, the Group had cash and cash equivalent amounting to EUR 68 million and committed available long-term credit facilities totaling EUR 650 million. In addition, the EUR 120 million long-term facility will become available for financing the Kemi mine investment.

Capital management

The objectives of capital management are to secure ability to continue as a going concern and to optimize cost of capital in order to enhance value to shareholders. As part of these objectives, Outokumpu seeks to maintain access to loan and capital markets at all times despite of the cyclical nature of the stainless steel industry. The Board of Directors reviews the capital structure of the Group on a regular basis. Capital structure and debt capacity are taken into account when deciding e.g. on investments and dividends. Tools to manage equity capital include dividend policy, share buybacks and issues of equity or equity-linked securities. Debt capital is managed taking into account the requirement to maintain good liquidity and the capability to refinance maturing debt. These topics are considered in connection with cost of capital optimization.

Tools to manage debt capital include issue of new debt, prepayment of loans and liability management measures, such as the use of call options of issued notes. In 2019 several measures targeting to increase average maturity of debt were implemented. The revolving credit facility, the sustainability linked term loan and the Kemi mine financing facility include financial covenants, which are based on debt-to-equity ratios. The notes maturing in 2024 include an incurrence based financial covenant on debt-to-equity ratio and the defined covenant level is 100 percent. In 2019 Outokumpu was in compliance with the financial covenants of its financing agreements.

The Group's internal capital structure is reviewed on a regular basis with an aim to optimize it e.g. by applying internal dividends and equity adjustments. In 2019, significant amount of equity capital was distributed from Germany and equity increases were done to Mexico and to business area Ferrochrome. Net investment and debt in foreign subsidiaries are monitored and Outokumpu has capability to hedge net investment translation risk.

Visenta Försäkringsaktiebolag has to comply with capital adequacy requirements set by the financial supervisory authority in Sweden. During the reporting period Visenta has been profitable and well capitalized to meet externally imposed requirements, which are based e.g. on Solvency II framework.

The management monitors Group's capital structure based on debt-to-equity ratio, which is calculated as net debt divided by total equity, and on a basis of leverage ratio, which is calculated as net debt divided by adjusted EBITDA. Outokumpu targets are to have debt-to-equity ratio below 35% and leverage below 1.0. Outokumpu also targets to improve its current credit ratings.

Capital structure

€ million	2019	2018
Total equity	**2,562**	2,750
Non-current debt	**1,053**	798
Current debt	**427**	511
Total debt	**1,480**	1,309
Total capitalization	**4,042**	4,059
Total debt	**1,480**	1,309
Cash and cash equivalents	**–325**	–68
Net debt	**1,155**	1,241

	2019	2018
Debt-to-equity ratio, %	**45.1**	45.1
Net debt to adjusted EBITDA	**4.4**	2.6

The debt-to-equity ratio remained stable despite of low profitability and IFRS 16 transition impact on net debt. Successful working capital management maintained to support the ratio stable.

Insurances

The Group's business is capital intensive and key production processes are rather tightly integrated and have therefore interdependencies. Property damage and business interruption insurance, covering e.g. fires, machinery breakdowns and natural catastrophes, is the most important insurance line and significant portion of insurance premiums paid relate to this PDBI cover. Business operations may cause significant liability risks related e.g. to people, environment or Outokumpu's products. Outokumpu aims to mitigate liability risk by relevant risk management measures and by having reasonable insurances in place. Other significant insurance lines include marine cargo and credit. Visenta Försäkringsaktiebolag can act as direct insurer and as reinsurer. Visenta is registered in Sweden and it has assets totalling EUR 19 million (2018: EUR 19 million). In 2019 Visenta continued its participation to Outokumpu's property and business interruption insurance. Visenta also engaged in issuing surety to cover certain potential environmental liabilities in connection with the operations in Kemi and Tornio.

During the reporting year there were no events leading to significant insurance claims. Fire safety and loss prevention surveys were carried out mainly as planned and the process of addressing capital expenditure to reduce identified hazard risk was improved.

20. Fair values and nominal amounts of derivative instruments

€ million	2019 Positive fair value	2019 Negative fair value	2019 Net fair value	2018 Net fair value	2019 Nominal amounts	2018 Nominal amounts
Currency and interest rate derivatives						
Currency forwards	7	9	**–3**	–4	**1,815**	2,289
Currency options, bought	0	–	**0**	–	**6**	–
Interest rate swaps	5	–	**5**	2	**200**	200
					Tonnes	Tonnes
Metal derivatives						
Forward nickel contracts, hedge accounted	7	1	**6**	–	**8,048**	–
Forward nickel contracts	1	7	**–6**	–5	**9,772**	12,266
Forward molybdenum contracts	–	0	**–0**	–0	**18**	34
Nickel options, bought	0	–	**0**	3	**5,500**	8,000
Nickel options, sold	–	–	**–**	–0	**–**	3,000
Propane derivatives	–	–	**–**	0	**–**	18,000
Total derivatives	20	17	**3**	–4		
Less long-term derivatives						
Interest rate swaps	5	–	**5**	2		
Forward nickel contracts, hedge accounted	0	–	**0**	–		
Forward nickel contracts	–	–	**–**	–1		
Forward molybdenum contracts	–	–	**–**	–0		
Short-term derivatives	15	17	**–2**	–4		

Fair values are estimated based on market rates and prices on the reporting date, discounted future cash flows and, in respect of options, on common option pricing models.

Hedge accounted cash flow hedges

Outokumpu has hedged with EUR/SEK currency forwards the spot price risk related to SEK denominated electricity supply agreement for the Finnish production sites. The forward points are excluded from the cash flow hedging relationship and are recognized in other operating profit and loss. All currency derivatives designated to cash flow hedge accounting and the purchases of electricity matured in 2019.

Cash flow hedges (EUR/SEK)

	2019	2018
Fair value of hedges, € million	**–**	0
Nominal amount of hedges, € million	**–**	37
Nominal amount of hedged item, € million	**–**	38
Hedge ratio	**1:1**	1:1
Weighted average hedge rate	**9.41**	9.41
Fair value reserve in other comprehensive income, € million	**–**	–3
Reclassified from other comprehensive income to profit or loss, € million [1]	**–4**	–4

[1] Included in cost of sales

In 2019 Outokumpu started cash flow hedge accounting for two selected nickel hedging programs. The hedging is allocated to the future cash flows of sales and purchases. The fair value of the nickel contracts included in hedge accounting is deferred in other comprehensive income and realized derivative result is recognized in sales or cost of sales depending on the nature of underlying hedged item during the same reporting period as the underlying item is recognized. In the purchase cash flow hedge program the realized part of the nickel derivatives are first reclassified from other comprehensive income to inventory for certain period of time before allocating to cost of sales. Only the spot component related to nickel derivatives is under hedge accounting, the forward element is recognized in profit and loss. The used nickel derivative instruments are forwards. The selected derivative instruments correspond to the price model used in the underlying. The ineffectiveness is tested regularly. The management has estimated that possible ineffectiveness relates to credit risk or timing of transactions, but these are estimated to be insignificant.

Cash flow hedges (nickel derivatives)

	2019	2018
Fair value of nickel contracts, € million	**6**	–
Nominal amount of nickel contracts, tons	**8,048**	–
Hedge ratio	**1:1**	–
Fair value reserve in other comprehensive income, € million	**6**	–
Reclassified from other comprehensive income to profit or loss, € million [1]	**–10**	–
Reclassified from other comprehensive income to profit or loss, € million [2]	**7**	–
Reclassified from other comprehensive income to inventory, € million	**2**	–

[1] Included in sales
[2] Included in cost of sales

Master netting agreements and similar arrangements

Outokumpu enters into derivative transactions with most counterparties under ISDA agreements. In general the amounts owed by each counterparty on a single day in respect of all transactions outstanding in the same currency are aggregated into a single net amount that is payable by one party to the other. In certain circumstances, e.g. when a credit event such as a default occurs, all outstanding transactions under the agreement are terminated, the termination value is assessed and only a single amount is payable in settlement of all transactions. ISDA agreements do not meet the criteria for offsetting in the statement of financial position. The right to offset is enforceable only on the occurrence of future credit events. The following table sets out the carrying amounts of recognized financial instruments that are subject to the agreements described above.

€ million	2019	2018
Derivative assets		
Gross amounts of recognized financial assets in the statement of financial position	**20**	17
Related financial instruments that are not offset	**11**	12
	9	5
Derivative liabilities		
Gross amounts of recognized financial liabilities in the statement of financial position	**17**	21
Related financial instruments that are not offset	**11**	12
	6	9

21. Inventories

€ million	2019	2018
Raw materials and consumables	**440**	485
Work in progress	**460**	584
Finished goods and merchandise	**523**	486
	1,424	1,555

The most important commodity price risk for Outokumpu is caused by fluctuation in nickel and other alloy prices. Significant part of stainless steel sales contracts include an alloy surcharge clause, with the aim of reducing the risk arising from the time difference between raw material purchase and product delivery. However, the risk is remarkable, because the delivery cycle in production is longer than the alloy surcharge mechanism expects. Thus, only the price for the products to be sold in near future is known. That is why a significant part of the future prices for the products to be sold is estimated according to management's best knowledge in net realizable value (NRV) calculations. Due to fluctuation in nickel and other alloy prices, the realized prices can deviate significantly from what has been used in NRV calculations on the closing date. NRV write-downs amounting to EUR 1 million were recognized in income statement during the financial year (2018: write-downs of EUR 13 million). In 2019, Outokumpu started to apply cash flow hedge accounting for two selected nickel hedging cases. More details on commodity price risk are presented in note 19 and on hedge accounting in note 20.

22. Trade and other receivables

€ million	2019	2018
Non-current		
Other accruals and receivables	**2**	2
Current		
Trade receivables	**359**	482
VAT receivable	**55**	26
Income tax receivable	**29**	24
Prepaid insurance expenses	**9**	11
Other accruals	**28**	28
Other receivables	**34**	70
	514	640
Impairment of trade receivables		
On Jan 1, 2018 before IFRS 9 transition	**–**	6
IFRS 9 transition impact	**–**	1
On Jan 1 according to IFRS 9	**7**	7
On Dec 31	**7**	7
Age analysis of trade receivables		
Neither impaired, nor past due	**312**	416
Past due 1–30 days	**40**	54
Past due 31–60 days	**3**	6
More than 60 days	**4**	6
	359	482

The maximum exposure to credit risk at the reporting date is the carrying amount of the loan and trade receivables. Most of the outstanding trade receivables have been secured by credit insurance policies, which typically cover some 95% of an insured credit loss. Credit risks related to trade receivables are presented in more detail in note 19. Expected credit losses are calculated as defined in the accounting principles of these financial statements (see note 2).

As of December 31, 2019 Outokumpu has derecognized trade receivables totaling EUR 321 million (2018: EUR 392 million), which represents fair value of the assets. Net proceeds received totaled EUR 312 million (2018: EUR 373 million). Underlying assets have maturity of less than one year. The maximum amount of loss related to derecognized assets is

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32

estimated to be EUR 11 million (2018: EUR 18 million). This estimate is based on insurance policies and contractual arrangements of factoring companies and Outokumpu. The analysis does not include impact of any operational risk related to Outokumpu's contractual responsibilities.

23. Cash and cash equivalents

€ million	2019	2018
Cash at bank and in hand	**323**	67
Short-term bank deposits and cash equivalents	**2**	1
	325	68
Bank overdrafts [1]	**–**	–36
	325	32

[1] Presented in current debt in the consolidated statement of financial position.

Fair value of cash and cash equivalents does not significantly differ from the carrying value. The average effective interest rate of cash and cash equivalents at the end of 2019 was 0.2% (Dec 31, 2018: 1.3%).

24. Equity

Share capital, premium fund and invested unrestricted equity reserve

€ million	Number of shares, 1,000	Share capital	Premium fund	Invested unrestricted equity reserve	Total
On Jan 1, 2018	412,672	311	714	2,103	3,127
Shares delivered from the share-based payment programs [1]	892	–	–	–	–
Treasury share purchase	–3,000	–	–	–	–
On Dec 31, 2018	410,564	311	714	2,103	3,127
Shares delivered from the share-based payment programs [1]	1,211	–	–	–	–
On Dec 31, 2019	**411,775**	**311**	**714**	**2,103**	**3,127**
Treasury shares [1]	4,600				
Total number of shares on Dec 31, 2019	**416,374**				

[1] Shares granted from treasury shares without effect to share capital. The movement in the cost of treasury shares is presented in the statement of changes in the equity.

According to the Articles of Association, the Outokumpu share does not have a nominal value.

Premium fund includes proceeds from share subscription and other contribution based on the old Finnish Limited Liability Companies Act for the part the contributions exceed the account equivalent value allocated to share capital. Invested unrestricted equity reserve includes net proceeds from the rights issues in 2014 and 2012. Fair value reserve from financial assets at fair value through other comprehensive income includes movements in the fair values of equity securities and fair value reserve from derivatives includes movements in the fair values of derivative instruments used for cash flow hedging. See note 17 for more information on the equity securities and note 20 for more information on derivative instruments. Other reserves include amounts transferred from the distributable equity under the Articles of Association or by a decision of the General Meeting of Shareholders, and other items based on the local regulations of the Group companies. Retained earnings include remeasurements of defined benefit plans, treasury shares, cumulative translation differences and other retained earnings and losses.

Distributable funds

On December 31, 2019, the distributable funds of the parent company totaled EUR 2,287 million of which retained earnings were EUR 164 million. The Board of Directors proposes to the Annual General Meeting in 2020 that a dividend of EUR 0.10 per share is paid for 2019 (dividend of EUR 0.15 per share paid for 2018).

25. Employee benefit obligations

Outokumpu has established several defined benefit and defined contribution plans in various countries. The most significant defined benefit plans are in Germany representing 40% and in the UK representing 57% of Group's total defined benefit liability.

Germany

In Germany, Outokumpu has several defined benefit plans, of which major plans include a management plan, open pension plans for normal staff, and other pension promises, which are nearly all closed for new entrants. Basis to all pension promises in Germany are bargaining agreements and/or individual contracts (management promises). Management plan and other pension promises are based on annuity payments, whereas plans for normal employees are based on one lump sum payment after retirement. In 2018, the lump sum payment option was introduced to more plans, and the assumption related to the usage of this option was revised. These were considered as plan amendments leading to a positive settlement impact of EUR 11 million.

In addition, all the promises are embedded in Germany in the BetrAVG law. The law contains rules for vested rights, pension protection scheme and regulations for the pension adjustments. In Germany no funding requirements exist, and the plans have been unfunded. However, in 2019 a CTA model (Contractual Trust Arrangement) was introduced under which the plans are funded.

The UK

The scheme is registered under UK legislation and is contracted out of the State Second Pension. The scheme is subject to the scheme funding requirements outlined in UK legislation. The scheme trustees are responsible for the operation and governance of the scheme, including making decisions regarding the scheme's funding and investment strategy. In 2018, the interpretation related to guaranteed minimum pension equalization was changed, which resulted in recognition of past service cost of EUR 9 million in 2018.

Risks associated with defined benefit plans

Through its defined benefit pension plans, Outokumpu is exposed to a number of risks, the most significant of which are detailed below.

Asset volatility: The level of equity returns is a key factor in the overall investment return. If a plan holds significant proportion of equities, which are expected to outperform corporate bonds in the long-term, it might face higher volatility and risk in the short-term. The investment portfolio might also be subject to a range of other risks typical of the assets held, in particular credit risk on bonds and exposure to the property market.

Change in bond yields: A decrease in corporate bond yields will increase plan liabilities, although this will be partially offset by an increase in the value of the plans' bond holdings (if any). In a situation where the return on plan assets is lower than the corporate bond yields, a plan may face a shortfall which might lead to increased contributions.

Inflation risk: Inflation rate is linked to both future pension and salary increase, and higher inflation will lead to higher liabilities.

Longevity: The majority of Outokumpu's defined benefit obligations are to provide benefits for the life of the member, so increases in life expectancy will result in an increase in the plans' liabilities.

Funding

Funding requirements are generally based on pension fund's actuarial measurement framework set out in the funding policies. In the UK preliminary pension fund's latest actuarial valuation started in January 1, 2017 and was completed in 2018 with a deficit of GBP 36 million. The valuation was not based on the same assumptions as the IFRS valuation, which shows a surplus. Since the valuation, Outokumpu has made contributions to cover the deficit. In 2019, these contributions were GBP 6 million, and the remaining GBP 9 million will be paid during 2020–2021. The next preliminary actuarial valuation of the UK pension fund started on January 1, 2020.

Defined benefit cost recognized in the consolidated statements of income and comprehensive income

€ million	2019	2018
In EBIT	**–7**	–2
In financial income and expenses	**–3**	–3
Defined benefit cost recognized in the consolidated statement of income	**–10**	–5
In other comprehensive income	**–43**	–7
Total defined benefit cost recognized	**–53**	–12

Amounts recognized in the consolidated statement of financial position

€ million	2019	2018
Present value of funded defined benefit obligations	**783**	415
Present value of unfunded defined benefit obligations	**3**	287
Fair value of plan assets	**–537**	–471
Net defined benefit liability	**249**	231

In 2019, a CTA model was introduced in Germany and the previously unfunded plans are now reported as funded.

€ million	2019	2018
Defined benefit liability	**318**	304
Other long-term employee benefit liabilities	**18**	14
Defined benefit assets	**–68**	–72
Net liability	**267**	245

Movement in net defined benefit liability

€ million	2019 Present value of obligation	2019 Fair value of plan assets	2019 Net defined benefit liability	2018 Present value of obligation	2018 Fair value of plan assets	2018 Net defined benefit liability
On Jan 1	702	–471	231	752	–503	249
Current service cost	6	–	6	7	–	7
Interest expense/(income)	16	–13	3	15	–12	3
Remeasurements arising from						
Return on plan assets	–	–38	–38	–	24	24
Demographic assumptions	–7	–	–7	1	–	1
Financial assumptions	88	–	88	–26	–	–26
Experience adjustment	–0	–	–0	8	–	8
Exchange differences	21	–24	–3	–3	4	1
Employer contributions	–	–31	–31	–	–31	–31
Benefits paid	–40	40	0	–48	48	0
Curtailments	–0	–	–0	–1	–	–1
Settlements	1	–	1	–5	0	–4
Other change	–	–	–	1	–	1
On Dec 31	**786**	**–537**	**249**	702	–471	231

The present value of obligations and the fair value of plan assets comprise mainly of German and UK plans. The present value of obligation for German plans on December 31, 2019 was EUR 316 million (Dec 31, 2018: EUR 294 million), and the fair value of plan assets was EUR 11 million (Dec 31, 2018: EUR 2 million) on December 31, 2019. For the UK, the present value of obligation was EUR 444 million (Dec 31, 2018: EUR 382 million), and the fair value of plan assets was EUR 512 million (Dec 31, 2018: EUR 454 million) on December 31, 2019.

The expected contributions to be paid to the defined benefit plans in 2020 are EUR 29 million.

Allocation of plan assets

€ million	2019	2018
Equity instruments	**49**	48
Debt instruments	**282**	251
Other assets	**203**	166
Total plan assets	**534**	465

Allocation of plan assets covers 99.6% of total defined benefit plan assets. The plan assets are mainly invested in quoted instruments. Debt instruments include mostly investment grade government and corporate bonds.

Asset-liability matching strategies

The majority of defined benefit assets are in the UK. The UK scheme's benchmark asset allocation is 30%/70% return-seeking/liability matching. This strategy reflects the scheme's liability profile and the trustees' and company's attitude to risk. The trustee monitors the investment objectives and asset allocation policy on a regular basis.

Significant actuarial assumptions

		Germany	The UK	Other countries
Discount rate, %	**2019**	**0.90**	**2.00**	**2.72**
	2018	1.75	2.75	3.12
Future salary increase, %	**2019**	**–**	**–**	**1.57**
	2018	–	–	1.26
Inflation rate, %	**2019**	**–**	**3.00**	**–**
	2018	–	3.20	–
Future benefit increase, %	**2019**	**1.70**	**2.85**	**–**
	2018	1.70	2.95	–
Medical cost trend rate, %	**2019**	**–**	**–**	**4.70–5.20**
	2018	–	–	5.20–5.60
Life expectancy	**2019**	RT 2018 G	96% SAPS All Pensioner Amounts tables with CMI Core Projection Model –2016	Standard mortality tables
	2018	Modified from RT 2018 G / RT 2005 G	96% SAPS All Pensioner Amounts tables with CMI Core Projection Model –2016	Standard mortality tables

The significant actuarial assumptions are presented separately for the significant countries, and for other countries a weighted average of the assumptions is presented.

The weighted average duration of the overall defined benefit obligation is 17.0 years. In Germany and in the UK the weighted average durations are 13.6 and 20.0 years, respectively.

Sensitivity analysis of significant actuarial assumptions

Reasonably possible changes at the reporting date to one of the weighted principal assumptions, while holding all other assumptions constant, would have affected the defined benefit obligation as shown below:

Germany	Change in assumption	Increase in assumption	Decrease in assumption
2019			
Discount rate	0.5%	Decrease by 6%	Increase by 7%
Future benefit increase	0.5%	Increase by 3%	Decrease by 3%
Life expectancy	1 year	Increase by 3%	
2018			
Discount rate	0.5%	Decrease by 6%	Increase by 7%
Future benefit increase	0.5%	Increase by 3%	Decrease by 3%
Life expectancy	1 year	Increase by 3%	

The UK	Change in assumption	Increase in assumption	Decrease in assumption
2019			
Discount rate	0.5%	Decrease by 9%	Increase by 11%
Future benefit increase	0.5%	Increase by 7%	Decrease by 6%
Life expectancy	1 year	Increase by 3%	
2018			
Discount rate	0.5%	Decrease by 9%	Increase by 11%
Future benefit increase	0.5%	Increase by 7%	Decrease by 6%
Life expectancy	1 year	Increase by 3%	

Other countries	Change in assumption	Increase in assumption	Decrease in assumption
2019			
Discount rate	0.5%	Decrease by 4%	Increase by 4%
Medical cost trend rate	0.5%	Increase by 1%	Decrease by 1%
Future salary increase	0.5%	Increase by 3%	Decrease by 4%
Life expectancy	1 year	Increase by 7%	
2018			
Discount rate	0.5%	Decrease by 4%	Increase by 4%
Medical cost trend rate	0.5%	Increase by 0%	Decrease by 0%
Future salary increase	0.5%	Increase by 1%	Decrease by 1%
Life expectancy	1 year	Increase by 7%	

Other long-term employee benefits

Other long-term employee benefits mainly relate to early retirement provisions in Germany and long-service remunerations in Finland. Under the German early retirement agreements, employees work additional time prior to retirement, which is subsequently paid for in instalments after retirement. In Finland, the employees are entitled to receive a one-time indemnity every five years after 20 years of service.

The other long-term employee benefit liabilities recognized in the consolidated statement of financial position on December 31, 2019 were EUR 18 million (Dec 31, 2018: EUR 14 million).

Multi-employer defined benefit plans

ITP pension plans operated by Alecta in Sweden and plans operated by Stichting Bedrijfspensioenfonds voor de metaalindustrie in the Netherlands are multi-employer defined benefit pension plans. However, it has not been possible to get sufficient information for the calculation of obligations and assets by employer from the plan operators, and therefore these plans have been accounted for as defined contribution plans in the consolidated financial statements.

26. Provisions

€ million	Restructuring provisions	Environmental provisions	Other provisions	Total
Provisions on Jan 1, 2019	13	53	4	70
Increases in provisions	56	4	3	62
Utilized during the financial year	–10	–4	–2	–16
Unused amounts reversed	–2	–4	0	–7
Provisions on Dec 31, 2019	**56**	**48**	**5**	**110**

€ million	2019	2018
Non-current provisions	**85**	65
Current provisions	**25**	5
	110	70

Restructuring provisions

Restructuring provisions relate mainly to the measures agreed upon in the negotiations carried out in Germany in 2019 targeting to improve competitiveness through cost reductions. The cash outflows related to these provisions are expected to take place between years 2020–2021.

Environmental provisions

Majority of the environmental provisions are for closing costs of production facilities and landfill areas, removal of problem waste and landscaping in facilities in Finland, the UK, and Germany. The outflow of economic benefits related to environmental provisions is expected to take place mainly over a period of more than 10 years. Due to the nature of these provisions, there are uncertainties regarding both the amount and the timing of the outflow of economic benefits.

Other provisions

Other provisions comprise for example provisions for product and other claims and are mainly current in nature.

Provisions are based on management's best estimates at the end of the reporting period.

27. Debt

€ million	2019	2018
Non-current		
Bonds	**249**	249
Convertible bonds	**–**	238
Loans from financial institutions	**445**	12
Pension loans	**183**	217
Lease liabilities	**176**	–
Finance lease liabilities	**–**	82
	1,053	798
Current		
Convertible bonds	**248**	–
Loans from financial institutions	**8**	45
Pension loans	**40**	3
Lease liabilities	**30**	–
Finance lease liabilities	**–**	3
Commercial paper	**101**	460
	427	511
Net debt		
Non-current and current debt	**1,480**	1,309
Cash and cash equivalents	**–325**	–68
Net debt	**1,155**	1,241

The bond maturing in 2024 as well as credit facilities and long-term loans from financial institutions include financial covenants, which are described in note 19.

Changes in non-current and current debt

2019 € million	Non-current debt	Current portion of non-current debt	Non-current lease liabilities	Current portion of lease liabilities	Current debt	Total
On Jan 1, before IFRS 16 transition	715	10	82	3	499	1,309
IFRS 16 transition impact	–	–	101	29	–	131
Financing cash flows	452	–13	–	–34	–396	9
Transfer to current debt	–290	290	–32	32	–	–
Other non-cash movements	–1	9	24	–	–	32
On Dec 31	**877**	**295**	**176**	**30**	**103**	**1,480**

2018 € million	Non-current debt	Current portion of non-current debt	Non-current finance lease liabilities	Current portion of finance lease liabilities	Current debt	Total
On Jan 1	613	13	85	5	487	1,203
Financing cash flows	101	–13	–	–5	7	90
Transfer to current debt	–10	10	–3	3	–	–
Other non-cash movements	11	–	–	–	4	16
On Dec 31	715	10	82	3	499	1,309

Regarding cash and cash equivalents, the reconciliation of cash effective and non-cash movements is presented in the consolidated statement of cash flows.

More information on leases and the IFRS 16 transition impact in note 13.

Bonds

€ million	Interest rate, %	Outstanding amount 2019	Outstanding amount 2018
2018 fixed rate bond maturing on June 18, 2024	4.125	**250**	250

Convertible bonds

€ million	Interest rate, %	Outstanding amount 2019	Outstanding amount 2018
2015 fixed rate bond maturing on Feb 26, 2020	3.250	**250**	250

The convertible bond is convertible into ordinary shares of Outokumpu. The current conversion price is set at EUR 6.75. The conversion price is subject to adjustments for any dividend in cash or in kind as well as customary anti-dilution adjustments, pursuant to the terms and conditions of the notes. Outokumpu has had the right to redeem all outstanding bonds on or after March 13, 2018, if the volume-weighted average price of the Outokumpu share calculated for a specified period of time exceeds 130% of the then prevailing conversion price.

28. Trade and other payables

€ million	2019	2018
Non-current		
Accruals	**29**	35
Current		
Trade payables	**1,265**	1,200
Accrued employee-related expenses	**65**	63
Accrued interest expenses	**9**	5
VAT payable	**23**	24
Withholding tax and social security liabilities	**20**	21
Payables related to factoring programs	**11**	46
Advance payments received	**11**	10
Other accruals	**47**	49
Other payables	**24**	52
	1,475	1,471

Customer contract liabilities related to unperformed transportation service amounted to EUR 1 million on December 31, 2019 (Dec 31, 2018: EUR 1 million). These liabilities and advances received are expected to be recognized as revenue during the first quarter of 2020.

On December 31, 2019, accrued volume discounts related to contracts with customers amounted to EUR 37 million (Dec 31, 2018: EUR 28 million).

29. Commitments and contingent liabilities

€ million	2019	2018
Mortgages and pledges on Dec 31		
Mortgages	**3,192**	3,055
Other pledges	**13**	28
Guarantees on Dec 31		
On behalf of subsidiaries for commercial and other commitments	**27**	28
On behalf of associated companies for financing	**4**	4
Other commitments on Dec 31	**14**	19

Mortgages relate mainly to securing the Group's financing. A major part of Outokumpu's borrowings are secured by mortgage over the real property of the Group's main production plants. Mortgages include also the business mortgage note to secure a loan for DeepMine project.

Outokumpu has provided a security, including a pledge of shares of a subsidiary company, related to AvestaPolarit pension scheme in the UK.

Other pledges include Outokumpu's shares in Manga LNG Oy to secure certain liabilities of Manga LNG Oy. Outokumpu's total liability at the end of 2019 amounted to EUR 29 million (Dec 31, 2018: EUR 33 million), and the part exceeding the share pledge and guarantee is presented under other commitments.

Outokumpu Oyj is, in relation to its shareholding in Etelä-Pohjanmaan Voima Oy, liable for the costs, commitments and liabilities relating to electricity provided by Tornion Voima Oy. Outokumpu's liability for the net debt of Tornion Voima Oy in year-end 2019 amounted to EUR 1 million (Dec 31, 2018: EUR 2 million). These liabilities are reported under other commitments.

Investment commitments

Outokumpu's share of the Fennovoima investment is about EUR 250 million of which EUR 79 million has been paid by the end of the reporting period. Annual capital expenditure related to the project is expected to be on average around EUR 15–20 million in the coming years, and approximately half of the investment is expected to be paid only at the end of the construction phase.

Group's other off-balance sheet investment commitments totaled EUR 68 million on December 31, 2019 (Dec 31, 2018: EUR 106 million).

30. Disputes and litigations

Claim in Spain related to the divested copper companies

Outokumpu divested all of its copper business in 2003–2008. One of the divested companies domiciled in Spain later faced bankruptcy. The administrator of the bankruptcy estate filed a claim against Outokumpu Oyj and two other non-Outokumpu companies for recovery of payments made by the bankrupt Spanish company in connection with the divestment. The court of first instance in Spain accepted the claim of EUR 20 million brought against Outokumpu and the two other companies. Outokumpu and the two other companies appealed the court's decision and in March 2018 the Court of Appeal ruled in favor of Outokumpu. In May 2018, the administrator of the bankruptcy estate filed an appeal before the Spanish Supreme Court, where the case is pending without progress during 2019.

Claim in Italy related to former tax consolidation group

In December 2015, Outokumpu Holding Italia and Acciai Speciali Terni (AST) entered into a dispute relating to the tax consolidation of the former ThyssenKrupp Tax Group in Italy. AST claimed payment of approximately EUR 23 million resulting from the former tax consolidation of the Italian tax group managed by ThyssenKrupp. Outokumpu Holding Italia is the former ThyssenKrupp holding company and was transferred to Inoxum as part of the carve-out in 2011. In July 2019, a final and conclusive settlement was reached between Outokumpu and ThyssenKrupp regarding the case and including also several other earlier claims from Outokumpu's acquisition of Inoxum. The financial impact of the settlement was reported in connection with the first quarter 2019 results.

31. Related party transactions

Outokumpu's related parties include the key management of the company and their close family members, associated companies and joint ventures, and Solidium Oy. The transactions with related parties are presented in the tables below. Key management includes Leadership Team members and members of the Board of Directors. The principal associated companies and joint ventures are listed in note 15 and subsidiaries are presented in note 32.

Solidium Oy, a limited company fully owned by the State of Finland, owned 21.7% of Outokumpu on December 31, 2019. Solidium's mission is to strengthen and stabilize Finnish ownership in nationally important companies and increase the value of its holdings in the long run.

Transactions and balances with related companies

€ million	2019	2018
Sales and other operating income	**89**	100
Purchases	**–7**	–16
Dividend income	**10**	1
Trade and other receivables	**29**	24
Trade and other payables	**3**	3

Employee benefits for the key management

€ thousand	2019	2018
Short-term employee benefits	**5,320**	6,381
Termination benefits	**–**	519
Post-employment benefits [1)]	**1,574**	1,247
Share-based payments	**235**	55
Remuneration to the Board of Directors	**706**	576
	7,834	8,777

[1)] Includes only supplementary pensions.

Employee benefits for CEO and Deputy CEO

€ thousand	Salaries and other short-term benefits	Bonuses	Termination benefits	Post-employment benefits	Share-based payments	Total
2019						
CEO	**1,074**	**276**	**–**	**444**	**372**	**2,167**
Deputy to the CEO [1)]	**79**	**–**	**–**	**37**	**–**	**117**
2018						
CEO	1,076	348	–	503	–166	1,761
Deputy to the CEO	469	163	519	101	159	1,411

[1)] Christoph de la Camp until February 28, 2019. As of March 1, 2019, Outokumpu has not had specifically appointed Deputy to the CEO.

Regarding the CEO, the figures include both the statutory pension expenses based on the Finnish Employees Pensions Act and the expenses for a defined contribution pension plan with an annual insurance premium of 25% of his annual earnings, excluding share rewards. The CEO has the right to retire at the age of 63.

Remuneration to Board of Directors

€ thousand	2019	2018
Chairman Kari Jordan, as of March 22, 2018	**173**	164
Chairman Jorma Ollila, until March 22, 2018	**–**	2
Vice Chairman Heikki Malinen	**103**	77
Vice Chairman Olli Vaartimo, until March 27, 2019	**3**	97
Member Kati ter Horst	**80**	77
Member Eeva Sipilä	**99**	75
Member Vesa-Pekka Takala, as of March 27, 2019	**77**	–
Member Pierre Vareille, as of March 22, 2018	**90**	77
Member Julia Woodhouse, as of March 27, 2019	**81**	–
Member Markus Akermann, until March 22, 2018	**–**	5
Member Roberto Gualdoni, until March 22, 2018	**–**	2
	706	576

More information on key management's employee benefits can be found in the Corporate Governance Statement's chapter Remuneration.

32. Subsidiaries on December 31, 2019

		Country	Group holding, %
Europe			
Outokumpu AS		Norway	100
Outokumpu B.V.		The Netherlands	100
Outokumpu Distribution France S.A.S.		France	100
Outokumpu Distribution Hungary Kft.		Hungary	100
Outokumpu Distribution Polska Sp. z o.o.		Poland	100
Outokumpu Distribution UK Ltd.		The UK	100
Outokumpu Europe Oy	*)	Finland	100
Outokumpu Ges.m.b.H.		Austria	100
Outokumpu India Private Limited		India	100
Outokumpu K.K.		Japan	100
Outokumpu Management (Shanghai) Co., Ltd.	*)	China	100
Outokumpu Middle East FZCO		United Arab Emirates	100
Outokumpu Nirosta GmbH		Germany	100
Outokumpu N.V.		Belgium	100
Outokumpu Prefab AB		Sweden	100
Outokumpu Press Plate AB		Sweden	100
Outokumpu PSC Benelux B.V.		The Netherlands	100
Outokumpu PSC Finland Oy		Finland	100
Outokumpu PSC Germany GmbH		Germany	100
Outokumpu (Pty) Ltd		South Africa	100
Outokumpu S.A.		Spain	100
Outokumpu (S.E.A.) Pte. Ltd.		Singapore	100
Outokumpu Service Center GmbH		Germany	100
Outokumpu Shipping Oy		Finland	100
Outokumpu S.p.A.		Italy	100
Outokumpu Stainless AB		Sweden	100
Outokumpu Stainless B.V.		The Netherlands	100
Outokumpu Stainless Oy		Finland	100
Outokumpu Stainless Pty. Ltd.	1)	Australia	100
Outokumpu Stainless Steel (China) Co. Ltd.		China	100
Outokumpu Tornio Infrastructure Oy		Finland	100

		Country	Group holding, %
Americas			
Outokumpu Brasil Comercio de Metais Ltda.		Brazil	100
Outokumpu Fortinox S.A.		Argentina	100
Outokumpu Mexinox Distribution S.A. de C.V.		Mexico	100
Outokumpu Mexinox S.A. de C.V.		Mexico	100
Outokumpu Stainless USA, LLC		The US	100
ThyssenKrupp Mexinox CreateIT, S.A. de C.V.		Mexico	100
Long Products			
Fagersta Stainless AB		Sweden	100
Outokumpu Stainless Bar, LLC		The US	100
Outokumpu Stainless Ltd		The UK	100
Ferrochrome			
Outokumpu Chrome Oy	*)	Finland	100
Other operations			
Outokumpu Americas, Inc.		The US	100
Outokumpu Distribution Benelux B.V.		The Netherlands	100
Outokumpu Holding Germany GmbH	*)	Germany	100
Outokumpu Holding Italia S.p.A.		Italy	100
Outokumpu Holding Nederland B.V.	*)	The Netherlands	100
Outokumpu Mining Oy		Finland	100
Outokumpu Stainless Holding GmbH		Germany	100
Outokumpu Stainless Holdings Ltd		The UK	100
Outokumpu Stainless UAB		Lithuania	100
Québec Inc.		Canada	100
Viscaria AB	*)	Sweden	100
Visenta Försäkrings AB		Sweden	100

In addition Outokumpu has branch offices in South Korea, Switzerland, Taiwan, Thailand, The UK and Vietnam.

This list does not include all dormant companies or all holding companies.

The Group holding corresponds to the Group's share of voting rights.

*) Shares and stock held by the parent company

1) Name changed

Parent company financial statements

Income statement of the parent company

€ million	2019	2018
Sales	**652**	587
Cost of sales	**–555**	–482
Gross margin	**97**	105
Other operating income	**17**	87
Selling and marketing expenses	**–17**	–17
Administrative expenses	**–115**	–110
Other operating expenses	**–0**	–431
EBIT	**–19**	–367
Financial income and expenses	**16**	187
Result before appropriations and taxes	**–3**	–180
Appropriations		
Group contribution	**53**	185
Change in depreciation difference	**–0**	1
Income taxes	**–0**	–0
Result for the financial year	**51**	6

According to the Finnish accounting standards, the parent company financial statements are to be presented in addition to Group financial statements. The parent company's financial statements have been prepared in accordance with Finnish accounting standards (FAS). The parent company Outokumpu Oyj's income statement and balance sheet items are mainly internal and are eliminated on the group level. The parent company's complete financial statements (available only in Finnish) can be read on the company's internet pages www.outokumpu.com.

Balance sheet of the parent company

€ million	2019	2018
ASSETS		
Non-current assets		
Intangible assets	**120**	100
Property, plant and equipment	**9**	9
Financial assets		
Shares in Group companies	**3,821**	3,776
Loan receivables from Group companies	**254**	1,022
Shares in associated companies	**17**	27
Other shares and holdings	**80**	80
Other financial assets	**5**	2
	4,176	4,906
Total non-current assets	**4,305**	5,016
Current assets		
Current receivables		
Loans receivable	**843**	617
Trade receivables	**53**	54
Prepaid expenses and accrued income	**39**	40
Other receivables	**91**	213
	1,026	924
Cash and cash equivalents	**272**	23
Total current assets	**1,298**	947
TOTAL ASSETS	**5,603**	5,962

€ million	2019	2018
EQUITY AND LIABILITIES		
Shareholders' equity		
Share capital	**311**	311
Premium fund	**720**	720
Invested unrestricted equity reserve	**2,123**	2,123
Retained earnings	**113**	169
Result for the financial year	**51**	6
	3,319	3,330
Untaxed reserves		
Accumulated depreciation difference	**1**	1
Liabilities		
Non-current liabilities		
Bonds	**250**	250
Convertible bonds	**–**	250
Loans from financial institutions	**405**	12
Pension loans	**103**	137
Other non-current loans	**0**	1
	758	650
Current liabilities		
Convertible bonds	**250**	–
Loans from financial institutions	**6**	36
Pension loans	**40**	3
Group bank account liabilities	**722**	1,275
Other current loans	**244**	464
Trade payables	**208**	163
Accrued expenses and prepaid income	**13**	10
Other current liabilities	**42**	30
	1,525	1,982
Total liabilities	**2,283**	2,632
TOTAL EQUITY AND LIABILITIES	**5,603**	5,962

Cash flow statement of the parent company

€ million	2019	2018
Cash flow from operating activities		
Result for the financial year	**51**	6
Adjustments for		
Taxes	**0**	0
Depreciation and amortization	**5**	7
Impairments	**0**	431
Gain/loss on sale of intangible assets, and property, plant and equipment	**–5**	–78
Interest income	**–68**	–94
Dividend income	**–0**	–171
Interest expense	**36**	35
Change in provisions	**0**	–1
Exchange gains and losses	**3**	15
Group contributions	**–53**	–185
Other non-cash adjustments	**–1**	1
	–83	–40
Change in working capital		
Change in trade and other receivables	**–6**	–10
Change in trade and other payables	**47**	2
	41	–8
Dividends received	**0**	171
Interest received	**75**	89
Interest paid	**–34**	–36
Income taxes paid	**–0**	–0
	41	224
Net cash from operating activities	**51**	183

€ million	2019	2018
Cash flow from investing activities		
Investments in subsidiaries and other shares and holdings	**–274**	–398
Purchases of property, plant and equipment	**–0**	–0
Purchases of intangible assets	**–30**	–78
Proceeds from disposal of subsidiaries and other financial assets	**239**	255
Proceeds from sale of property, plant and equipment	**1**	–10
Proceeds from sale of intangible assets	**11**	27
Change in other long-term receivables	**361**	–125
Net cash from investing activities	**308**	–330
Cash flow before financing activities	**358**	–147
Cash flow from financing activities		
Dividends paid	**–62**	–103
Treasury shares purchase	**–**	–17
Borrowings of non-current debt	**473**	250
Repayments of non-current debt	**–76**	–221
Change in current debt	**–806**	–540
Cash flow from group contribution	**185**	97
Other financing cash flow	**176**	643
Net cash from financing activities	**–109**	108
Net change in cash and cash equivalents	**249**	–39
Net change in cash and cash equivalents in the balance sheet	**249**	–39

Statement of changes in equity of the parent company

€ million	Share capital	Premium fund	Invested unrestricted equity reserve	Retained earnings	Total equity
Equity on Jan 1, 2018	311	720	2,123	289	3,444
Result for the financial year	–	–	–	6	6
Dividends paid	–	–	–	–103	–103
Treasury shares repurchase	–	–	–	–17	–17
Equity on Dec 31, 2018	311	720	2,123	175	3,330
Result for the financial year	–	–	–	51	51
Dividends paid	–	–	–	–62	–62
Equity on Dec 31, 2019	**311**	**720**	**2,123**	**164**	**3,319**

Distributable funds on Dec 31

€ million	2019	2018
Retained earnings	**113**	169
Result for the financial year	**51**	6
Invested unrestricted equity reserve	**2,123**	2,123
Distributable funds on Dec 31	**2,287**	2,298

Commitments and contingent liabilities of the parent company

€ million	2019	2018
Other pledges on Dec 31	**13**	13
Guarantees on Dec 31		
On behalf of subsidiaries		
For financing	**350**	378
For commercial guarantees	**3**	2
For other commitments	**26**	28
On behalf of associated companies		
For financing	**4**	4
Other commitments on Dec 31	**14**	19

A major part of Outokumpu's borrowings are secured by security to the real property of selected subsidiaries.

Other pledges include Outokumpu's shares in Manga LNG Oy to secure certain liabilities of Manga LNG Oy. Outokumpu's total liability at the end of 2019 amounts to EUR 29 million (Dec 31, 2018: EUR 33 million), and the part exceeding the share pledge and guarantee is presented under other commitments.

Outokumpu Oyj is, in relation to its shareholding in Etelä-Pohjanmaan Voima Oy, liable for the costs, commitments and liabilities relating to electricity provided by Tornion Voima Oy. Outokumpu Oyj's liability for the net debt of Tornion Voima Oy at the year-end 2019 amounted to EUR 1 million (Dec 31, 2018: EUR 2 million). These liabilities are reported under other commitments.

Auditor’s Report (Translation of the Finnish Original)

To the Annual General Meeting of Outokumpu Oyj

Report on the Audit of the Financial Statements

Opinion

In our opinion

- the consolidated financial statements give a true and fair view of the group’s financial position and financial performance and cash flows in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU
- 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 the financial statements in Finland and comply with statutory requirements.

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

What we have audited

We have audited the financial statements of Outokumpu Oyj (business identity code 0215254-2) for the year ended 31 December 2019. The financial statements comprise:

- the consolidated statement of income, consolidated statement of comprehensive income, consolidated statement of financial position, consolidated statement of cash flows, consolidated statement of changes in equity and notes to the consolidated financial statements, including the accounting principles for the consolidated financial statements
- the parent company’s income statement, balance sheet, cash flow statement and notes to the parent company financial statements.

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 the Financial Statements section of our report.

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

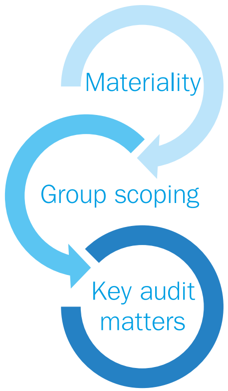
Independence

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.

To the best of our knowledge and belief, the non-audit services that we have provided to the parent company and to the group companies are in accordance with the applicable law and regulations in Finland and we have not provided non-audit services that are prohibited under Article 5(1) of Regulation (EU) No 537/2014. The non-audit services that we have provided are disclosed in note 6 to the Financial Statements.

Our Audit Approach

Overview



- Overall group materiality: € 38 million

- The audit scope includes all significant companies, covering the vast majority of revenues, assets and liabilities.

- Valuation of goodwill
- Valuation of Property, Plant and Equipment
- Valuation of inventories
- System environment and internal controls
- Valuation of subsidiary shares in the parent company’s financial statements

As part of designing our audit, we determined materiality and assessed the risks of material misstatement in the financial statements. In particular, we considered where management made subjective judgements; for example, in respect of significant accounting estimates that involved making assumptions and considering future events that are inherently uncertain.

Materiality

The scope of our audit was influenced by our application of materiality. An audit is designed to obtain reasonable assurance whether the financial statements are free from material misstatement. Misstatements may arise due to fraud or error. They 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.

Based on our professional judgement, we determined certain quantitative thresholds for materiality, including the overall group materiality for the consolidated financial statements as set out in the table below. These, together with qualitative considerations, helped us to determine the scope of our audit and the nature, timing and extent of our audit procedures and to evaluate the effect of misstatements on the financial statements as a whole.

Overall group materiality	€ 38 million
How we determined it	0.6% of net sales 2019
Rationale for the materiality benchmark applied	We chose net sales as the benchmark because, in our view, it is a stable and an important benchmark in the group's current situation, against which the performance of the group is measured by users of the financial statements. As the group's profitability has not been stable, net sales is also a generally accepted benchmark. We chose 0.6% which is within the range of acceptable quantitative materiality thresholds in auditing standards.

How we tailored our group audit scope

We tailored the scope of our audit, taking into account the structure of the Outokumpu group, the accounting processes and controls, and the industry in which the group operates. The group audit scope was focused on the manufacturing companies in Finland, Sweden, Germany, USA, Mexico, the UK and Italy. We obtained, through our audit procedures at the aforementioned companies, combined with additional procedures at the group level, sufficient and appropriate evidence regarding the financial information of the group as a whole to provide a basis for our opinion on the consolidated financial statements.

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.

As in all of our audits, we also addressed the risk of management override of internal controls, including among other matters consideration of whether there was evidence of bias that represented a risk of material misstatement due to fraud.

Key audit matter in the audit of the group	How our audit addressed the key audit matter
Valuation of goodwill Refer to notes 2, 11 and 14 in the consolidated financial statements. As at 31 December 2019 the group's goodwill balance amounted to € 466 million. Goodwill is tested at least annually, irrespective of whether there is any indication of impairment. For goodwill testing purposes, the recoverable amount is based on value in use which is determined by reference to discounted future net cash flows expected to be generated by the asset. Key assumptions used in the value-in-use calculations are discount rate, growth rate of terminal value, average global growth in consumption of stainless steel and base price development. Valuation of goodwill is a key audit matter due to the size of the goodwill balance and the high level of management judgement involved the estimation process.	Our audit of goodwill valuation focused on management's judgement and estimates used. We assessed the appropriateness of these through the following procedures: • We tested the methodology applied in the value in use calculation by comparing it to the requirements of IAS 36, Impairment of Assets, and we tested the mathematical accuracy of the calculations. • We evaluated the process by which the future cash flow forecasts were drawn up, including comparing them to medium term strategic plans and forecasts approved by the Board and testing the key underlying assumptions. • We considered whether the sensitivity analysis performed by management around key drivers of the cash flow forecast was appropriate by considering the likelihood of the movements of these key assumptions. • We compared the current year actual results to those included as estimates in the prior year impairment model to corroborate the reliability of management's estimates. • The discount rates applied within the model were assessed by PwC business valuation specialist, including comparison to economic and industry forecasts as appropriate. We also considered the appropriateness of the related disclosures provided in note 14 in the group financial statements.

Key audit matter in the audit of the group	How our audit addressed the key audit matter
Valuation of Property, Plant and Equipment Refer to notes 2 and 12 in the consolidated financial statements. As at 31 December 2019 the Group's Property, Plant and Equipment (PPE) amounted to € 2,767 million, which is 46% of the total assets and 108% of the total equity. The group's business is very capital intensive and there is a risk that the carrying value of the Property, Plant and Equipment is overstated. The carrying value of Property, Plant and Equipment is tested as part of the group impairment testing based on the discounted cash flow model. Valuation of Property, Plant and Equipment is a key audit matter due to the size of the balance and the high level of management judgement involved the estimation process.	We assessed the appropriateness of the group's method and management's judgement and estimates in the impairment calculations for Property, Plant and Equipment. Our audit work also included testing the operating effectiveness of key controls in place to ensure the existence and appropriate valuation of Property, Plant and Equipment. Such controls include the authorization of additions, disposals and scrapings, the evaluation of the useful economic lives and the reconciliation of fixed assets registers to the accounting records. In addition we performed substantive audit procedures including testing of assets acquired in the year and depreciation of the fixed assets mainly through analytical audit procedures.

Key audit matter in the audit of the group	How our audit addressed the key audit matter
Valuation of Inventories Refer to notes 2 and 21 in the consolidated financial statements. Net inventories amount to € 1,424 million as at 31 December 2019. Inventories are stated at the lower of cost and net realizable value (NRV). Net realizable value is the estimated selling price in the ordinary course of business, less the estimated costs of completion and the estimated costs necessary to make the sale. The most important commodity price risk for Outokumpu is caused by fluctuation in nickel and other alloy prices. A large part of stainless steel sales contracts include an alloy surcharge clause, with the aim of reducing the risk arising from the time difference between raw material purchase and product delivery. The risk is significant because the delivery cycle in production is longer than the alloy surcharge mechanism provides for. Thus, only the price for the products to be sold in near future is known. That is why a significant part of the future price for each product to be sold is estimated according to management's best knowledge in NRV calculations. Due to fluctuations in nickel and other alloy prices, the realized prices can deviate significantly from what has been used in NRV calculations on the closing date. Due to the high level of management judgment and the significant carrying amounts and risks relating to valuation, this is one of the key audit matters.	Our audit work included testing management's key controls in place to ensure proper valuation and existence of inventories. In addition, our audit procedures included, among other things, the following: • We performed tests over the prices of raw materials and verified items in the product costing of work in progress. • We performed tests over the NRV calculations and the assumptions used. • We assessed the adequacy of the obsolescence provision and the management judgement used. • We participated in the physical inventory counting and performed independent test counts to validate the existence of assets and accuracy of the counting performed.

Key audit matter in the audit of the group	How our audit addressed the key audit matter
System environment and internal controls The group has a fragmented system environment. The fragmented system environment introduces risks related to system access, change management and data transfer between the different systems, and we have accordingly designated this as a key audit matter. The group is also implementing a new global ERP, which was taken into use in two countries in October 2019. This introduces risks related to temporarily increased complexity as well as processes and data in the new system.	Our response to the risks related to the fragmented system environment included both testing of IT controls and tests of details. We tested the group's controls around access and change management related to key IT systems. We also tested the group's controls around system interfaces, and the transfer of data between systems. We noted certain weaknesses related to access controls to certain key systems. We reported these control weaknesses to management and performed tests of detail to reduce the related risks of material misstatement to an acceptably low level. We tested the group's controls related to the new ERP implementation and the IT controls for the new system. We also tested the completeness and accuracy of data migrations relevant for financial reporting.

There are no significant risks of material misstatement referred to in Article 10(2c) of Regulation (EU) No 537/2014 with respect to the consolidated financial statements.

Key audit matter in the audit of the parent company	How our audit addressed the key audit matter
Valuation of subsidiary shares in the parent company's financial statements As at 31 December 2019, the value of Outokumpu Oyj's subsidiary shares amounted to € 3,819 million in the parent company's financial statements prepared in accordance with Finnish GAAP. The valuation of subsidiary shares is tested as part of the group impairment testing based on the discounted cash flow model. The valuation of subsidiary shares is a key audit matter due to the significant carrying amounts involved and the high level of management judgement involved. This matter is a significant risk of material misstatement referred to in Article 10(2c) of Regulation (EU) No 537/2014.	We assessed the appropriateness of the method and management's judgement and estimates in the calculations through the following procedures: • We evaluated the process by which the future cash flow forecasts were drawn up, including comparing them to medium term strategic plans and forecasts approved by the Board and tested the key under-lying assumptions. • We considered whether the sensitivity analysis performed by management around key drivers of the cash flow forecast was appropriate by considering the likelihood of the movements of these key assumptions. • We compared the current year actual results included in the prior year impairment model to corroborate the reliability of management's estimates. • The discount rates applied within the model were assessed by PwC business valuation specialist, including comparison to economic and industry forecasts as appropriate.

Responsibilities of the Board of Directors and the Managing Director for the Financial Statements

The Board of Directors and the Managing Director 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 Managing Director 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 Managing Director are responsible for assessing the parent company's and the group's ability to continue as a 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 to cease operations, or there is no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about 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 the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these 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 Managing Director's 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 parent company or the group 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 to 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

Appointment

We were first appointed as auditors by the annual general meeting on 21 March 2017. Our appointment represents a total period of uninterrupted engagement of 3 years.

Other Information

The Board of Directors and the Managing Director are responsible for the other information. The other information comprises the report of the Board of Directors and the information included in the Annual Report, but does not include the financial statements and our auditor’s report thereon. We have obtained the report of the Board of Directors prior to the date of this auditor’s report and the Annual Report is expected to be made available to us after that date.

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 the report of the Board of Directors, our responsibility also includes considering whether the report of the Board of Directors has been prepared in accordance with the applicable laws and regulations.

In our opinion

- the information in the report of the Board of Directors is consistent with the information in the financial statements
- the report of the Board of Directors has been prepared in accordance with the applicable laws and regulations.

If, based on the work we have performed on the other information that we obtained prior to the date of this auditor’s report, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Other statements based on the decision by the Annual General Meeting

The proposal by the Board of Directors regarding the treatment of distributable funds is in compliance with the Limited Liability Companies Act. We support that the Board of Directors of the parent company and the President and CEO be discharged from liability for the financial period audited by us.

Helsinki 5 February 2020

PricewaterhouseCoopers Oy
Authorised Public Accountants

Janne Rajalahti
Authorised Public Accountant (KHT)