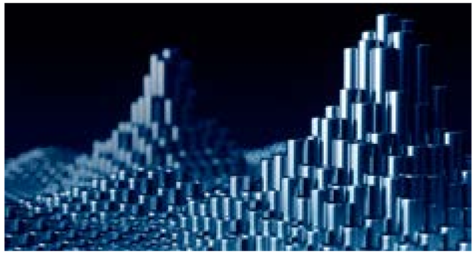
Annual report 2019

outokumpu



Contents

This Annual report combines Outokumpu's sustainability and financial reporting for 2019. Outokumpu's Sustainability review has been assured and the Financial statements have been audited.

Annual review

Sustainability review

Review by the Board of Directors and Financial statements

Governance

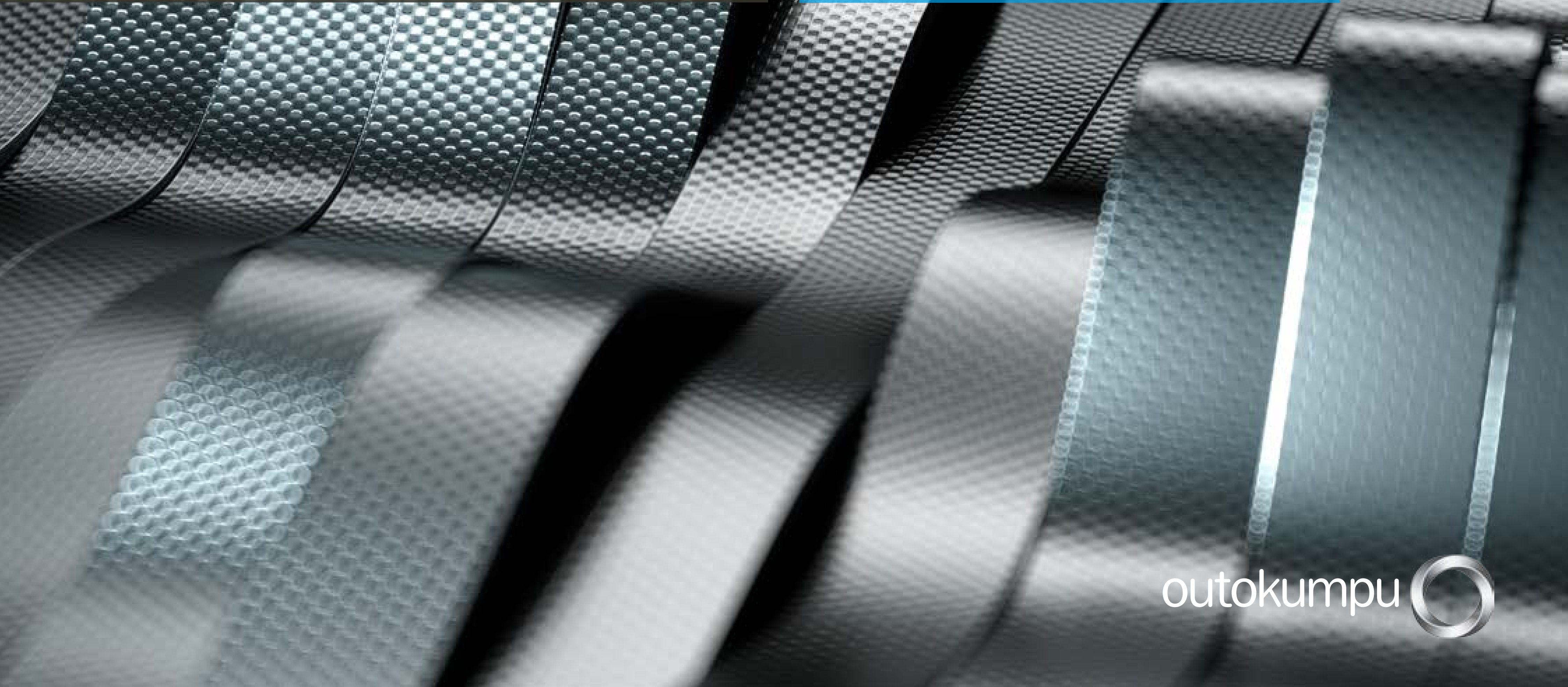
Download the Sustainability review as PDF

Download the Review by the Board of Directors and Financial statements as PDF

Download the Corporate Governance as PDF

Annual review 2019

Stainless steel is an amazing material that makes modern society possible by providing unmatched durability, longevity and recyclability. It is at the heart of moving society from quick fixes towards a world that lasts forever.



outokumpu

Working towards a world that lasts forever

Outokumpu is the global leader in stainless steel. We aim to be the best value creator in stainless steel, through our competitive edge of customer orientation and efficiency.

In 2019, Outokumpu's sales amounted to 6.4 billion euros and stainless steel deliveries to 2.2 million tonnes. Outokumpu is the clear market leader in Europe and the second largest in the Americas market. Outokumpu is listed on Nasdaq Helsinki.

Outokumpu's business is divided into four business areas: Europe, Americas, Long Products and Ferrochrome. We have production in Finland, Germany, Sweden, the UK, the USA and Mexico, and we serve our customers through a global sales and service center network. Outokumpu's own chromite mine in Kemi, Finland is the source of the key raw material for stainless steel.

The foundation of our business is our ability to tailor stainless steel into any form and for almost any purpose. Our customers use it to create society's basic structures and its most famous landmarks as well as products for households and various industries. Our legacy as the inventor of stainless steel compels us to drive the development of the material further.

Stainless steel is sustainable, durable and long-lasting. At the end of its life cycle, stainless steel is 100% recyclable. We work together with our customers and partners to look beyond the short term and create advanced materials that help us to build a world that lasts forever. ■

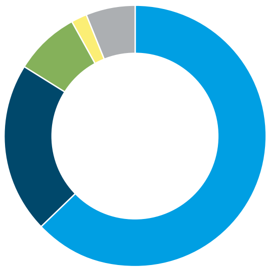
* Compared to the baseline of 2014–2016

Key figures 2019

In 2019, we kept our focus on enhancing our operational efficiency and securing our competitiveness. Our ongoing operational excellence efforts delivered a 4% productivity improvement. Furthermore, we were able to release almost EUR 220 million from net working capital, and most importantly we reduced our net debt to EUR 1,155 million.

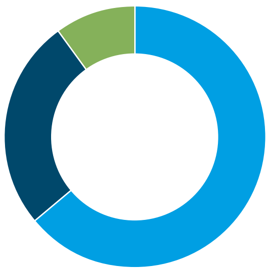
	2019	2018	2017	2016	2015
Net sales, € million	**6,403**	6,872	6,356	5,690	6,384
Stainless steel deliveries, 1,000 tonnes	**2,196**	2,428	2,448	2,444	2,381
Adjusted EBITDA, € million	**263**	485	631	309	165
Net result for the period, € million	**–75**	130	392	144	86
Operating cash flow	**371**	214	328	389	–34
Net debt, € million	**1,155**	1,241	1,091	1,242	1,610
Debt-to-equity at the year-end, %	**45.1**	45.1	40.1	51.4	69.1
Personnel at the year-end	**10,390**	10,449	10,141	10,600	11,002

Sales by business area, € 6,403 million



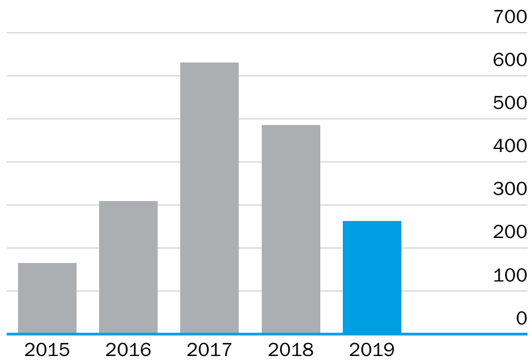
- Europe **63%**
- Americas **21%**
- Long Products **8%**
- Ferrochrome **2%**
- Other operations **6%**

Stainless steel deliveries by business area, %

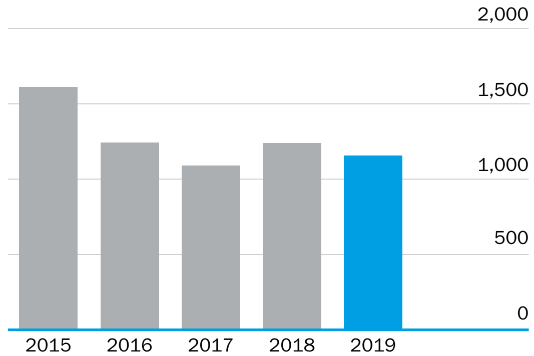


- Europe **64%**
- Americas **26%**
- Long Products **10%**

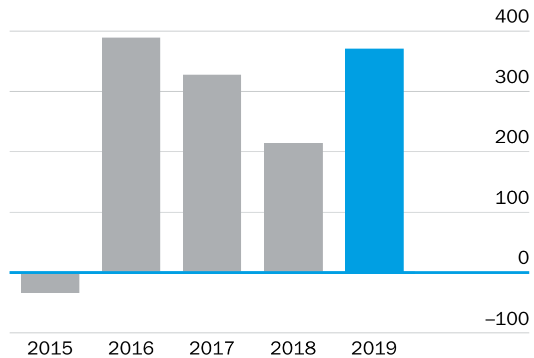
Adjusted EBITDA, € million



Net debt, € million



Operating cash flow, € million



CEO's review

2019 was a challenging year for the European steel industry. Weak demand and historically low prices weighed heavily on our results. In spite of the harsh environment, we have been able to secure our competitiveness and market position.

Increasing protectionism around the world, in the wake of invoking article 232 tariffs in the US, has led to a continuing flood of imports into the European market. The safeguard measures implemented by the European Commission have not had the desired effect due to some fundamental flaws in their design. In 2019, these effects were exacerbated by the global slowdown in manufacturing, especially in the automotive industry. The resulting weak demand and historically low prices weighed heavily on Outokumpu's results.

In a testament to the resilience that the company has gained through four years of relentless execution of our must-win battles, we have been able, in spite of this harsh environment, to celebrate important successes. Our sharp focus on cost and cash has resulted in a more than 4% productivity gain year on year, safeguarding our competitiveness and market position. Recognizing that in such an environment cash is even more important than ever, we drove working capital down by almost 220 million euros resulting in a significant reduction of net debt to just over 1.1 billion euros.

In line with our vision, to be the best value creator in the industry through customer orientation and efficiency, we again improved on customer satisfaction rate. According to the latest customer satisfaction survey, 72% of our customers are highly satisfied with our products and services and consider Outokumpu as the partner of choice.

CEO’s review

> “Outokumpu has always been a leader in sustainability but we will not rest on our laurels”

Equally, looking at internal accomplishments, we have for the fourth year in a row improved our safety performance with a reduction of recordable incidents by 20% over 2018. We are now undisputedly best in class in our industry when it comes to safety performance.

On the flipside of the coin, Outokumpu’s full-year adjusted EBITDA amounted to a disappointing EUR 263 million, strongly influenced by low prices and exceptionally low deliveries. This was especially true for business area Europe where import penetration reached an all-time high of over one third of all consumption. In spite of that the business area delivered a reasonable result demonstrating the resilience of our business model.

Rapid and diligent implementation of the comprehensive improvement plan introduced at the end of 2018 positively contributed to the performance in business area Americas. Distributor destocking had a negative impact on deliveries in 2019, but under the leadership of the revamped management team the Americas’ underlying performance continued to improve, supported by a strong operational performance and greatly enhanced commercial capabilities. The investment in ferritics production in Calvert, due to start production during the fourth quarter of 2020, will further strengthen our position in the US market.

Going forward, establishing a level playing field for the European steel industry is crucial for the long-term health of our industry. We are confident that we can compete with any other stainless steel company as long as they play with the same rules. Unfair state subsidies, preferential treatment and illegal tax breaks are not part of that level playing field.

More importantly, with the environmental challenge the world is facing, everyone must be held to the same environmental standards. To make sure that a level playing field is established, we work closely with the European Commission, the US government and other stakeholders. The available toolbox that will help restore a fair market includes a variety of measures ranging from tightening the European safeguards to trade investigations into dumping and other market distorting practices. The European Commission is also investigating hot-rolled stainless steel imports originating from China, Indonesia and Taiwan.

Furthermore, the EU has lodged a complaint with the WTO against market distortion of the Nickel market by Indonesia, and the United States has joined the EU in the WTO consultations. On the environmental front, the Commission considers implementing a carbon border adjustment as part of the EU’s Green Deal to make Europe climate-neutral. This would address the concern around highly polluting Asian steel imports displacing sustainably produced European steel and the resulting carbon leakage.

In today’s world, more than ever before, all companies have to assume their responsibility to provide sustainably produced products. Outokumpu has always been a leader in sustainability but we will not rest on our laurels. We strongly believe that we are part of the solution due to the character of our products and our best in class production processes.

Reduction of our carbon footprint and mitigation of climate change are key targets for Outokumpu. We believe that sustainability provides a license to operate and is a precondition for competitiveness in the long run. As a leading producer of sustainable stainless steel, we are committed to mitigating climate change through reducing our green-house gas emissions significantly during the coming decade. Approximately 90% of our raw material is recycled, and we continuously develop our processes and energy efficiency to further lower our environmental impacts.

Four years ago, we set ourselves ambitious targets linked to a bold vision – to be the best value creator in stainless steel by 2020. Looking back, it is clear the market environment has been much more challenging than we predicted in 2016 making us fall short of some of our financial targets. However, when judging our progress on everything from creating a highly effective and high-performing organization to being one of the most efficient operations in the industry, I am extremely proud of all that has been achieved and we can look to the future with the confidence that comes with a strong company.

Outokumpu’s success depends on people, and I want to thank our employees for your hard work and commitment. I also want to say a big thank you to our customers and shareholders for your continued trust and support.

Roeland Baan
CEO

Creating value with sustainable stainless steel

The cornerstone of our business is enabling our customers' growth and innovation through sustainable stainless steel solutions to benefit modern society for generations to come. With sustainability at our core, we continuously work towards more environmentally efficient operations to mitigate climate change.

Video: What is Outokumpu made of?

Stainless steel is the solution to many challenges the world is facing as it is fully recyclable, efficient, and long lasting. We help our customers to build a world that lasts forever by producing stainless steel that has the lowest carbon footprint in the industry. Based on our vision of becoming the best value creator in stainless steel through customer orientation and efficiency, we are focusing our efforts on the areas where we need to excel to be able to create the best value for our customers, shareholders, and employees.

Outokumpu is the undisputed market leader in Europe and strong number two in the Americas. Our world-class assets, comprehensive product portfolio and proven expertise form a sound foundation for our strategy execution and future success.

Megatrends drive the demand for sustainable solutions

Global megatrends, such as urbanization, mobility, economic and population growth, and climate change, are the main growth drivers for the stainless steel industry. The need to develop sustainable solutions that are durable and can be reused at the end of their lifecycle is apparent, as the megatrends drive the demand for economic, social, and environmental sustainability.

Our sustainability strategy covers the economic, environmental and social aspects of our operations. Mitigating climate change by reducing our carbon footprint is a clear focus area, and we aim to reduce our environmental impact for example through energy efficient production and by using low-carbon electricity.

Our commitment and contribution to sustainability are embedded throughout our value chain from procurement and production to customer deliveries. We have the lowest carbon footprint in our industry and we are the leader in the circular economy as the recycled content in our stainless steel is highest in the industry – over 85%. We are continuously looking for ways to even further improve the sustainability of our products and processes.

Our strategy is based on selected must-win battles

We believe that the rigorous execution of our must-win battles coupled with sound and sustainable operations will lead us towards our vision. Our aim is to capture a significant part of the market growth and provide the best value to our key stakeholders and society.

Outokumpu's strategy builds on six strategic targets, or must-win battles, through which we aim to strengthen our competitiveness and further improve financial performance. All six must-win battles – safety, sustainability, operational excellence, commercial excellence, Americas and digital transformation – are connected to customer orientation and efficiency improvements.

- Disciplined safety practices correlate with improved quality and operational efficiency.
- Securing Outokumpu's position as the sustainability leader in the stainless industry helps to fight climate change and to create a competitive advantage versus competition.
- Operational excellence aims to deliver continuous improvement and step change in quality, supply chain, and manufacturing.
- Commercial excellence focuses on margin growth through a superior product strategy that meets the stringent customer requirements and matches market demand with an optimal product mix. It lays the foundation for an industry leading customer experience.
- The Americas holds the biggest profitability lever, with significant improvement potential in both cost and market position.
- Digital transformation drives for new digital business and manufacturing platforms and a major step-change toward data driven management.

As of 2020, sustainability was included as a new must-win battle and high-performing organization has been discontinued as a must-win battle as the set targets have already largely been met. However, the Organizational Health Index (OHI) remains a measure of success also in 2020.

Each must-win battle includes specific development programs that guide our daily activities and form the basis for performance management. A common denominator for all of our strategic targets is striving for straightforward and standardized processes and ways of working to increase the efficiency and productivity throughout the organization.

Must-win battles	Achievements in 2019	Next steps
Safety	• Total recordable incident frequency (TRIFR) decreased to 3.2 • Company-wide Safety Awards program launched to highlight good practices	• TRIFR target for 2020: <3.0
Sustainability	• New must-win battle as of 2020	• Launch roadmap to carbon neutrality
Operational excellence	• Outokumpu Production Index (OPI) moved from a group average of 47% in 2018 to 61% • Reliability acceleration initiatives have delivered stability	• All sites >70% in OPI
Commercial excellence	• Developed sales processes to deliver the best customer experience in the industry • Customer satisfaction ratio of absolutely or very satisfied customers at 72% (63% in 2018)	• Customer satisfaction at 75% in 2021
Americas	• The Americas' adjusted EBITDA amounted to EUR 10 million in Q4/2019 • Reorganization of the Commercial team resulted in stronger alingment across sales teams	• Improving delivery performance
Digital transformation	• New ERP system implemented without major business interruptions • Digital Manufacturing program established the Outokumpu Digital Platform (ODP) in Tornio, Finland	• Expand ODP to other production sites

Stainless steel market

Global consumption of stainless steel is growing due to the increasing need of long-lasting and sustainable solutions for the world's most critical challenges.

The long-term prospects for the increasing use of stainless steel are positive. Stainless steel consumption has been growing in all geographical areas. Growth has been fastest in the APAC region, while consumption in the Americas and EMEA regions have grown slower.

Global market with few big players

Outokumpu operates in the global stainless steel market. The market for cold-rolled products totaled approximately 30.5 million tonnes in 2019, of which Outokumpu's market share globally was approximately 5%. Our cold rolled market share in Europe is approximately 28% and in the NAFTA region approximately 21%. Outokumpu is the market leader in Europe and the clear number two in the Americas with a market share of approximately 20% in the US. (Source: EUROFER, SMR)

In addition to Outokumpu, the largest stainless steel producers worldwide include Asian companies Tsingshan, TISCO and POSCO as well as European-based Acerinox and Aperam. Several Asian producers also manufacture carbon steel, while European manufacturers focus on stainless steel. (Source: CRU)

With a growing demand, the longterm market outlook is positive

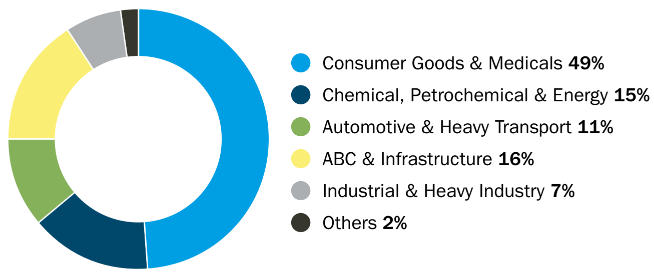
The long-term outlook for stainless steel demand remains positive. Global megatrends, such as urbanization, climate change, and increased mobility combined with growing global

Major stainless steel producers

Million tonnes	**2020**	2019
Tsingshan	**9.8**	9.8
TISCO	**4.5**	4.5
POSCO	**3.3**	3.3
Acerinox	**3.3**	3.3
Outokumpu	**3.2**	3.2
Aperam	**3.0**	3.0
Guanxi Chengde	**3.0**	3.0
YUSCO	**2.8**	2.8
Jindal	**2.6**	2.6

Source: Stainless steel production capacity of slabs, CRU November 2019.

End-uses of stainless steel in 2019



Source: SMR, stainless steel finished products (rolled and forged products excl. 13Cr tubes, profiles), January 2020.

demand for energy, food, and water, are expected to support the future growth of stainless steel demand. In 2019, the global steel production amounted to 1,870 million tonnes of which approximately 3% was stainless steel. (Source: CRU, Worldsteel)

The demand for stainless steel products is impacted by global, regional, and national economic conditions, levels of industrial investment activity and industrial production.

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% respectively. (Source: SMR)

Global real demand for stainless steel products reached 43.8 million tonnes in 2019, 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 2018. Demand in the Consumer Goods & Medical and Industrial & Heavy Industries grew by 3% and 1%, respectively. Meanwhile demand in the Chemical, Petrochemical and Energy segment remained at the same levels as 2018, whereas demand in Automotive & Heavy Transport segment shrank by 7%. (Source: SMR)

Market environment remains difficult

In 2019, the European steel industry continued to suffer from the surge of imports and unprecedented price pressure 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.

The stainless steel industry has been burdened by overcapacity in recent years, especially in Asia. The global stainless steel production capacity of slabs increased in 2019 by roughly 4% to 58.8 million tonnes. The global utilization rate was assessed to have slightly decreased to the levels of 72% in 2019. As the production of stainless steel is capital intensive, producers generally seek to maintain high capacity utilization in order to maintain and improve profitability. (Source: CRU)

The global stainless steel production of slabs grew by around 1% in 2019 from the previous year, reaching 42.6 million tonnes. The output decreased in most of the regions including Europe and Americas, while it only grew in China by 9% and in Indonesia by 15% compared to 2018. (Source: CRU)

Stainless steel is sold either directly to end users or to stainless steel distributors, tube makers, and processors, such as steel service centers, who resell the products to end users. In 2019, 55% of Outokumpu's stainless steel was sold directly to end-user customers. The remaining approximately 45% of sales were shipped to distributors and processors that stock and process stainless steel to serve end users. ■

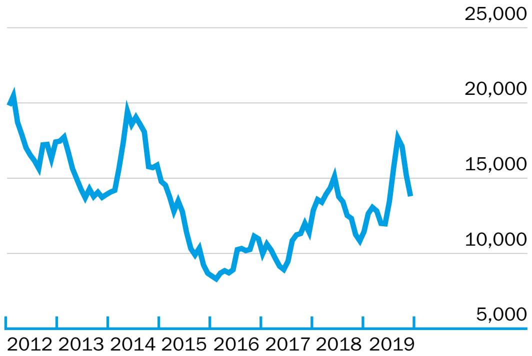
More on our operating environment

Stainless steel and raw material prices in 2019

Stainless steel price*, EUR/t

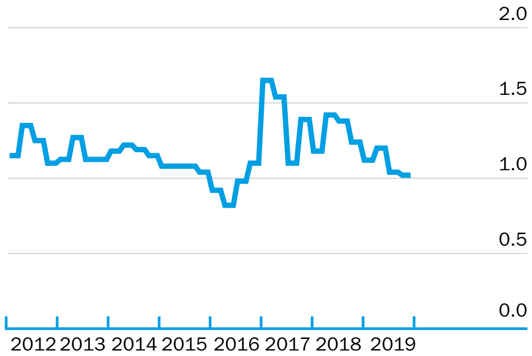
Source: CRU January 2020
* Stainless steel reference price for cold rolled 304 2mm sheet in Europe.

Nickel price, USD/t



Source: LME settlement, monthly average prices, including December 2019

Ferrochrome price, USD/lb



Source: Quarterly contract prices agreed between South African ferrochrome producers and European buyers, including Q4/2019.

Customers and expertise

Delivering the best customer experience and the most advanced and sustainable solutions are important focus areas for Outokumpu.

Outokumpu has a strong customer base spread across the globe on every continent and balanced over a range of industries. Our customers operate, for example, in building and construction, produce energy, and manufacture appliances and cars. The majority of our customers are based in areas where we have our own production: Europe, the US, and Mexico. We also have a global sales and service center network that serves customers on all the main continents.

Our goal is to increase our customers' competitiveness with our products by improving their efficiency, profitability, and sustainability. We continuously innovate and improve our operations and products so that we can offer more benefits to our customers. Together with our customers, we can find new application areas where stainless steel can make a positive impact as a more sustainable solution.

Customer satisfaction increased

Continuous interaction with customers helps us to improve our understanding of our customers' needs, challenges, and business environments. This feedback helps us to achieve our growth targets and guides us in improving our performance, at the strategic and operational levels.

Outokumpu conducts regular customer satisfaction surveys and the latest was conducted in late 2019. In total, 844 customer contacts were interviewed in the survey. Of the respondents, 72% said they are absolutely or vert satisfied with their business relationship with Outokumpu (2018: 63%). In three years, this target figure has increased by 14 percentage points, and Outokumpu is only three percentage points away from the set goal of 75%. Reacting quickly to customer requests, understanding customer needs and reaching contact persons easily were listed as Outokumpu's strengths, where as areas requiring development relate in particular to delivery performance.

Creating business benefits with R&D

Our research and development function aims to be the industry benchmark in profitable stainless steel solutions and the development partner of choice for our customers.

Our R&D mission is to create extraordinary value for collaboration partners both internally and externally by delivering focused projects on current and future product demands, developing and adopting new process technologies, improving the efficiency of our production processes, ensuring best in class product support, securing competitive knowledge, and driving value by using digital tools and data science.

Outokumpu's R&D function works closely with sales, operations and customers to support the business and align activities with customers' needs. To strengthen the organization and to create a better foundation for future projects and market demands, R&D started working in functional process and product R&D teams in 2019. Cooperation between Outokumpu's market development and R&D teams was further deepened to better align R&D activities with market needs.

Outokumpu continues to have three R&D centers located in Avesta, Sweden, Krefeld, Germany and Tornio, Finland. In 2019, Outokumpu's R&D expenditure totaled EUR 17 million, 0.3% of net sales (2018: EUR 15 million and 0.2%). Outokumpu is continuously developing its R&D infrastructure. For instance, in 2019 a new state-of-the-art FIB-SEM (Focused ion beam scanning electron microscope) was procured to our R&D center in Avesta.

Outokumpu has an extensive network of external R&D collaboration partners, including top class universities and institutes, technology suppliers and customers. Outokumpu actively participates both in national and international collaborative R&D projects and programs.

Improving processes

During 2019, the process R&D projects were focused on optimization of product quality, yield, production cost reduction and material efficiency. For instance, several successful R&D projects resulting in major improvements in surface quality of our products were delivered. Several R&D projects were also initiated to enable product transfers between Outokumpu units and thus make possible more flexible and efficient operation of our production assets.

Sharing of best practices between Outokumpu production sites was also kept high in our agenda. Process R&D teams were also actively involved in our industrial digitalization initiatives. A new expert team on modeling and simulations was set up to strengthen our competences on this field.

A scoping study on possibilities to substantially reduce CO_2 emissions from ferrochrome process was finalized. Follow-up projects focusing on the most potential CO_2 reduction technologies are being set up.

Developing sustainable material solutions

The product R&D projects are focused on developing new steel grades, characterization and optimization of existing grades, as well as on use of stainless steels in new application areas. The product R&D activities concentrated on Outokumpu’s Pro grades.

The direction of Outokumpu’s product, application, and technical market development is driven by global megatrends, such as economic and population growth, mobility, urbanization, climate change, and limited resources. The key focus is the development of long-lasting, sustainable material solutions providing advantages over the entire product life cycle.

Efficiency through digital manufacturing

We see a great potential in digital manufacturing and foresee up to 100,000 tonnes capacity release in next few years through the digitalization of our operations, main levers being improved asset availability, quality assurance, and shorter lead time. In 2018, Outokumpu announced that it is aiming to fully digitalize its biggest factory in Tornio, Finland, transforming it into the most digitalized and most cost-competitive stainless steel operation in the industry by 2020. After Tornio, digital manufacturing is planned to be rolled out to Outokumpu’s other production units internationally.

During 2019, Outokumpu has built up the Outokumpu Digital Platform (ODP) to enable the digitalization targets. The new platform enables fast development cycles, data driven experimentation, and scalable deployments of new digital solutions to Tornio and later in other Outokumpu production sites.

Ensuring material safety

Outokumpu strives to improve the properties of stainless steel even further and support customers to utilize them in their applications. An example is a modular concept for wastewater treatment tanks that makes them much more flexible for expansion. Innovative wastewater treatment tanks are made from Outokumpu Forta Duplex stainless steel.

Outokumpu has made environmental assessments on its steel and revised its Environmental Product Declarations (EDPs) for its main products. EDPs describe the main environmental effects and energy needs of our stainless steel throughout their supply chain and help customers to calculate sustainability performance over their products’ life cycle. EPDs are standardized and verified externally.

Stainless steel in its manufactured forms – as delivered by Outokumpu to our customers – is inert, non-reactive, and non-toxic. The industrial processes of reprocessing stainless steel by, for instance, welding and pickling, can release substances or fumes. Outokumpu provides customers with a safety information sheet or safety data sheets for all of our products. This safety information helps our customers to process our stainless steel products in a safe manner. Outokumpu also complies fully with European regulations on REACH and RoHS requirements. ■

Outokumpu on board: new business opportunities in the shipping industry

In 2020, the IMO (International Maritime Organization) regulation for a global sulfur cap for marine fuel will enter into effect – and thus vessel owners need to adapt their ship engines to fulfil the requirements. It is estimated that around 70,000 vessels worldwide will be affected by the new IMO regulation. One option for vessels is to install exhaust gas cleaning systems (scubbers) made from stainless steel Pro grades.

These scrubbers may become the widespread technology if there will be a significant price gap between high- and low-sulfur fuel and if the maintenance of scrubbers proves to be manageable. The sales to this industry segment have already increased from about 400 tonnes in 2016 to approximately 25,000–30,000 tonnes in 2019.

Sustainability review 2019

Outokumpu contributes to a more sustainable world by producing stainless steel – a material with superior durability, longevity and recyclability. But it is not only what we produce, but how we produce it.

Download the Sustainability review as PDF

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Sustainability at Outokumpu

Outokumpu is a leading producer of sustainable stainless steel globally. The cornerstone of our business is enabling growth and innovation through sustainable stainless steel solutions to benefit modern society for generations to come.

Outokumpu is committed to carbon neutrality by 2050

During 2019, we took steps to further strengthen our sustainability agenda and our sustainability strategy was updated to reflect the growing importance of sustainability and the possibilities it offers to our business. Our sustainability strategy is based on three pillars:

- Climate
- Environment
- Society

Our product is at the very core of our sustainability strategy. Stainless steel is a superb material for sustainable solutions as it is 100% recyclable, efficient and long-lasting.

However, it is not only what we do, but also how we do it. We are the industry leader in sustainability as according to internal estimates our stainless steel has the lowest carbon footprint of the industry when taking into account all indirect emissions, including raw materials. We are committed to reach carbon neutrality by 2050. We also lead the industry in terms of contribution to the circular economy. The recycled steel content of our stainless steel is about 85% and we are continuously looking for ways to minimize our environmental impact.

Materiality analysis and global frameworks

To map our key sustainability topics, we conducted a materiality analysis in 2018. The analysis is reflected in our updated sustainability strategy. We maintain a continuous dialog with our key stakeholder groups – customers, employees, suppliers, and investors – to follow emerging sustainability trends and topics within the stainless steel industry. Key topics discussed in 2019 include climate change mitigation with lower carbon footprint, improving energy efficiency, ensuring the safety, well-being, and development of our personnel and strengthening supply chain sustainability with further assessing environmental, social and governance compliance. Our strategy is aligned with global initiatives such as ResponsibleSteel.

We are committed to the United Nation's Sustainable Development Goals (SDGs) and our focus was realigned with the updated strategy during 2019. We have selected six SDGs that are the most relevant to us in terms of our contribution.

Principles and standards

Sustainability is integrated into all of our operations, activities, and decision making. Outokumpu's operations are guided by our Code of Conduct, Ethical Principles, Corporate Responsibility Policy, and Environment, Health & Safety and Quality Policy. We expect our business partners and suppliers to follow similar standards. All of our policies are available at outokumpu.com.

All of Outokumpu's sites are certified according to quality ISO 9001 and environment ISO 14001 management systems, including energy efficiency targets. The functioning of the systems is monitored by both internal and external audits. These management systems are used to implement sustainability issues on the local level. No fines or non-monetary sanctions occurred in 2019. ■

Sustainability performance in 2019

Outokumpu has set challenging goals and key sustainability performance indicators. The company also follows up and measures other selected economic, social and environmental indicators.

All sustainability figures are available on our sustainability data tool

Organizational health continues to improve

We achieved our target for the Organizational Health Index and improved our score toward the first quartile of the evaluation.

More on our people

TARGET >67% / RESULT 71%

Work-related injuries continued to decline

Our total recordable injury frequency rate (TRIFR, per million working hours) continued to decline and was 3.2 compared to 4.1 in 2018.

More on safety and health

TARGET <3.5 / RESULT 3.2

Energy efficiency remained stable

Our target is to improve energy efficiency by 1% annually. It is reported as an improvement compared to the baseline 2007–2009.

More on energy efficiency

TARGET 2020 12.9% / STATUS 6.0%

No significant environmental incidents

Outokumpu's target is to have no significant environmental incidents, and the company has had no such incidents for many years.

More on our environmental impact

TARGET 0 / RESULT 0

Recycled content continued to be high

Our stainless steel contains the highest rate of recycled content in the industry. Recycled content includes steel scrap and recycled metals from other residuals.

More on resource efficiency

TARGET 2020 90% / STATUS 89.6%

Reduced CO_2 emissions intensity

Our long-term target is to reduce our CO_2 emissions by 20% by 2023 compared to the baseline of 2014–2016.

More on our actions on climate change

TARGET 2023 20% / STATUS 13.8%

Safety is our highest priority

Safety is our highest priority. Everyone who works or visits Outokumpu's premises – employees, customers, contractors, and other visitors – has the right to a safe and healthy working environment.

Safety is one of the cornerstones in Outokumpu's strategy. We believe that strong safety performance correlates with improved quality and operational efficiency. We aim to be among the industry leaders in safety with the vision of zero accidents.

Our safety management system supports us in striving toward this goal through various preventive activities. Safety audits are performed regularly at our production sites according to a standardized audit program. Our daily work is guided by common safety principles, standards, guidelines, and our ten Cardinal Safety Rules. Hazard observations and Safety Behavioral Observations (SBOs) are utilized to flag potential risks and unsafe behaviors before they lead to accidents. Lessons from past incidents are shared with other sites in the monthly Safety Call hosted by the CEO.

Preventive and positive safety culture

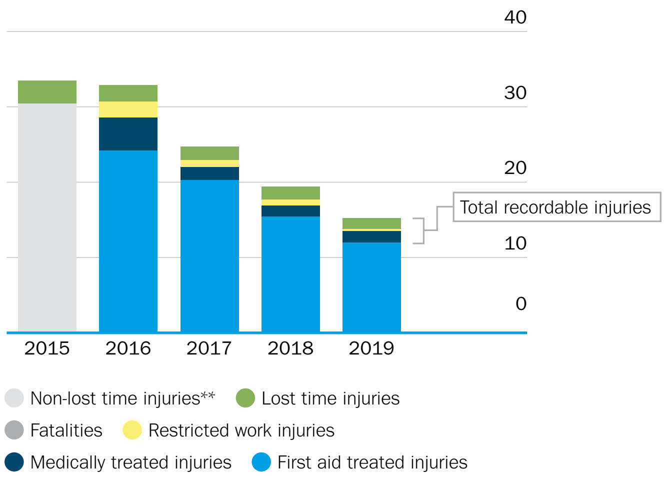
Strengthening our safety culture across the organization was one of our focus areas for 2019. The company-wide behavioral safety training program SafeStart has been executed at most of our sites with approximately two thirds of the employees having completed the training. The feedback questionnaire filled out by participants at the end of the training has given a good indication that the program has met expectations with positive feedback for the trainers who held the trainings. One site has received a Gold award from SafeStart organization as a result of the follow-up process.

In addition to the safety awareness training and the regular task and location specific safety education, a new e-learning course about risk assessments was launched to increase awareness and understanding of workplace hazards, risks and control measures.

As a part of building a positive and preventive safety culture, Outokumpu launched a global Safety Awards program in 2019. The initiative aims to encourage and recognize both individual employees and teams for their efforts to improve safety performance and culture.

The annual Safety Week was held in April with a continued focus on hand safety and preventing hand injuries as these types of accidents have still represented a high percentage of our accidents. In 2019, the theme was taken further by linking it with known high-risk areas in our production sites, combining hand safety with risk assessments – another safety priority.

Work-related injuries*



* Per 1 million working hours.

** Split between non-lost time injury types is not available before 2016.

Safety performance

Proactive safety actions and incidents were reported and monitored on a monthly basis. The definitions of safety performance indicators are based on international standards. Incident rates and the rate of proactive safety actions (leading indicators) were reported per million working hours.

Outokumpu uses total recordable injuries per million working hours of employees and contractors (TRIFR) as the main safety performance indicator. Group TRIFR declined from the previous year and was 3.2 against the target of <3.5 (2018: 4.1). Group LTIFR (lost time injuries per million working hours) was 1.4 against the target of <1.3 (2018: 1.7).

The rate of all work-related accidents (total recordable injuries and first aid treated injuries per million working hours) was 15.3 (2018: 19.5). Lost-day rate (more than one calendar day absence from the day after the accident per million working hours) was 63.2 (2018: 84.2).

Proactive safety action frequency was 3,810 (2018: 3,330). This includes reported near-misses, hazard observations, SBOs and other preventive safety actions per million working hours.

Health and well-being

Good health and well-being of our personnel are essential values on their own. In addition, we believe that a healthy and thriving team of professionals is an asset to the company's success. We want all employees to return home healthy, safe and sound every day.

Outokumpu encourages its employees to take care of their physical health by offering various exercise benefits and discounts to sports and well-being services. Different health support programs are also run across our sites.

Regular health checks and other preventive medical care activities such as influenza immunization were carried out in many countries. Employees were offered screenings for common diseases, for example, in Germany for skin cancer and in the US for heart and vascular blockages.

In addition, occupational hygiene measurements are being carried out at Outokumpu sites to ensure a healthy working environment.

The number of occupational diseases diagnosed in the Group was 0 (2018: 0). Total absentee rate was 4.2% (2018: 4.2%). ■

Work-related injuries by region, accident and employee type

	Group	Europe	Americas	Asia and rest of the world	Female	Male	Employees	Contractors
TRIFR [1]	3.2	3.8	1.8	0.0	0.2	3.0	3.1	3.6
LTIFR [2]	1.4	1.7	0.6	0.0	0.1	1.3	1.6	0.9
Total recordable injuries [3]	75	64	11	0	4	71	56	19
Fatalities	0	0	0	0	0	0	0	0
Lost time injuries	33	29	4	0	2	31	28	5
Restricted work injuries	8	7	1	0	1	7	6	2
Medically treated injuries	34	28	6	0	1	33	22	12
Lost-day rate	63.2	68.4	50.5	0.0	0.9	62.3	53.6	37.6

[1] Total recordable injury frequency includes fatalities, lost time injuries, restricted work injuries and medically treated injuries, per million working hours.
[2] Lost time injuries including fatalities and lost time injuries, per million working hours.
[3] Includes fatalities, lost time injuries, restricted work injuries and medically treated injuries.

Hands are not tools – success at reducing hand injuries

Since 2017, Outokumpu's site in Mexico has had a safety program aimed at reducing hand related injuries. The program started with releasing a Hands Off Policy that sets the rules and principles for hand safety at the site.

The policy was followed by a safety campaign, Hands are not tools, and several other initiatives. The program has proven to be a success: in two years, the number of hand injuries decreased from 21 to 2 in 2019. The key for achieving success with the campaign has been in the safety commitment at all levels as well as sharing best practices and emphasizing safe behaviors.

Organizational health continues to improve

We aspire to develop a high performing organization and make Outokumpu an even better place to work. We want our people to feel motivated, respected, and proud to be part of the Outokumpu team.

Improving our workplace and organizational health continued during 2019 with an emphasis on the selected focus areas: empowerment, role clarity, and inspirational leadership.

We measure and manage our organizational health in a consistent and comprehensive manner to succeed in the long-term as a high performing organization. To assess our strengths and improvement areas and to initiate the needed development efforts, Outokumpu conducts annually an Organizational Health Index, OHI survey.

Strategy and vision better connected to daily operations

As a tool, OHI survey connects the day-to-day behaviors and mindsets of employees to the company strategy. In 2019, our target was to improve our overall OHI score toward the first quartile of the evaluation. The Outokumpu team's participation in the OHI survey was once again outstanding and the overall response rate reached 87% (2018: 86%), which is exceptionally high for an industrial company. More than 17,000 individual open comments, recommendations, and opinions were given by employees at all levels of the organization. The engagement of our personnel to Outokumpu and to improving the company is shown in the active participation in our annual organizational health survey and in shared development initiatives.

Above all, our organizational health continued to improve. In three years, our OHI score has improved significantly, from 50 points in 2016 to 71 in 2019. The overall score for all of Outokumpu improved by 4 points, only 2 points from reaching the top quartile.

According to the OHI survey results, employees are now much more involved in continuous improvement activities. Outokumpu's strategy and vision are better connected to daily operations, and the sense of empowerment has increased among our employees. By supporting, challenging, involving, and inspiring employees, leadership is becoming more effective and visible. The relentless work in our shared development initiatives has resulted in this progress and the improvements demonstrate that we have taken the right actions to develop our organizational health, thereby making Outokumpu an even better place to work. After thorough analysis, we will initiate action planning and the necessary development activities.

Based on the survey results, we have identified that our key development areas for 2020 will remain similar as the previous year: leadership, role clarity, and empowerment.

Our people

During 2019, there were no significant changes to the total number of employees. The number of employees decreased by 59 globally. We started actions including personnel negotiations in Germany and business area Long Products to enhance the productivity and efficiency of our European operations.

In Europe, continuous collaboration with the personnel takes place in a joint consultative body, Personnel Forum, which is an information channel between our personnel and corporate management. Outokumpu is committed to informing and consulting its employees and their representatives to ensure a greater understanding of the company and the competitive situation in which we operate. The Personnel Forum discusses issues concerning transnational interests, such as financial performance, employment issues, reorganization, health and safety, and technology and research. In 2019, the Personnel Forum meeting focused on two main topics, safety and digital transformation. The forum has 33 representatives from European countries, elected according to the national legislation and local practices in each country. The forum appoints the Group Working Committee, which is responsible for the ongoing cooperation between management and employees. Eight members represent employees and three represent the management. In 2019, the Personnel Forum met once, and the Working Committee convened four times.

Outokumpu's working hours, minimum notice periods, vacation times, wages, and other working conditions are consistent with the applicable local laws. Outokumpu maintains a consistent policy of freedom of association. All Outokumpu employees are free to join trade unions according to the local rules and regulations, and in 2019 altogether 79% of the Group's employees were covered by collective agreements (2018: 80%). 5,424 days in 2019 were lost due to strikes (2018: 1,607).

Outokumpu's Code of Conduct sets the way of operating in the Group, built on the equal treatment of all people: there is zero tolerance for any kind of discrimination, whether it is based on ethnic origin, nationality, religion, political views, gender, sexual orientation, or age.

Our people by region

	2019	2018	2017
Germany	**2,555**	2,667	2,744
Finland	**2,502**	2,437	2,377
Sweden	**1,975**	1,940	1,619
The United Kingdom	**560**	571	538
Other Europe	**727**	698	624
Europe	**8,319**	8,313	7,902
The United States	**1,064**	1,072	1,077
Mexico	**859**	903	1,000
South America	**87**	86	85
Americas	**2,010**	2,061	2,162
Asia/Rest of the world	**61**	75	77
Group total	**10,390**	10,449	10,141

Organizational Development

As a High Performing Organization, we aim for a lean, simple, and flat organizational structure with clear roles and responsibilities creating a high level of individual accountability. Several actions and initiatives were ongoing during 2019 as we continued enhancing personal ownership, empowerment, and role clarity.

Enhancing the must-win battle High Performing Organization has encompassed various group functions preparing organizational process blueprints with the first implementation phase taking place in the first half of 2019. Well-defined role clarity has been in focus during the rollouts of the organizational blueprints and the business transformation program Chorus.

Implementation of the new HR organization was launched with the aim to create a shared employee experience across the organization. The new HR organization and service model emphasizes employee and manager empowerment and creates consistent and standardized HR processes, common ways of working as well as improved efficiency and effectiveness through the better utilization of technology.

Capability building

In 2019, we had a strong focus on leadership as we improved our talent management and leadership development. In addition to leadership development programs, we are continuously improving day-to-day leadership skills, e.g. using calibration sessions to discuss and align to the performance management results.

During 2019, a specific emphasis was on supportive leadership behavior, and to advocate the change, our Leadership Excellence program was launched to the full extent in the first two locations, where all levels of managers were trained. To enhance the capabilities of our first line managers, the License to Lead training continued in several locations. In 2020, the program will be modified, as the Leadership Pipeline methodology will be implemented into the program.

To reinforce the implementation of the new HR organization and service model, a training program for all new roles in HR has been piloted and was being rolled-out. The role-based customized training program, HR Academy, supports role clarity and enables and empowers HR team members to perform their future roles by leveraging capabilities and creating a common mindset.

In addition, we revised our Sales Academy, piloting new modules. Other specific programs include Reliability Engineering Academy for operations and maintenance, and Digital Manufacturing Academy for IT enablement to prepare for digital manufacturing. Capability building has included multiple activities and training programs in the Manufacturing Excellence initiative. Several of our Black Belt level experts in Lean Six Sigma methods have been certified to assist in coaching and supporting our Green Belt community in delivering improvement projects.

The implementation of the Chorus program also comprised extensive learning and training: over 1,600 employees were involved in the Chorus related training sessions. Furthermore, the SafeStart behavioral safety awareness program continued and spread to new locations. The global e-learning curriculum included safety related Risk Assessment course, compliance focused Knowing Your Business Partner course as well as Welcome to Outokumpu onboarding course for newcomers.

In total, over 84% of Outokumpu employees participated in training sessions and programs. Overall, the number of training and development days amounted to 18,004 (2018: 17,860) and 144,036 hours (2018: 142,845) during the year.

Developing global talent management

Our global talent management process is owned by the Outokumpu Leadership Team. During 2019, succession planning became more systematic, as better use of technology and our common HR platform PeopleDrive enabled the change and provided more efficiency.

Young talents and employees identified as potentials form the foundation of our talent base. We have intensive programs to develop these talent pools along with our graduate programs. Form your Future is an international development program for newly hired graduates that sets the basis for an international career growth in Outokumpu. We have continued building our development programs and Development Center events, where the individual strengths and development areas of each talent are identified. Young talents and high potentials are offered individual development plans for target-oriented and systematic development, and the aim is to assess the potential for positions at a higher level.

As part of the talent review process, Outokumpu builds succession plans for several levels of the organization, and the Excellerate program presents leadership development reviews and management audits. Moreover, our onboarding program has been upgraded and taken into use across the company to ensure a uniform onboarding experience.

Performance review process

Our aim for a high performing organization is enforced through active performance management, processes and systems for the whole organization.

Improving performance management has included access to participation in the performance management process to everyone, both production and administrative employees. Regular performance review discussions enhance role clarity in the organization and form an essential development tool. In 2019, 94% of production employees and 95% of administrative employees in applicable countries had a regular performance development discussion with their respective manager. In those countries where local contracts or regulations do not make it possible to have performance development discussions, Outokumpu follows the local procedures.

To ensure high performance for the whole organization, we are improving efficiency and effectivity through better utilization of technology. We have a common HR platform, PeopleDrive, which enables effective alignment of our HR processes. With our vision to become the best value creator in our industry for our employees, we aim to use this opportunity to create a common employee experience across the whole organization. In addition, development was ongoing in 2019 to enable the mobile use of PeopleDrive. The mobile PeopleDrive will improve user experience, transparency and on time delivery for both managers and employees.

In 2019, Outokumpu continued its efforts to increase alignment and transparency in remuneration topics by means of the wider use of its global HR system as well as updated policies and documentation in several remuneration areas and by providing further training to all managers. Outokumpu's remuneration principles and framework are largely unchanged from the previous year meaning incentive plans remained the same while salary increases were on a moderate market-based levels. The long-term incentive programs continue to focus on emphasizing shareholder value creation and ownership culture and to incentivize the achievement of the 2020 vision.

Establishing leadership excellence

With the extensive Leadership Excellence program, we are bringing leadership skills to a new level. The program was piloted at our locations in Tornio and Kemi and rolled out also in Avesta and Nyby, triggering development and leveraging team performance. Topics that leaders have started to practice during the program include how to create value in leadership roles and what the main responsibilities are in leading people: is the manager leading other individuals or other leaders. Empowerment is linked with the leadership development activities, incorporating the idea of helping others to succeed and gaining results through others. The new mindset generates more role clarity, well-being and tools to focus on adding value.

Focus areas for 2020

We strive to improve our organizational health further, as we want to offer our employees the best work environment. We will continue enhancing leadership, role clarity and empowerment. In 2020, our target is to move to the first quartile among the 1,700 other companies using the Organizational Health Index methodology.

Our professional training program will be aligned according to the future needs and qualifications and, furthermore, educating and increasing the competencies of employees continue as an essential part of capability development. For example, profiling the skillset of a future operator is linked with Digital Manufacturing program at our site in Tornio.

Our academy programs ensure that employees have the skills and knowledge to perform value adding tasks, and for example HR Academy and Sales Academy continue in 2020. To prepare for Digital Manufacturing, a program focused on IT enablement will continue in 2020. In addition, Finance Academy is in preparation for 2020, and the QualityApplied program will be launched for operations and sales to raise awareness of the product quality requirements. In connection to creating the step-change in leadership, we will proceed in rolling out the Leadership Excellence program in 2020.

Our talent management will be developed further, e.g. by ensuring high potentials have the capability to develop into higher-level roles or more advanced work. Our talent pools are continuously reviewed and updated, and they produce the foundation for finding successors within the organization.

As planned, the transition toward the complete implementation of our new HR service model will last until the end of 2020. By that time, we will have implemented common processes, supported by the required technology, and we will have centralized, streamlined, and automated all of the process steps in scope.

We will continue to standardize our processes and improve PeopleDrive, which will allow managers and employees to complete more tasks efficiently by using the self-service options. For example, the execution of succession module in our common HR platform PeopleDrive will underpin our talent review process. In the coming 12 months, we will continue our HR digitalization journey and focus on delivering efficiency, transparency, standardization, and improved user experience.

To increase transparency and understanding, we have prepared a new compensations and benefits guideline to all managers and we will offer training on compensation and salary management processes, consisting of salary policy and incentives, for example. ■

Sustainability in the supply chain

Outokumpu is a part of a global supply chain by producing stainless steel for leading brands in demanding industries around the globe. Our customers expect us to provide a traceable supply chain and, therefore, we have in place stringent requirements on our suppliers, too.

Our customers require assurance that the materials for their applications are produced and procured in an ethical and responsible manner. We are one of the few companies in the stainless steel industry with an integrated production – covering the production from the mining of chromite and ferrochrome production to the melting, hot rolling, cold rolling, and finishing of stainless steel.

Our most important raw material is recycled steel, which originates mainly from Europe and the US where our melt shops are located. The main alloying element, chromium, originates from our own chromium mine that differentiates us from our competitors. Our mine in Kemi, Finland is the only chromium mine in the EU and we produce ferrochrome for all our steel melt shops.

We place stringent requirements on ourselves and our suppliers

As our customers require a lot from us, we place the most stringent requirements on ourselves, and require the same from our suppliers. All suppliers and subcontractors are expected to comply with our Code of Conduct or similar standards and meet our supplier requirements, which require our suppliers to act according to the applicable laws and regulations, maintain a quality management system, sign general terms and conditions, and be able to clearly define, document, and share their supply and production control processes including material traceability.

We assess our new and existing suppliers and if there is evidence of any kind of violation of our requirements, the suppliers are requested to provide an improvement plan and evidence of improvement. If the situation continues without progress, Outokumpu will discontinue purchasing from the supplier. There were no cases of restricting supply in 2019. Outokumpu has declined business opportunities in cases where it has been established that the business partner is not following our Code of Conduct.

Outokumpu monitors its suppliers through self-assessment, screenings, and audits. Most of the suppliers are going through a monthly compliance screening for sanctions. In 2019, 11 suppliers were invited for a self-assessment and 11 suppliers were audited on site. The suppliers audited on-site were partially the same suppliers who participated in the self-assessment. As a result, improvement opportunities and improvement requirements were identified and communicated to the suppliers. The supplier assessment is based on Outokumpu's supplier requirements and focused to evaluate suppliers' social and environmental responsibility, safety and quality management.

Global supply chain

In 2019, Outokumpu had over 9,000 suppliers. Vast majority (93%) of the suppliers are located in Finland, Germany, Sweden, the UK, the US, and Mexico, where Outokumpu has its production units. In those locations where we have significant production sites, the proportion of spending on local suppliers was on level of 80%–90%*. There were no major changes in the

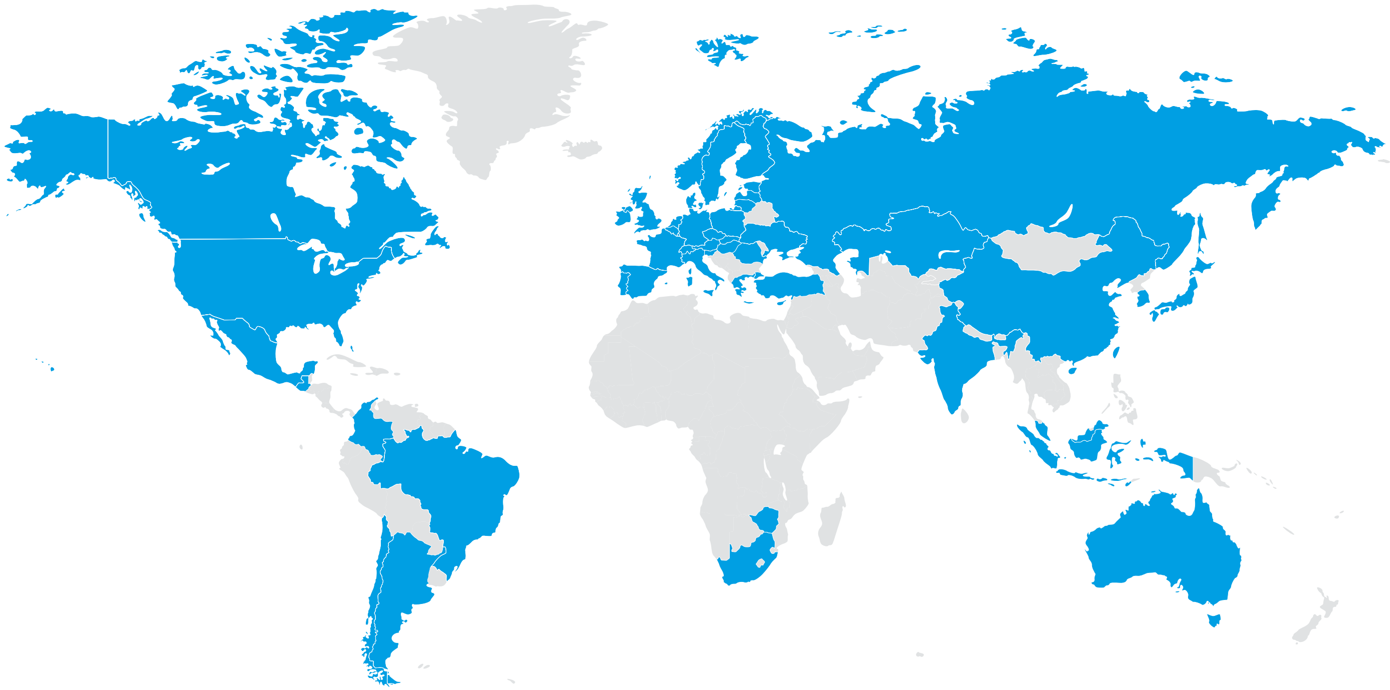
* Figure not comparable with 2018 as definition of local supplier has changed.

supplier base during the year. Some purchase volumes between the raw materials suppliers shifted, but no new major suppliers were introduced.

We take into account the OECD Due Diligence Guidance for Responsible Supply Chain. In 2019, we screened our direct material suppliers on the environmental, social, and governance (ESG) risks in countries of origin. The ESG country risk assessment was based on the following seven criteria: regulatory quality, rule of law and corruption from the World Bank, Environmental Performance Index, conflict minerals, child labor, and forced labor. The top 20 suppliers cover 80% of the total direct material spending. Six suppliers out of this group are located in countries with ESG risks. Those were requested for a self-assessment and all of the requested companies replied. Analysis of self-assessment showed that no ESG risk was taken up in the answers. In 2020, we will start to audit the top 20 suppliers also under ESG criteria.

Environmentally sustainable transportation

Outokumpu's target is to transport as much of our products by rail and ship as possible. Our mills have various programs and targets to make transportation more environmentally friendly. In 2019, the total transport emissions decreased by about 17% mainly due to production decrease. ■



Material and service suppliers

● Outokumpu supplier countries, including the most important supplier countries with purchases of more than 50,000 euros.

Mitigating climate change with stainless steel

Stainless steel helps to mitigate climate change. It is fully recyclable, efficient, and long-lasting. In addition to offering solutions for low carbon society, we work continuously to reduce our carbon profile.

During 2019, we revised environmental product declarations (EPDs) on our main products with life-cycle inventory data, making it possible for our customers to calculate sustainability performance over their products' life cycle. EPDs are standardized and verified externally.

Where do our emissions come from?

The greenhouse gas emissions from Outokumpu operations are limited to CO_2 emissions. These emissions come directly from production (scope 1), indirectly from the use of electricity (scope 2) and mainly from upstream emissions from the use of materials (scope 3).

Direct emissions originate from the carbon content of our raw materials and from the use of fuels. Indirect emissions are caused by the use of electricity. These emissions are followed by market-based emission factors from suppliers of Outokumpu's electricity mix. Electricity emissions are also published as location-based emissions.

Other indirect emissions for steel productions are mainly upstream emissions of material use such as ferroalloys (except ferrochrome which is included in direct and indirect emissions of scope 1 and 2) as well as lime and dolomite, transportation and to a lesser extent from some other scope 3 emissions. At the moment, there are no estimation methods for the complex downstream emissions of stainless steel available. Case studies from consultants indicate $CO_{2\ eq.}$ net savings of steel use from life cycle assessment.

Towards lower company footprint

Our total company carbon footprint, including upstream emissions, is the lowest in the industry according to internal estimates. We continuously strive to make our operations more energy efficient and to maximize the use of low carbon electricity in our operations. Increasing the recycled content of our products and improving resource efficiency are also factors in reaching even lower $CO_{2\ eq.}$ emissions and reducing upstream emissions.

In 2019, the total specific $CO_{2\ eq.}$ emissions were reduced by 13.8% compared to baseline 2014–2016. Scope 3 emissions could be reduced by higher recycling. Ferrochrome production increased and we sold more ferrochrome outside the company compared to 2018. The emissions allocated to sold ferrochrome were not included in the target report for the stainless steel.

In 2019, Outokumpu consumed overall 28,254 TJ of primary fuels and electricity decreasing by 4% due to lower stainless steel production. However, the intensity figure increased by 7% to 10.9 GJ per ton steel due to increased ferrochrome production. See all data on CO_2 emissions

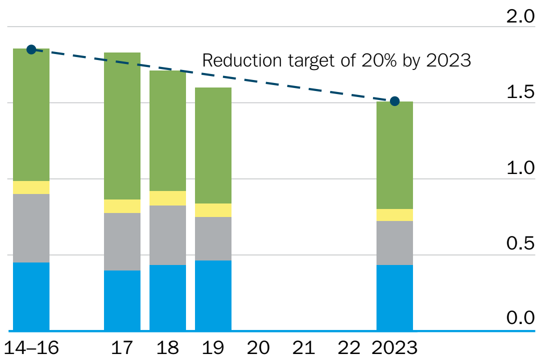
Our climate targets are science-based

Outokumpu is committed to the Science Based Targets initiative. The initiative considers companies' greenhouse gas reduction targets science-based if they are in line with the level of decarbonization required to keep global temperature increase well below 2°C compared to the pre-industrial temperature.

Our target is to reduce scope 1, 2, and 3 greenhouse gas emissions by 20% per tonne of stainless steel by 2023 from a 2014–2016 base-period. The baseline of the three years was chosen to get the most recent baseline after the restructuring of the company and to avoid influence of yearly fluctuations. Emission intensity refers to emissions per tonne of produced steel.

Target for Science Based Target criteria

Outokumpu's $CO_{2\ eq.}$ emission intensity, tonnes of $CO_{2\ eq.}$ per tonne steel



We also follow the 2°C scenario convergence criteria of steel industry's decarbonization approach: to reduce emission intensity to 0.92 t CO_2 per tonne of crude steel by 2050. Specific electricity emissions follow the electricity decarbonization approach, where the specific emission reduction target is 95% by 2050.

In 2019, as a part of the new sustainability strategy, a new working group was created to prepare steps for long-term carbon reduction to achieve carbon neutrality in 2050. Electric arc furnace is the best available technique for stainless steel production. Emission reduction comes from further energy efficiency strain, increasing recycling and transitioning to carbon neutral electricity. For ferrochrome, Outokumpu is conducting research on new low carbon technologies. Our processes are already connected with the lowest $CO_{2\ eq.}$ emissions as we have an integrated site using ferrochrome in a liquid phase and using process gas to replace primary fuels.

Opportunities of a low-carbon society

Climate change is one of the three megatrends driving our business. The life cycle of a stainless steel solution can have a lower climate impact compared to carbon steel, for example. As stainless steel is corrosion resistant and a long-lasting material, it stands out in many applications of renewable energy production such as in high temperature power plants, solar farms, and biofuel plants. This growing market in the transition to a low-carbon society gives Outokumpu the opportunity to increase the revenue.

Emissions trading and fair competition

80% of Outokumpu's all direct emissions fall under the European Union Emissions Trading Scheme (ETS). The total phase allocation of 2012–2020 will be sufficient for the rest of the trading period, although individual plants are in deficit. Total free allocation for 2019 was below emissions.

The ETS is continuing by the third trading period 2013–2020 remaining to receive free emissions allocations according to efficiency-based benchmarks and historical activity. The main risk of the emissions trading system to Outokumpu involves the pass-through costs of allowances to the electricity price, reduction of electricity price compensations and of free allocation. Outokumpu collaborates with industry associations to mitigate the risks.

The next trading phase from 2020–2030 will continue with the general rules. Outokumpu will need to buy allowances and use some surplus allocations available from production decrease in the past and fall in short position as the product benchmark significantly reduces. Electricity and allowance prices are expected to increase. Read about risks related to emissions trading in Key risks section. The EU Emissions Trading Scheme does not take into account the product life span. This is misleading for metal and steel products because they decrease $CO_{2\ eq.}$ emissions during their life span more than their production phase causes. ■

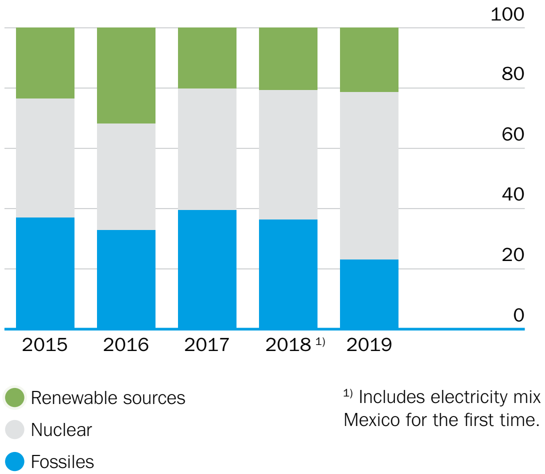
Focus on energy efficiency improvements

Outokumpu's operations are energy intensive. For the recycled steel to melt, it is heated to over 1,400°C. The process requires a high amount of electricity as the best available technique for melting recycled steel is to use electric arc furnaces.

Outokumpu is continuously striving to make its production operations more energy efficient and minimize its environmental impacts. Although the melting of recycled steel and the production of stainless steel consume a lot of energy, stainless steel enables energy efficient solutions from a life-cycle perspective by saving energy during its use phase.

Our target is to improve the energy efficiency of our operations by 1% each year until 2020. In 2019, our energy efficiency was affected by low production volumes. Our improvement of energy efficiency calculated as a sum of different process steps was 6.0% compared to the baseline 2007–2009. This was below our target, but it corresponds to a yearly saving of 0.55 million MWh in 2019.

Origin of electricity, %



1) Includes electricity mix of Mexico for the first time.

Yield optimization improves energy efficiency

The biggest energy-saving potential lies in the optimization of yield. Yield refers to how much sellable product we can make of the metal raw materials inserted in the process. Energy reduction and efficiency plans are included in environmental management systems at all our sites. Over the past years, we have been able to improve our overall energy efficiency by reorganizing production sites, optimizing our internal supply chain and increasing our capacity utilization globally. During 2019, energy efficiency projects and improvements were discussed and reported in an internal working group.

As energy sources, we use natural gas, propane, or some other fuels, such as diesel. Fossil fuels cover about 80% of our total fuel consumption. Outokumpu does not consume renewable fuels in production processes but we utilize our own recovered carbon monoxide process gas with 20% of our total fuel. Process gases and waste heat are also used to heat buildings on sites.

Toward low-carbon electricity

Outokumpu has centralized energy procurement in order to secure sufficient energy supply, to ensure predictable, competitive, and stable energy prices, and to optimize the energy portfolio also on low-carbon electricity.

Outokumpu participates in several programs that promote the use of low-carbon electricity such as wind power, hydropower, combined heat and power as well as nuclear power. For example, the combined heat and power plant in Tornio produces heat for the Tornio site out of recovered process gases, and in Dahlerbrück, Germany, we have our own hydro power plant to generate some 10% of the electricity needed in the production. Outokumpu is a shareholder in a wind power park in Tornio, in a hydro-power plant in Norway and in a new nuclear power plant project in Finland. In 2019, 77% of our electricity sources came from low-carbon (renewable and nuclear) sources (2018: 64%). We succeeded to increase the level of low-carbon electricity as we have allocated higher nuclear power to the Finnish electricity supply. See more details in the data tool.

In 2019, our site in Tornio fully transitioned to use LNG instead of propane in production. During 2019, the use of LNG reduced Tornio site's $CO_{2\ eq.}$ emissions by 4% compared to corresponding propane emissions. Natural gas has already been in use at our sites in Germany, Mexico, the US, and the UK. Compared to propane, LNG has also lower and more stable prices improving our cost-competitiveness. ■

Energy used in operations

Terajoules, TJ	2019	2018	2017
Electricity	**16,167**	17,189	16,325
Carbon monoxide gas	**2,412**	2,275	2,003
Natural gas	**6,983**	4,623	4,241
Propane	**2,024**	4,754	5,016
Diesel, light and heavy fuel oil	**688**	662	580
Energy	**28,254**	29,502	28,164
Energy use in GJ per tonne crude steel	**10.9**	10.1	9.3

Data includes the acquired site in Fagersta, Sweden for July–December 2018.

New LNG terminal inaugurated

The new LNG terminal in Tornio is operated by Manga LNG, a joint venture by Outokumpu, EPV Energy, SSAB Europe, and Skangas. The terminal is the largest LNG terminal in the Nordic countries and the second LNG terminal operating in Finland. Overall, liquefied natural gas is an environmentally friendly fuel that can replace petroleum-based fuels in industry, energy production and heavy transport, and it can help reduce shipping emissions as it meets the Sulphur Directive regulations. Outokumpu's Tornio site's emissions can be reduced by approximately 4% due to transition to LNG.

Operating at the heart of the circular economy

We operate at the core of the circular economy as we use high amounts of recycled materials and at the end of its life-cycle stainless steel is endlessly recyclable without any loss of quality.

In fact, our stainless steel mills are significant recycling facilities, producing new products out of recycled steel, recovering and recycling everything reasonable in our production, and finally selling by-products from the manufacturing process to replace natural resources.

High recycled content

Recycled steel from both stainless and carbon steel is our most important raw material. The steel recycled content according to ISO 14021 was 85%. This includes pre- and post-consumer scrap. Including the use of recycled metal from our waste streams, the recycled content of our products was 89.6% in 2019.

One key factor in reaching such a high level of recycled content is the recovery and recycling of metals from the production processes, e.g. from dust. Dust is either treated on site or by an external facility for recycling in our melt shops.

In addition to metals, other raw materials, such as slag formers, acids, and gases, are needed in the production process although they do not become part of the stainless steel products. Some of these input materials are needed to minimize or prevent emissions to the environment. As far as reasonable, these are also recovered and recycled in the process. For instance, used acids are continuously regenerated for reuse and hydrogen from bright annealing process are recovered in the incineration of the process furnace.

Total waste

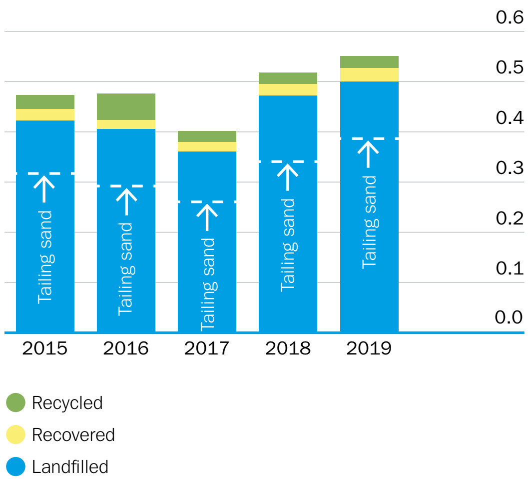
Tonnes	2019	2018	2017
Total non-hazardous waste	**281,646**	356,230	289,502
Recycled	**49,227**	52,736	50,972
Recovery	**17,138**	19,256	11,875
Landfilled	**215,281**	284,239	226,655
Total hazardous waste	**146,765**	163,555	144,621
Recycled	**12,988**	15,414	14,506
Recovery	**53,252**	47,700	41,171
Landfilled	**80,525**	100,442	88,939
Tailing sands	**1,006,590**	991,391	784,585

Aim to reach zero waste to landfill

Our approach to reaching zero waste is twofold: we aim to reduce the total volume of landfill waste from our own operations and increase the proportion of materials sold as by-products.

The biggest waste items at Outokumpu are slag that are not used, tailing sand from the mining operation and sludges, dust and scales from the stainless steel production. While waste is recycled whenever possible in our own production, our production still generates landfill waste. We strive further to reduce this, and our long-term goal is to generate zero landfill waste. In 2019, the total amount of waste from stainless steel production was 0.43 million tonnes and the landfilled waste decreased to 0.3 million tonnes (2018: 0.38) as production decreased.

Total waste development, tonnes per tonne steel



The amount of tailing sands from the mining operation increased in 2019 compared to the previous year, as the production of chrome concentrate increased, and the ore quality changed. 14.5% of waste from stainless steel production was recycled and 16.4% recovered. Other recovered material like lime, bricks, and some sludges were mostly used in our melting shops to substitute virgin additive materials like slag formers. Tailing sand is deposited in the pond of mining area itself.

Total waste development

Turning slag into by-products

Outokumpu sold or used 1.4 million tonnes of slag as the main by-product of operations. Slag is essential material in the steel melting process, and it is made from limestone or other natural minerals.

Outokumpu has developed slag-based mineral products for road construction, refractory, and concrete production, and for water treatment. The use of our slag by-products reduces the amount of waste, saves virgin materials, and leads to lower $CO_{2\ eq.}$ emissions. For example, in road construction, slag use is an environmentally and economically sustainable solution.

In 2019, the use rate (including use, recovery, and recycling) of all slag was 90.6%. The remaining 300,000 tonnes of slag were sent to landfill. The use rate depends on the local market for construction materials and on the acceptance of secondary material instead of virgin materials. ■

New slag furnace in Tornio could improve resource efficiency

In September, Outokumpu announced it is assessing options to build a new slag furnace in Tornio, Finland. The planned unique production facility would produce ferrochrome-nickel (FeCrNi) alloy from slag and side streams primarily from production processes. The slag furnace would enable efficient utilization of various side streams, which would improve resource efficiency of Outokumpu's production significantly. The new slag furnace would be the most energy-efficient ferro-chrome-nickel alloy producer in the world, as energy consumption in the new facility would be 30 percent lower than in the current ferrochrome production processes enabled by the new metallurgical process invented by Outokumpu. Furthermore, the new facility would strengthen Outokumpu's competitiveness in the global ferrochrome market.

Minimizing environmental impacts

We aim to reduce our impact on the environment by proactively developing our production processes, energy and material efficiency, and solutions for the by-products from our operations.

The biggest environmental impacts of stainless steel production are dust emissions into the air, water discharges from production, use of direct and indirect energy, and the waste created in the production process.

Dust emissions at low levels

Steel melting and rolling processes generate dust and scales that are collected, treated and, whenever possible, recycled in our own production. For example, raw material metals (chromium, nickel and molybdenum) are recovered from dust, sludges and scales through specialist recovery plant.

Our dust filtering systems are extremely efficient and remove 99% of the particles. The measured particle emissions from all of our production processes were 266 tonnes in 2019 (388 tonnes). The majority of particles were emitted from the ferrochrome production process at 130 tonnes (313 tonnes). However, emission measurement campaign results in this process include high uncertainty causing remarkable fluctuation in results year by year. The level of dust emissions from the melt shops is well within the limits of environmental permits. No significant further reduction is expected.

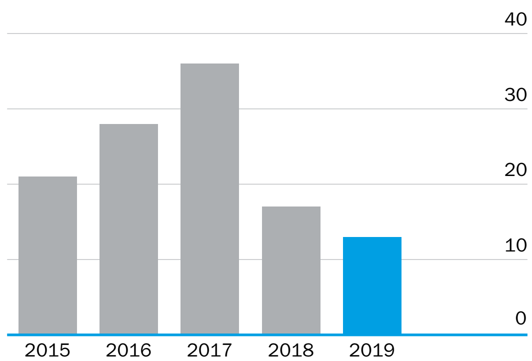
As our main raw material is recycled steel, we take all possible precautionary measures to check the input material for any unwanted content, such as mercury and radioactive contaminated material. In 2019, there were four incidents involving radioactivity. All incidents were dealt in accordance with authority guidance and did not cause exposure. We work together with our suppliers to decrease the amount of unwanted materials in our production processes. All input material, the liquid steel and waste gas of melting process, is controlled regarding radioactive contamination.

Water is reused in production

Water is used in our production process in annealing, pickling, and cooling. The withdrawal of water is metered and rainwater is estimated by average rainfall and the surface of used rainwater. It is treated and recycled as much as possible, and only some is discharged to the municipal wastewater system.

All wastewater is treated in the company's own treatment plants or in municipal water treatment systems before it

Steel melt shop particle emissions, grams/t



is discharged. The main discharges into water are metals and nitrates. The discharge is measured and supervised by authorities. Wastewater treatment depends on the contamination of the wastewater. The water is treated directly in the water circle at the process step and/or before discharge. According to the needs, treatments are oil skimming, neutralization, flocculation, and sedimentation to extract metals and, when necessary, a Cr(VI) reduction process. Nitrate is often treated in the municipal water treatment to reduce discharge. In these cases, the steel allocated discharge cannot be monitored. Water impact is managed by the municipal treatment operators.

Water used in the production is mainly surface water. In 2019, the withdrawal of water increased as a full year reporting of the Swedish site Fagersta is included. Impact of water withdrawal is evaluated at sites where river water is used, and data of the river water is available. The impact was screened by the percentage of withdrawn water compared to the river flow on a yearly base in 2017. All of the sites resulted in no impact on the river and that means the withdrawal was below 5%. In 2019, the assessment was revised for one site and resulted in no impact. In addition, our site in Avesta, Sweden conducted a water impact study on the river. Analysis of results are still ongoing.

Outokumpu operates a cold rolling mill in San Luis Potosí, Mexico, in a dry, arid area, where groundwater is a scarce resource for people. The water withdrawal of this site is 0.5% of Outokumpu's total water withdrawal. Water recycling and treatment at this site are especially ambitious to minimize the groundwater impact.

Water withdrawal and discharges

Million m³	2019	2018	2017
Surface water	**45.4**	44.6	38.2
Municipal water	**1.2**	1.4	1.2
Groundwater	**2.4**	2.5	1.2[1)]
Rainwater	**1.8**	1.2	2.4[1)]
Water withdrawal by source	**50.7**	49.7	43.1
Water discharges by type and destination			
Cooling water out	**13.7**	13.4	12.5
Wastewater out	**22.4**	23.4	20.5
Discharge to surface water	**21.1**	22.2	19.2
Emissions to water			
Metal discharges to water, tonnes	**34**	25	24
Nitrogen in nitrates, tonnes [2)]	**1,046**	1,443	1,308

1) Refined reporting on mining water resulted in change from rainwater to groundwater in 2018.

2) Data restated to give the discharged nitrate. Part of the nitrates are treated in a municipal treatment plant.

Impacts of the mining operation are limited

Outokumpu operates a chrome mine in Kemi, Finland. We are a member of The Finnish Network for Sustainable Mining and Kemi mine is committed to the Finnish sustainability standard for mining.

The environmental impacts of the mine are very limited due to the nature of the process. The minerals are in oxide form and very stable with only minimal amount of sulfur compounds. Chemicals are not used in the beneficiation process, which is based on gravity separation. Kemi mine is almost self-sufficient with water as it recycles water on site and collects rainwater. Underground mine takes drilling water from old open pits (rainwater) and drilling water is also recycled inside the underground mining process. All dewatering from mine is pumped to the closed circuit of the tailings site and concentrator plant on surface level. Furthermore, a significant amount of rain and snow melting waters are collected to the process. Kemi mine is discharging 2,000,000 m³ waters from area whereas the water intake from municipal supply is only 30,000 m³.

During 2018–2021, Kemi mine is carrying out a Deep Mine project to increase the resource efficiency of the mine. The project is about the depth extension and building underground mine infrastructure from 500-level to 1,000-level below surface. Due to the expansion, there has been more use of explosives and quarrying in 2019 than on average. The area of the mine site has not been expanded.

The biggest impact on environment from the mine is nitrates in the discharge water which originate from explosives. However, the amount of nitrates is reduced by natural processes in the internal water recycling system of the mine site. Another environmental aspect is chlorites from underground mine water which originates from natural geological formations. Land use of mining is limited to the existing mining area as mining is underground. Tailing sand is deposited in tailing ponds of the mine area which will be landscaped as forest when full.

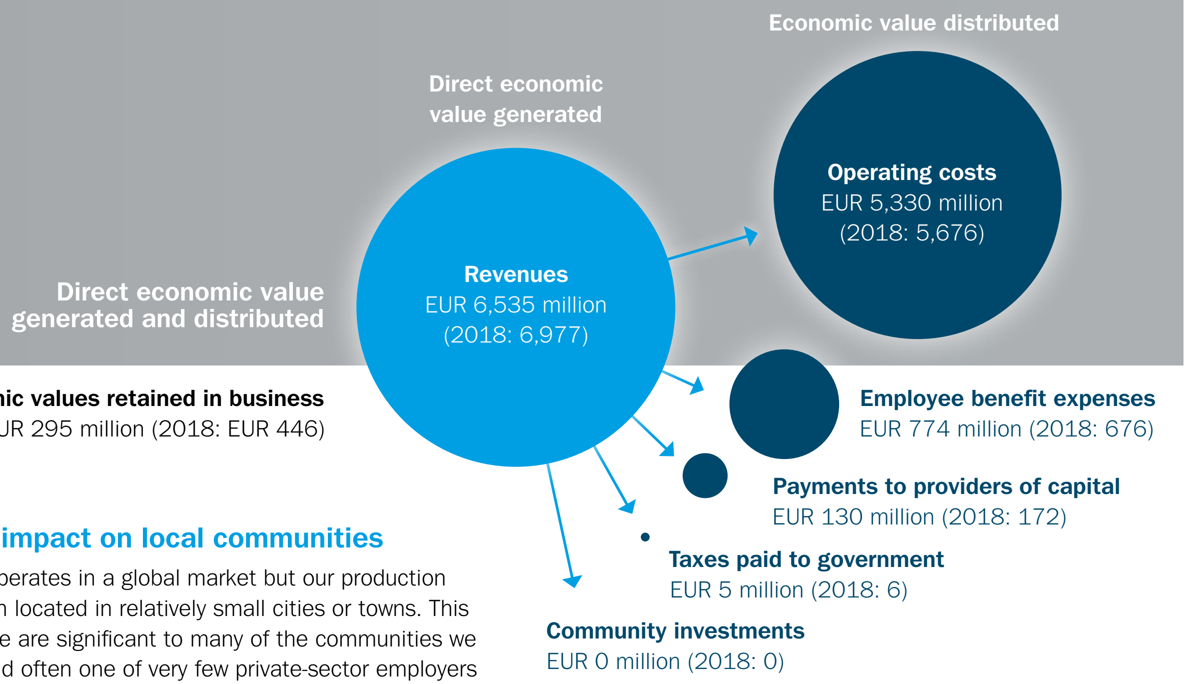
Biodiversity

The production of stainless steel does not occupy or reserve large areas of land or have a significant effect on the biodiversity of the surrounding natural environment. Outokumpu's production sites are not located in sensitive areas. However, Outokumpu has identified areas of high biodiversity value that are owned by the company or adjacent to our sites in Calvert, Alabama in the US, Dahlerbrück, Germany and in Kemi and Tornio, Finland. These sites count for 80% of total owned land. There is no negative impact on the mentioned sensitive areas according to impact studies.

Site	Area in km²	Percentage
Calvert, US	4.69	18.8%
Dahlerbrück, Germany	0.063	0.3%
Kemi, Finland	9.16	36.7%
Tornio, Finland	6	24.0%
Total		**79.7%**

Outokumpu regularly monitors the environment of its production sites. Areas once utilized by production are remediated for further use. More information on biodiversity on our website.

Outokumpu and society



Our operations have impacts on the local, national, and global communities in which we operate. We contribute to the well-being of the communities we operate in through the economic impact and other ways of community involvement.

Economic impact on local communities

Outokumpu operates in a global market but our production sites are often located in relatively small cities or towns. This means that we are significant to many of the communities we operate in, and often one of very few private-sector employers in the area. We recognize that our decisions might have a major impact on communities, our personnel as well as local suppliers and service providers.

Our main areas of direct economic impact are our financial interactions with customers, suppliers, employees, the public sector, investors, and shareholders. See taxes by country in our sustainability data tool.

We maintain continuous cooperation with community officials and representatives, other companies, schools, and universities. Every year, there are numerous local engagement projects at our production sites. Typically, sites have yearly discussions with local community representatives on relevant topics such as employment, the environment, energy, or sponsoring of local events.

Outokumpu also organizes open-door events at its production sites for neighbors and families of our employees. In 2019, we organized Family Day events at several sites gathering thousands of attendees.

As part of their community engagement, some Outokumpu sites also continued their dialogue with environmental NGOs related to ongoing permit processes or other environmental issues. In 2019, Outokumpu initiated an Environmental Impact Assessment in Tornio, Finland, regarding a possible investment in a new slag furnace.

Public sector and sponsoring

In sponsorships, Outokumpu prioritizes connections to stainless steel, sustainability, talent, and education. Locally Outokumpu has sponsored, for example, artworks by donating stainless steel, significant local projects, and sports associations.

During 2019, Outokumpu sponsored over 100 local projects as a part of a social responsibility campaign set up to celebrate the remarkable response rate of 86% in our organizational health survey. Employees were invited to nominate local projects for sponsorships.

We support research related to our field of industry and maintain close cooperation with educational institutes. Apprenticeships have been offered to local colleges and student placements have been made available in the form of one-year programs.

Associations and public affairs

Outokumpu is a signatory to the International Chamber of Commerce (ICC) charter and the United Nations Global Compact. Outokumpu has signed the World Steel Association's Sustainable Development Charter and the ISSF's Sustainable Stainless Charter. In 2019, Outokumpu joined ResponsibleSteel which is a global standard and certification initiative for the steel industry. Our total spending on association memberships is around EUR 2 million.

Outokumpu is a member of several international organizations and provides relevant information to decision-makers and experts relating to the development of the business environment and legislation. The Group also participates in the work of trade organizations. Our public affairs approach is to communicate via industrial associations like Eurofer toward governing bodies and regulators. See the list of our membeships on our website.

Compliance

Outokumpu is strongly committed to legal compliance and an ethical way of conducting business. Outokumpu's Code of Conduct sets out these ethical standards and provides guidelines for a common way of working. The objective of Outokumpu's compliance program is to ensure that Outokumpu and its employees comply with laws, regulations as well as Outokumpu's internal policies and instructions. The program also aims to mitigate compliance risks by a set of preventive and supervisory measures.

Raising awareness of and training on the Code of Conduct and its topics are central elements of the program. Anti-corruption and competition law compliance are important parts of this. Outokumpu's Code of Conduct sets zero tolerance for corrupt practices and requires compliance with applicable competition laws. Outokumpu has also an Anti-Corruption Instruction providing more 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.

Outokumpu regularly communicates on compliance related topics internally and trains employees both through e-learnings and face-to-face trainings. E-learning courses in 2019 included a Knowing Your Business Partner e-learning, a re-issue of the Competition law compliance e-learning and an e-learning on competition law compliance in trade associations. The Knowing Your Business Partner e-learning, mandatory for all administrative employees, achieved a completion rate of 96%. The Competition law compliance e-learning achieved a completion rate of 97% and the e-learning on competition law compliance in trade associations achieved a completion rate of 96%. Furthermore, 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. Compliance efforts in 2019 also included continuous targeted trainings on selected compliance topics.

In 2019, compliance communication was implemented through different channels on various topics, including data protection (EU GDPR), fair competition practices and compliance with internal policies and instructions. In 2019, within the area of trade compliance, Outokumpu developed further its business partner onboarding, screening and monitoring processes, including the risk-based approach to control and mitigate third party risks to ensure compliance with sanctions regulations, anti-money laundering laws and other relevant regulations.

Compliance risks, including risks related to corruption, are assessed and reviewed annually and described in the Corporate Governance statement 2019 and Key risks section in our Annual report. More information regarding our misconduct reporting in our BoD review, Corporate Governance statement and website. ■

Supporting employees in their community activities

As part of our social responsibility, Outokumpu designed a global project to support our employees in their community activities in 2019. To celebrate the remarkable response rate in the previous Organizational Health Index (OHI) survey, Outokumpu sponsored altogether 140 projects, which our employees were actively involved in. The diverse voluntary projects in our neighboring communities included charitable organization projects, community projects, and local voluntary initiatives, e.g. replacing batteries in fire alarms in Torshälla, Sweden, supporting group of volunteers knitting woolen socks for the elderly in Tornio, Finland and partnering with the community to support public art in Mobile, Alabama.

Scope of the report

Outokumpu has published its sustainability review as part of the Annual Report 2019. Sustainability information is also available at www.outokumpu.com/sustainability.

Outokumpu reports on the material developments of continuing sites and changes in 2019 as part of the Annual Report. The reportted data includes all continuing sites. Additional information is published on the company's website. The Annual Report 2019, including Sustainability Review, was published in February 2020.

Outokumpu's report has been prepared in accordance with the GRI Standards: Core option according to the GRI Standards reporting requirements. The materiality assessment from 2018 and continuous communication with stakeholders were the basis for the decision on material topics and relevant disclosures.

Full GRI disclosure

The independent practitioner's assurance report on the limited assurance conclusion is available on page 24 in the Sustainability review. The Financial Statements 2019 have been audited, and the auditor's report is available on page xx in the Review by the Board of Directors and Financial statements section.

Measurement and estimation methods

Economic responsibility

Most figures relating to economic responsibility presented in this report are based on the consolidated financial statements issued by the Outokumpu Group and collected through Outokumpu's internal consolidation system. Financial data has been prepared in accordance with International Financial Reporting Standards (IFRS). Outokumpu's accounting principles for the Group's consolidated financial statements are available in note 2 to the consolidated financial statements.

All financial 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. Using the GRI guidelines as a basis, economic responsibility figures have been calculated as follows:

Direct economic value generated

Direct economic value generated includes all revenues received by Outokumpu during the financial year. The sources of revenue include sales invoiced to customers, net of discounts and indirect taxes, revenues reported as other operating income (including gains from the disposal of Group assets), and revenues reported as financial income, mainly dividend and interest income.

Economic value distributed

Operating costs include the cost of goods and services purchased by Outokumpu during the financial year. Employee benefit expenses include wages and salaries, termination benefits, social security expenses, pension and other post-employment and long-term employee benefits, expenses from share-based payments and other personnel expenses. Taxes paid to the government include income taxes. Deferred taxes are excluded from the figure. Payments to providers of capital include interest costs on debt and other financial expenses during the financial year. Capitalized interest is deducted from this figure. The dividend payout is included in the payments to providers of capital according to the proposal by Outokumpu's Board of Directors.

Community investments consist of donations to and investments in beneficiaries external to the company.

Local suppliers

In this report, vendors are defined as local if they are located in the same country as the Outokumpu location. Significant locations for suppliers are production units that have a melt shop, ie. Avesta, Sweden; Calvert, the US; Sheffield, the UK and Tornio, Finland.

Environmental responsibility

Outokumpu's climate change target is based on science and approved by the Science Based Target initiative. The target includes $CO_{2\ eq.}$ intensity of direct and indirect emissions of electricity and upstream emissions. Emissions are consolidated on production control.

$CO_{2\ eq.}$ emissions of electricity are calculated and monitored by the emissions factor of Outokumpu's electricity mix of 167 kg $CO_{2\ eq.}$/MWh (2018: 239 kg $CO_{2\ eq.}$/MWh), given by the electricity supplier for the used electricity and calculated as weighted average. In addition, the location-based electricity emissions are disclosed. They are calculated by the published country-specific emissions factors of the electricity generation of 2017 or 2018 if available.

$CO_{2\ eq.}$ emissions outside the company (scope 3), except electricity, are covered by more than 96%. They are calculated as follows:

- For alloys: by emissions factors of the life-cycle assessment of relevant association.
- For used gases, lime and dolomite, electrodes and coke: by emissions factors of ISO 14404.
- For upstream emissions of coke and oil: by emissions factors of World Steel Association.
- For internal and product transport: by typical distances and type of transport with the corresponding emissions factors. The coverage of reporting includes all modes of transport.

- For business travel: by estimated driven kilometers with emissions factors for the car, and for flights by $CO_{2\ eq.}$ reports of the flight companies. Rental car emissions are included by the rental car company report.

Upstream transport was assessed on data of environmental product declaration of 2019 but excluded from scope 3 emissions.

The recycled content is calculated as the sum of pre and post consumer scrap related to crude steel production. Additionally, we report on the recycled content including all recycled metals from own treated waste streams entering the melt shop.

Energy efficiency is defined as the sum of specific fuel and electricity energy of all processes calculated as energy consumption compared to the product output of that process. It covers all company productions: ferrochrome, melt shop, hot rolling and cold rolling processes. Used heat values and the consumption of energy are taken from supplier's invoices.

Water withdrawal is measured for surface water, taken from municipal suppliers and estimated for rainwater amount.

Waste is separately reported for mining and stainless production. In mining, amount of non-hazardous tailing sands is reported. For stainless production hazardous and non-hazardous wastes are reported as recycled, recovered and landfilled. Waste treated is counted as landfilled waste.

Social responsibility

Health and safety figures

Health and safety figures reflect the scope of Outokumpu's operations as they were in 2019.

Safety indicators (accidents and preventive safety actions) are expressed per million hours worked (frequency). Safety indicators include Outokumpu employees, persons employed by a third party (contractor) or visitor accidents and preventive safety actions. A workplace accident is the direct result of a work-related activity and it has taken place during working hours at the workplace.

Accident types

- Lost time injury (LTI) is an accident that caused at least one day of sick leave (excluding the day of the injury or accident), as the World Steel Association defines it. One day of sick leave means that the injured person has not been able to return to work on their next scheduled period of working or any future working day if caused by an outcome of the original accident. Lost-day rate is defined as more than one calendar day absence from the day after the accident per million working hours.
- Restricted work injury (RWI) does not cause the individual to be absent, but results in that person being restricted in their capabilities so that they are unable to undertake their normal duties.
- Medically treated injury (MTI) has to be treated by a medical professional (doctor or nurse).
- First aid treated injury (FTI), where the injury did not require medical care and was treated by a person himself/herself or by first aid trained colleague.
- Total recordable injury (TRI) includes fatalities, LTIs, RWIs and MTIs, but FTIs are excluded.
- All workplace accidents include total recordable injuries (TRI) and first aid treated injuries (FTI)

Proactive safety actions

Hazards refer to events, situations or actions that could have led to an accident, but where no injury occurred. Safety behavior observations (SBOs) are safety-based discussions between an observer and the person being observed. Other preventive safety action includes proactive measures.

Sick-leave hours and absentee rate

Sick-leave hours reported are total sick leave hours during a reporting period. Reporting units provide data on absence due to illness, injury and occupational diseases on a monthly basis. The absentee rate (%) includes the actual absentee hours lost expressed as a percentage of total hours scheduled.

Total personnel costs

This figure includes wages, salaries, bonuses, social costs or other personnel expenses, as well as fringe benefits paid and/or accrued during the reporting period.

Training costs

Training costs include external training-related expenses such as participation fees. Wages, salaries and daily allowances for participants in training activities are not included, but the salaries of internal trainers are included.

Training days per employee

The number of days spent by an employee in training when each training day is counted as lasting eight hours.

Bonuses

A bonus is an additional payment for good performance. These figures are reported without social costs or fringe benefits.

Personnel figures

Rates are calculated using the total employee numbers at the end of the reporting period. The calculations follow the requirements of GRI Standards. The following calculation has been applied e.g.

Hiring rate = New Hires / total number of permanent employees by year-end

Average turnover rate = (Turnover + New Hires) / (total number of permanent employees by year-end × 2)

Days lost due to strikes

The number of days lost due to strikes is calculated by multiplying the number of Outokumpu employees who have been on strike by the number of scheduled working days lost. The day on which a strike starts is included. ■

Independent Practitioner's Assurance Report

To the Management of Outokumpu Oyj

We have been engaged by the Management of Outokumpu Oyj (hereinafter also the Company) to perform a limited assurance engagement on selected sustainability disclosures for the reporting period 1 January to 31 December 2019, disclosed in Outokumpu Oyj's Sustainability Review 2019 and in Outokumpu Oyj's online sustainability tool. In terms of the Company's GRI Standards reporting and GRI Standards Content Index, the scope of the assurance has covered economic, social and environmental sustainability disclosures listed within the Topic-Specific Disclosures as well as General Disclosures 102-8 and 102-41 (hereinafter Sustainability Information).

Management's responsibility

The Management of Outokumpu Oyj is responsible for preparing the Sustainability Information in accordance with the Reporting criteria as set out in the Company's reporting instructions and the GRI Sustainability Reporting Standards of the Global Reporting Initiative. The Management of Outokumpu Oyj is also responsible for such internal control as the management determines is necessary to enable the preparation of the Sustainability Information that is free from material misstatement, whether due to fraud or error.

Practitioner's independence and quality control

We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

PricewaterhouseCoopers Oy applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Practitioner's responsibility

Our responsibility is to express a limited assurance conclusion on the Sustainability Information based on the procedures we have performed and the evidence we have obtained. Our assurance report has been prepared in accordance with the terms of our engagement. We do not accept, or assume responsibility to anyone else, except to Outokumpu Oyj for our work, for this report, or for the conclusions that we have reached.

We conducted our limited assurance engagement in accordance with the International Standard on Assurance Engagements (ISAE) 3000 "Assurance Engagements Other than Audits or Reviews of Historical Financial Information". That standard requires that we plan and perform the engagement to obtain limited assurance about whether the Sustainability Information is free from material misstatement.

In a limited assurance engagement the evidence-gathering procedures are more limited than for a reasonable assurance engagement, and therefore less assurance is obtained than in a reasonable assurance engagement. An assurance engagement involves performing procedures to obtain evidence about the amounts and other disclosures in the Sustainability Information. The procedures selected depend on the practitioner's judgement, including an assessment of the risks of material misstatement of the Sustainability Information.

Our work consisted of, amongst others, the following procedures:

- Interviewing senior management of the Company.
- Visiting the Company's Head Office as well as one site in Finland.
- Conducting two video interviews with sites in the United Kingdom and in the United States of America.
- Interviewing employees responsible for collecting and reporting the Sustainability Information at the Group level and at the site level where our site visits and video interview were conducted.
- Assessing how Group employees apply the Company's reporting instructions and procedures.
- Testing the accuracy and completeness of the information from original documents and systems on a sample basis.
- Testing the consolidation of information and performing recalculations on a sample basis.

Limited assurance conclusion

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that Outokumpu Oyj's Sustainability Information for the reporting period ended 31 December 2019 is not properly prepared, in all material respects, in accordance with the Reporting criteria.

When reading our assurance report, the inherent limitations to the accuracy and completeness of sustainability information should be taken into consideration.

Helsinki, 24 February 2020

PricewaterhouseCoopers Oy

Sirpa Juutinen	Jussi Nokkala
Partner Sustainability & Climate Change	Director Sustainability & Climate Change

Review by the Board of Directors and Financial statements

Download the Review by the Board of Directors and Financial statements as PDF

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.

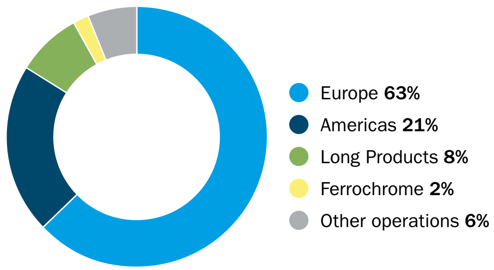
Sales

€ 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

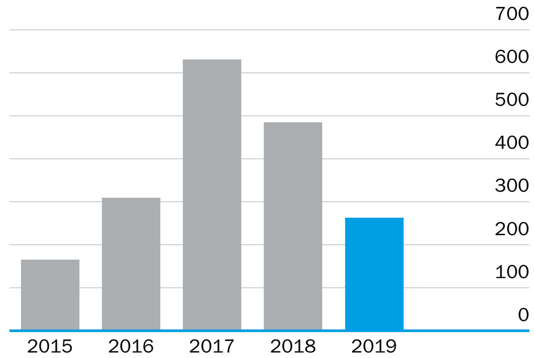
Adjusted EBITDA decreased to EUR 263 million in 2019 compared to EUR 485 million in 2018. The impact from lower stainless steel deliveries was partly offset by product mix which was significantly better in 2019 compared to 2018 for both business areas Europe and Americas. Business area Ferrochrome's 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

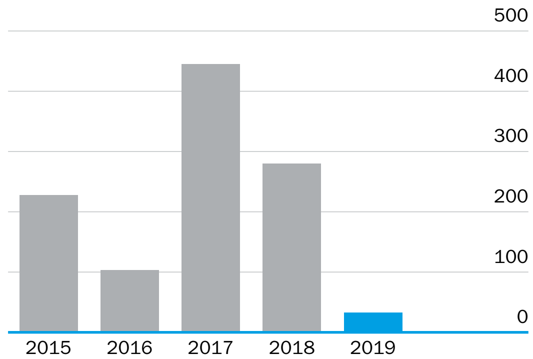
Sales, € 6,403 million



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.

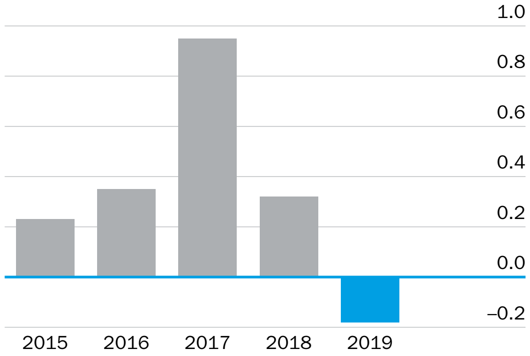
Net financial expenses were EUR 80 million in 2019 (EUR 107 million) and interest expenses were EUR 76 million (EUR 70 million). Cash and cash equivalents were at EUR 325 million at the end of 2019 (EUR 68 million) and the total liquidity reserves were EUR 1.0 billion (EUR 0.7 billion). In addition to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

Key financial indicators on financial position

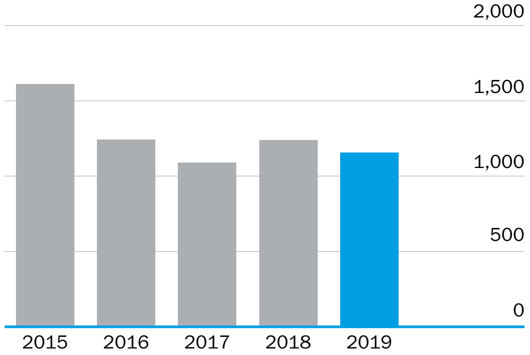
€ million	2019	2018	2017
Net debt			
Non-current debt	**1,053**	798	698
Current debt	**427**	511	505
Cash and cash equivalents	**325**	68	112
Net debt	**1,155**	1,241	1,091
Shareholders' equity	**2,562**	2,750	2,721
Return on equity, %	**–2.8**	4.8	15.4
Debt-to-equity ratio, %	**45.1**	45.1	40.1
Equity-to-assets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

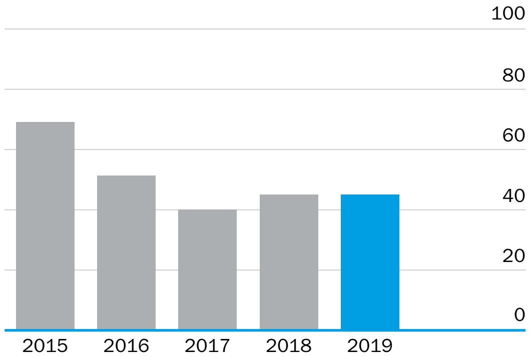
Earnings per share, €



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.

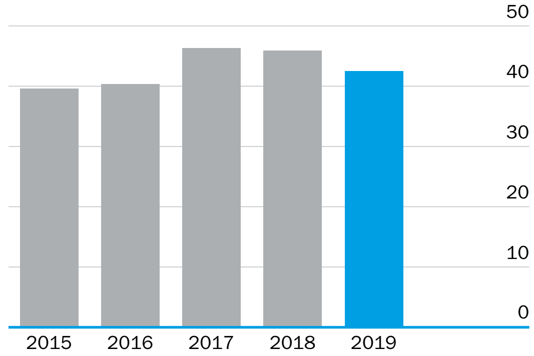
Ferrochrome's sales amounted to EUR 461 million in 2019 compared to EUR 542 million in 2018. Adjusted EBITDA amounted to EUR 96 million (EUR 210 million). Ferrochrome operations were stable with a record-high production of 505,000 tonnes in 2019 (497,000 tonnes), and deliveries were also higher, but 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

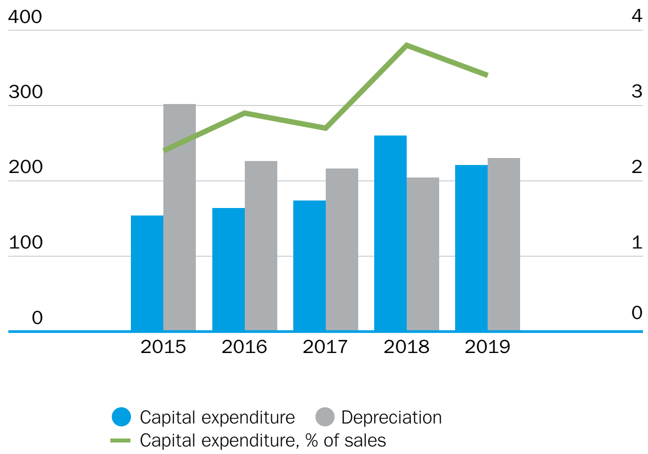
Outokumpu is a leading global producer of stainless steel with world-class production assets in its key markets in Europe and the Americas, and a global sales and service network close to its international customers. Stainless steel is a significant contributor to building a sustainable world. Stainless 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.

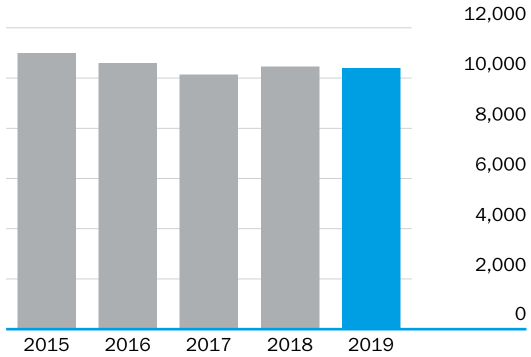
In 2019, CO_2 intensity reduced by about 13.8% from baseline period 2014–2016 and reached 72% of the targeted reduction by 2023. Landfilled waste decreased as production also decreased.

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.

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).

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

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.

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

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

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

Capital expenditure

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

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.

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

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

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.

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.

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

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.

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

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 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

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

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

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.

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.

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

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.

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

€ 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.

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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.

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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.

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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 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).

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

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.

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

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.

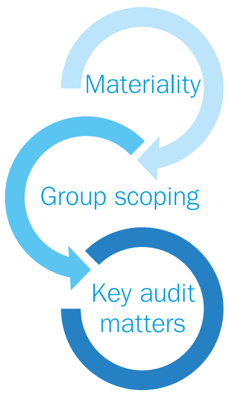
Independence

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)

Governance 2019

Outokumpu's Corporate Governance statement includes information on the Group's governance principles as well as remuneration and risks.

Download the Corporate Governance as PDF

outokumpu

Corporate Governance Statement 2019

Regulatory and structural framework

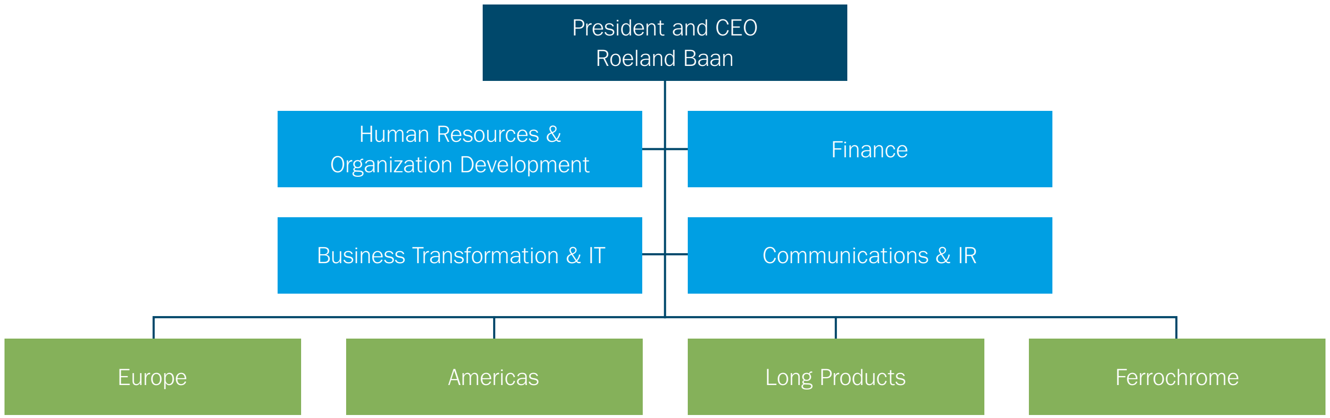
Outokumpu Oyj, the Group's parent company, is a public limited liability company, listed on Nasdaq Helsinki and incorporated and domiciled in Finland. In its corporate governance and management, Outokumpu Oyj complies with the laws and regulations applicable to Finnish public companies, the company's Articles of Association and the Corporate Governance Policy approved by the company's Board of Directors.

Outokumpu Oyj follows the Finnish Corporate Governance Code, effective as of January 1, 2020. The Finnish Corporate Governance Code is issued by the Finnish Securities Market Association and adopted by Nasdaq Helsinki.

The governing bodies of the parent company Outokumpu Oyj, i.e. the General Meeting of Shareholders, the Board of Directors, and the President and Chief Executive Officer (CEO), have the ultimate responsibility for the management and operations of the Outokumpu Group ("the Group"). The Outokumpu Leadership Team members report to the CEO and support and assist the CEO in the efficient management of the Group's operations. The latest Corporate Governance Statement and other updated corporate governance information can be found on the Group's Corporate Governance website.

The General Meeting of Shareholders convenes at least once a year. Under the Finnish Companies Act, certain important decisions such as the amendments to the Articles of Association, approval of financial statements, increases or decreases of share capital, decisions on dividends, and election of the Board of Directors and auditors, fall within the exclusive domain of the General Meeting of Shareholders.

Organization structure



Composition and operations of the Board of Directors December 31, 2019

Chairman of the Board of Directors

Kari Jordan

Chairman of the Remuneration Committee

b. 1956, Finnish citizen
M.Sc. (Econ.), Vuorineuvos (Finnish honorary title)
Outokumpu Board member 2018–
Chairman of the Board 2018–
Chairman of the Remuneration Committee

Work experience
CEO: Metsäliitto Cooperative 2004–2017
President and CEO: Metsä Group 2006–2018
Chairman, Metsä Board Corporation 2005–2018
Chairman, Metsä Fibre Oy 2006–2017
Chairman, Metsä Tissue Corporation 2004–2017

Positions of trust
Vice Chairman of the Board of Directors: Nordea Bank Abp 2019–
Vice Chairman of the Board: Nokian Tyres Plc 2018–
Chairman of the Supervisory Board: Varma Mutual Pension Insurance Company 2015–2019
Chairman of the Board: Finland Chamber of Commerce 2012–2016
Member of the Board (2005–2017), Vice Chairman of the Board (2005–2008, 2014–2017) and Chairman of the Board (2009–2011): Finnish Forest Industries Federation
Member of the Board (2005–2016) and Vice Chairman of the Board (2009–2011, 2013–2014): Confederation of Finnish Industries (EK)

Independent of the company and its significant shareholders.

Vice Chairman of the Board 2019

Heikki Malinen

Member of the Remuneration Committee

b. 1962, Finnish citizen
M.Sc. (Econ.), MBA (Harvard)
Outokumpu Board member 2012–
Vice Chairman of the Board 2019–
Member of the Remuneration Committee

Work experience
President and CEO: Posti Group Corporation (formerly Itella Corporation) 2012–2019
President and CEO: Pöyry PLC 2008–2012
Executive Vice President, Strategy, member of the UPM Executive Team:
UPM-Kymmene Corporation, 2006–2008

Positions of trust
Chairman: Realia Group 2017–
Vice Chairman 2016–2018 and Board member: Service Sector Employers PALTA 2013–2019
Board member: East Office of Finnish Industries 2012–2019

Independent of the company and its significant shareholders.

Kati ter Horst

Member of the Audit Committee

b. 1968, Finnish citizen
M.Sc. (Marketing), MBA (International Business)
Outokumpu Board member 2016–
Member of the Audit Committee

Work experience
Executive Vice President, Head of Stora Enso Paper, member of the Group Leadership team 2014–
Senior Vice President, Paper Sales, Printing and Living: Stora Enso 2013–2014
Senior Vice President, Office Paper Sales, Printing and Reading: Stora Enso 2012–2013

Positions of trust
Board member: Climate Leadership Coalition 2019–
Vice Chairman (2019–) and board member: EURO-GRAPH asbl 2017–
Board member: Finnish Forest Industries Federation 2015–

Independent of the company and its significant shareholders.

Eeva Sipilä

Chairman of the Audit Committee

b. 1973, Finnish citizen
M.Sc. (Econ.), CEFA
Outokumpu Board member 2017–
Chairman of the Audit Committee

Work experience
Chief Financial Officer and Deputy to the CEO: Metso Corporation 2016–
Executive Vice President and Chief Financial Officer: Cargotec Corporation 2008–2016
Senior Vice President, Investor Relations and Communications: Cargotec Corporation 2005–2008

Independent of the company and its significant shareholders.

Vesa-Pekka Takala

Member of the Audit Committee

b. 1966, Finnish citizen
M.Sc. (Econ.)
Outokumpu Board member 2019–
Member of the Audit Committee

Work experience
Deputy Managing Director: Metsäliitto Cooperative 2017–
Chief Financial Officer (CFO): Metsä Group 2010–
Chief Financial Officer (CFO) and Substitute to CEO, Member of the Group Executive Committee:
Outotec Oyj 2009–2010

Positions of trust
Board member: Metsä Tissue Oy 2018–
Board member: Metsä Spring Oy 2018–
Chairman of the Board: Metsä Group Treasury Oy 2013–
Board member, the Economy and Tax Committee: Finnish Forest Industries 2017–
Member of the Delegation: the Helsinki School of Economics Foundation 2014–

Independent of the company and its significant shareholders.

Pierre Vareille

Member of the Remuneration Committee

b. 1957, French citizen
Knight of the Legion of Honour in July 2003
M.Sc. (Ecole Centrale Paris), BA (Econ.) (Sorbonne University), Degree in Controlling and Finance (Institut de Contrôle de Gestion)
Outokumpu Board member 2018–
Member of the Remuneration Committee

Work experience
Chairman and CEO 2012–2013 and CEO 2013–2016: Constellium
Chairman of the Board and CEO: FCI SA 2008–2012
Chief Operating Officer: FCI SA 2007–2008

Positions of trust
Chairman of the Board: Société Bic SA 2018–
Board member 2015– and member of the Audit Committee (2018–2019) and the Nomination and Compensation Committee 2019-: Verallia
Founder and Co-President: The Vareille Foundation 2014–
Member of the Strategic Committee: CentraleSupelec 2008–2019

Independent of the company and its significant shareholders.

Julia Woodhouse

Member of the Audit Committee

b. 1958, British citizen
BA (hons) History
Outokumpu Board member 2019–
Member of the Audit Committee

Work experience
Director, Global Chassis Purchasing, Ford Motor Company 2016–2018
Director, Global Power Train Components Purchasing, Ford Motor Company 2012–2016
Director, Ford of Europe Program Purchasing, Ford Motor Company 2005–2011

Positions of trust
Member of the Advisory Board: Nexcel, a BP/Castrol automotive technology start-up company 2019–

Independent of the company and its significant shareholders.

Additional information on work experience and positions of trust to be found on the Company's website

The Board assesses the independence of the Board members and records the outcome in the Board minutes. All members of the Board of Directors on December 31, 2019 were independent of the company and its significant shareholders.

Outokumpu shares and share-based rights (parent and subsidiaries) owned by each director and their controlled corporations on December 31, 2019.

Board member	Number of shares
Kari Jordan	122,474
Heikki Malinen	45,459
Kati ter Horst	23,375
Eeva Sipilä	24,823
Vesa-Pekka Takala	9,225
Pierre Vareille	34,206
Julia Woodhouse	9,225
Total	268,787

Operations and appointment of the Board of Directors

The general objective of the Board of Directors is to direct Outokumpu's business and strategies in a manner that secures a significant and sustained increase in the value of the company for its shareholders. To this end, the members of the Board are expected to act as a resource and to offer their expertise and experience for the benefit of the company. The tasks and responsibilities of the company's Board of Directors are determined on the basis of the Finnish Companies Act as well as other applicable legislation.

The Board of Directors has general authority to decide and act in all matters not reserved for other corporate governance bodies by law or under the provisions of the company's Articles of Association. The general task of the Board of Directors is to organize and oversee the company's management and operations and it has the duty at all times to act in the best interest of the company.

The Board of Directors has established the rules of procedure that define its tasks and operating principles in the Charter of the Board of Directors. The main duties of the Board of Directors are as follows:

With respect to directing the company's business and strategies:

- Decide on Outokumpu's strategy and the long-term targets of the Outokumpu Group (the "Group") and monitor their implementation;
- Decide on annual business plans and monitor their implementation;
- Decide on annual limits for the Group's capital expenditure, monitor related implementation, review performance and decide on changes;
- Decide on any major and strategically significant investments and monitor their implementation;
- Decide on any major and strategically important business acquisitions and divestments and monitor their implementation;
- Decide on any significant financing arrangements;
- Decide on any other commitments by any of the Group companies that are out of the ordinary either in terms of value or nature, taking into account the size, structure, and field of the Group's operations.

With respect to organizing the company's management and operations:

- Nominate and dismiss the CEO and his/her deputy, if any, monitor his/her performance and to decide on the CEO's terms of service, including incentive schemes, on the basis of a proposal made by the Board's Remuneration Committee;
- Nominate and dismiss the members of the Outokumpu Leadership Team and to define their areas of responsibility based on a proposal by the Board's Remuneration Committee;

- Monitor the adequacy and allocation of the Group's top management resources;
- Decide on any significant changes to the Group's business organization;
- Decide on the Group's ethical values and modes of activity;
- Ensure that policies outlining the principles of corporate governance are in place;
- Ensure that policies outlining the principles of managing the company's insider issues are being observed;
- Ensure that the company has guidelines for any other matters that the Board deems necessary and that fall within the scope of the Board's duties and authority.

With respect to the preparation of matters to be resolved by the General Meetings of Shareholders:

- Establish a dividend policy and issue a proposal on dividend distribution;
- Make a proposal to the Annual General Meeting concerning the election of an external auditor and auditing fees;
- Make other proposals to General Meetings of Shareholders.

With respect to financial control and risk management:

- Discuss and approve interim reports, statements, and annual accounts;
- Monitor significant risks related to the Group's operations and the management of such risks;
- Ensure that adequate policies for risk management are in place;
- Monitor financial position, liquidity, and debt maturity structure;
- Monitor and assess how agreements and other legal acts between the company and its related parties meet the requirements of the ordinary course of business and arm's length terms;
- Monitor the Group's control environment;
- Reassess its activities on a regular basis.

The Board of Directors shall have a quorum when more than half of its elected members are present. A decision by the Board of Directors shall be the opinion supported by more than half of the members present at a meeting. In the event of a tie, the Chairman shall have the casting vote.

The Annual General Meeting elects the Chairman, the Vice Chairman and the other members of the Board of Directors for a term expiring at the close of the following Annual General Meeting. The entire Board of Directors is, therefore, elected at each Annual General Meeting. A Board member may be removed from office at any time by a resolution passed by a General Meeting of Shareholders. Proposals to the Annual General Meeting concerning the election of Board members that have been made known to the Board of Directors prior to the Annual General Meeting will be made public if such a proposal is supported by shareholders holding a minimum of 10% of all the company's shares and voting rights and the person being proposed has consented to such nomination.

Under the company's Articles of Association, the Board shall have a minimum of five and a maximum of twelve members. A Board consisting of 7 members was elected at the 2019 Annual General Meeting. The Board of Directors meets at least five times each year. In 2019, the Board of Directors had 10 meetings, and the average attendance rate was 100%.

Breakdown of individual attendance at Board meetings

10 meetings in 2019	Attendance
Kari Jordan	10/10
Heikki Malinen	10/10
Olli Vaartimo until March 27, 2019	1/1
Kati ter Horst	10/10
Eeva Sipilä	10/10
Vesa-Pekka Takala, from March 27, 2019	9/9
Pierre Vareille	10/10
Julia Woodhouse, from March 27, 2019	9/9

Diversity principles of the Board of Directors

Diversity of the Board of Directors supports the vision and long-term objectives of the Group. Outokumpu recognizes the importance of a diverse Board, taking age, educational and international background, professional expertise, experience from relevant industrial sectors as well as a well-balanced gender representation into account. The Shareholders' Nomination Board shall take the Diversity Principles into consideration when preparing its proposals to the Annual General Meeting and the progress in achieving set objectives shall be disclosed annually. The objective of a well-balanced Board structure in terms of gender representation was achieved in 2019.

The review by the Board of Directors is found on p. 2 in the section Review by the Board of Directors and Financial statements.

Composition and operations of the Board committees

The Board of Directors has set up two permanent committees consisting of Board members and has confirmed the rules of procedure for these committees. Both committees report to the Board of Directors.

Audit Committee

The Audit Committee consists of a minimum of three Board members. At least one of the Committee members shall have an appropriate education and special expertise in corporate finance, accounting or auditing. The rules of procedure for and responsibilities of the Audit Committee have been established in the Charter of the Audit Committee approved by the Board of Directors. The task of the Audit Committee is, in greater detail than is possible for the Board as a whole, to deal with matters relating to financial reports and statements, the company's financial position, auditing work, fees paid to the auditors, internal controls and compliance matters, the scope of internal and external audits, the Group's tax position, the Group's financial policies and other procedures for managing Group risks. In addition, the Audit Committee prepares a recommendation to the Board of Directors concerning the election of an external auditor and auditing fees at a General Meeting. The Audit Committee met five times during 2019, and the average attendance rate was 100%.

Breakdown of individual attendance at Audit Committee meetings

5 meetings in 2019	Attendance
Olli Vaartimo, until March 27, 2019	1/1
Eeva Sipilä	5/5
Kati ter Horst	5/5
Vesa-Pekka Takala, from March 27, 2019	4/4
Julia Woodhouse, from March 27, 2019	4/4

Remuneration Committee

The Remuneration Committee consists of the Chairman of the Board and a minimum of two additional Board members. The rules of procedure for and responsibilities of the Remuneration Committee have been established in the Remuneration Committee Charter approved by the Board of Directors. The tasks of the Remuneration Committee are to discuss and prepare recommendations to the Board regarding new nominations in and compensation principles applicable to the Group's executive and senior management. The Board of Directors has authorized the Remuneration Committee to determine the terms of service and benefits enjoyed by the Outokumpu Leadership Team members other than the company's CEO. The Remuneration Committee prepares the remuneration policy and the remuneration report for the company's governing bodies. The Remuneration Committee met 8 times during 2019, and the average attendance rate was 100%.

Breakdown of individual attendance at Remuneration Committee meetings

8 meetings in 2019	Attendance
Kari Jordan	8/8
Heikki Malinen	8/8
Pierre Vareille	8/8

Temporary Working groups

To handle specific tasks, the Board of Directors can also set up temporary working groups consisting of Board members. These working groups report to the Board of Directors. No temporary working groups were set up in 2019.

Shareholders' Nomination Board

Outokumpu's Annual General Meeting in 2012 resolved to establish a Shareholders' Nomination Board to annually prepare proposals to the Annual General Meeting for the election, composition, and compensation of the members of the Board of Directors.

The Annual General Meeting has adopted a Charter of the Shareholders' Nomination Board, last revised in 2019, which regulates the nomination and composition, and defines the tasks and duties of the Nomination Board.

The Nomination Board consists of five members. Four of the members represent the Company's four largest shareholders and the Chairman of the Company's Board of Directors, in his capacity as an expert member, acts as the fifth member of the Nomination Board.

The representatives of the four largest shareholders of the Company are annually appointed to the Nomination Board. The largest shareholders of the Company are determined on the basis of the shareholders' register of the Company and the ownership situation at the closing of Nasdaq Helsinki's last trading day in August. The Company's shareholders' register only consists of shareholders who are directly registered in the Finnish book-entry system. Accordingly, to be eligible for membership in the Nomination Board, a nominee-registered shareholder needs to register the respective shareholding directly in the Finnish book-entry system for at least the said date.

In case a shareholder, who under the Finnish Securities Markets Act has an obligation to announce changes in its shareholdings and to sum up its holdings together with the holdings of certain other parties when doing so (flagging obligation), presents no later than on August 31 a written request to that effect to the Chairman of the Company's Board of Directors, then the holdings of such shareholder and other parties shall be summed up for the purposes of determining the holdings of the largest shareholders.

In case two or more shareholders own an equal number of shares and, as a consequence, the four largest shareholders cannot be determined, the status of these shareholders among the four largest shareholders shall be resolved by drawing lots.

The Chairman of the Board of Directors shall request the four largest shareholders of the Company each to nominate one member to the Nomination Board. Should a shareholder wish not to use its nomination right, the right transfers to the next largest shareholder who would otherwise not have a nomination right.

The term of office of the members of the Nomination Board expires annually when a new Nomination Board has been appointed. A shareholder may change its representative in the Nomination Board mid-term, should there be a weighty cause for such a change.

Decisions of the Nomination Board shall be unanimous. If unanimity cannot be reached, members of the Nomination Board shall present their own proposals to the Annual General Meeting individually or jointly with other members of the Nomination Board.

Shareholders with the right to appoint representatives to the Nomination Board in 2019 were Solidium Oy, Varma Mutual Pension Insurance Company, the Social Insurance Institution of Finland and Ilmarinen Mutual Pension Insurance Company. These shareholders nominated the following individuals as their representatives in the Nomination Board: Antti Mäkinen, Managing Director of Solidium Oy; Pekka Pajamo, CFO of Varma Mutual Pension Insurance Company; Jouko Pölönen, President and CEO of Ilmarinen Mutual Pension Insurance Company and Tuula Korhonen, Investment Manager of the Finnish Social Insurance Institution. Antti Mäkinen was elected Chairman of the Nomination Board, and Kari Jordan, Chairman of the Outokumpu Board of Directors, served as an expert member. The Nomination Board convened twice, and the attendance rate was 100%. The Nomination Board has submitted its proposals regarding the Board composition and director compensation to Outokumpu's Board of Directors, and the Board has incorporated these proposals into the notice convening the Outokumpu 2020 Annual General Meeting of Shareholders.

Executive Management

Biographical details of the CEO and the Leadership Team on December 31, 2019

Roeland Baan

President and Chief Executive Officer

b. 1957, Dutch citizen
M.Sc. (Econ.)
President and Chief Executive Officer 2016–
Chairman of the Outokumpu Leadership Team 2016–
Responsibility: Group management; Business area Ferrochrome; legal, corporate affairs and compliance; safety; health; and internal audit
Employed by Outokumpu Group since 2016

Work experience
President – Business area Europe: Outokumpu Oyj 2016–2017
Executive Vice President and CEO: Aleris Europe and Asia 2013–2015
Executive Vice President and CEO, Global Rolled and Extruded Products: Aleris 2011–2013
Executive Vice President and CEO, Europe and Asia: Aleris 2008–2011

Positions of trust
Board member: Norsk Hydro ASA 2019–2020
Supervisory Board member: SBM Offshore N.V. 2018–
Board member 2016– and Vice Chairman 2017–: International Stainless Steel Forum
Board member: World Steel Association 2016–
Board member 2015– and member of the Executive Committee 2018–: Eurofer

Pia Aaltonen-Forsell

Chief Financial Officer

b. 1974, Finnish citizen
M.Soc.Sc. (Econ.)
Chief Financial Officer 2019–
Member of the Outokumpu Leadership Team 2019–
Responsibility: Financial and business controlling and analysis; taxation; treasury; metal and risk management; global business services
Employed by Outokumpu Group since 2019

Work experience
Executive Vice President & CFO: Ahlström-Munksjö 2018
Chief Financial Officer: Munksjö 2015–2017
Chief Financial Officer: Vacon 2013–2015

Positions of trust
Board member (2017–) and Audit Committee Chair (2018–): Uponor

Maciej Gwozdz

President – Business area Europe

b. 1975, Polish citizen
Executive MBA, M.Sc. (Econ.)
President – Business area Europe 2018–
Member of the Outokumpu Leadership Team 2016–
Responsibility: Business area Europe; Global R&D and Operational Excellence
Employed by Outokumpu Group since 2016

Work experience
Executive Vice President – Operations, Europe: Outokumpu Oyj 2016–2017
Senior Vice President, Steering Europe: ZF Friedrichshafen AG 2016
Vice President, Steering Europe: TRW Automotive/ZF Group 2013–2016

Positions of trust
Board member: Oras Group 2019–

Olli-Matti Saksi

President – Americas

b. 1967, Finnish citizen
M.Sc. (Eng.)
President – Americas 2019–
Member of the Outokumpu Leadership Team 2014–
Responsibility: Business area Americas
Employed by Outokumpu Group since 2013

Work experience
Chief Commercial Officer, Outokumpu Oyj 2018–2019
Executive Vice President – Sales, Europe, Outokumpu Oyj 2016–2019
President – EMEA: Outokumpu Oyj 2014–2016

Kari Tuutti

President – Business area Long Products & Group Sustainability

b. 1970, Finnish citizen
M.Sc. (Econ.)
President – Business area Long Products 2014– & Group Sustainability 2019–
Member of the Outokumpu Leadership Team 2012–
Responsibility: Business area Long Products; Group Sustainability
Employed by Outokumpu Group since 2011

Work experience
Executive Vice President – Marketing, Communications and Sustainability: Outokumpu Oyj 2012–2014
Senior Vice President – Marketing, Communications and IR: Outokumpu Oyj 2011–2012
Director, Marketing Creation: Nokia 2009–2011

Positions of trust
Board member: Technology Industries of Finland 2019–
Board member: Association of Finnish Steel and Metal Producers 2019–

Liam Bates

Executive Vice President – Supply Chain Management, Business area Europe

b. 1971, British citizen
B.Sc. hons Economics, MBA
Executive Vice President – Supply Chain Management, Business area Europe 2016–
Member of the Outokumpu Leadership Team 2015–
Responsibility: Supply chain management in Business area Europe
Employed by Outokumpu Group since 1993

Work experience
President – Quarto Plate: Outokumpu Oyj 2015–2016
Senior Vice President – Quarto Plate Europe: Outokumpu Stainless AB 2014–2015
Vice President – Mergers & Acquisitions: Outokumpu Oyj 2012–2014

Jan Hofmann

Executive Vice President – Business Transformation & IT

b. 1979, German citizen
M.Sc. (Econ.)
Executive Vice President – Business Transformation & IT 2016–
Member of the Outokumpu Leadership Team 2015–
Responsibility: Business transformation and IT
Employed by Outokumpu Group since 2012

Work experience
President – APAC: Outokumpu Oyj 2015–2016
Chief Financial Officer – APAC: Outokumpu Oyj 2015
Senior Vice President – Group Strategy and Business Excellence: Outokumpu Oyj 2012–2014

Reeta Kaukiainen

Executive Vice President – Communications and Investor Relations

b. 1964, Finnish citizen
M.Sc. (Soc.)
Executive Vice President – Communications and Investor Relations 2017–
Member of the Outokumpu Leadership Team 2017–
Responsibility: Communications, investor relations and marketing
Employed by Outokumpu Group since 2017

Work experience
Marketing & Communications Country Lead: Accenture Oy 2016–2017
Senior Vice President, Communications: Metsä Group 2012–2015
Vice President, Communications and Investor Relations: Tieto Corporation 2007–2012

Johann Steiner

Executive Vice President – Human Resources and Organization Development

b. 1966, German citizen
M.Sc. (Econ.)
Executive Vice President – Human Resources and Organization Development 2016–
Member of the Outokumpu Leadership Team 2013–
Responsibility: Human resources and organization development
Employed by Outokumpu Group since 2013

Work experience
Executive Vice President – Human Resources, IT, Health and Safety: Outokumpu 2013–2016
Executive Vice President – Human Resources and Health, Safety and Sustainability: Outokumpu Oyj 2013
Group HR Director: SAG Group GmbH 2012

Additional information on work experience and positions of trust to be found on the Company's website

Outokumpu shares and share-based rights (parent or subsidiaries) owned by the CEO and Leadership Team members and his/her controlled corporations on December 31, 2019

Member of the Leadership Team	Number of shares
Roeland Baan	1,237,567
Pia Aaltonen-Forsell	0
Liam Bates	130,295
Maciej Gwozdz	189,313
Jan Hofmann	132,262
Reeta Kaukiainen	0
Olli-Matti Saksi	285,856
Johann Steiner	143,475
Kari Tuutti	166,579
Total	2,285,347

More information on compensation can be found on p. 22 in this Governance section and in the separate Remuneration statement.

CEO and deputy to the CEO

The President and Chief Executive Officer (CEO) is responsible for the company's operational management, in which the objective is to secure significant and sustainable growth in the value of the company for its shareholders.

The CEO prepares decisions and other matters for the meetings of the Board of Directors, develops the Group's operations in line with the targets agreed with the Board of Directors, and ensures the proper implementation of Board decisions. The CEO is also responsible for ensuring that the existing legislation and applicable regulations are observed throughout the Group.

The CEO chairs the meetings of the Outokumpu Leadership Team. The deputy to the CEO is responsible for attending to the CEO's duties in the event that the CEO is prevented from doing so. Until February 28, 2019, the Group's Chief Financial Officer acted as deputy to the CEO. Currently, no deputy to the CEO has been appointed.

Leadership Team

The Outokumpu Leadership Team assists the CEO in the overall management of Outokumpu's business. The members of the team have extensive authorities in their individual areas of responsibility, and their duty is to develop the Group's operations in line with the targets set by the Board of Directors and the CEO. At the end of 2019, the members of the Outokumpu Leadership Team held the following positions:

- President and Chief Executive Officer (group management, business area ferrochrome, legal, corporate affairs and compliance, safety, health and; internal audit)
- Executive Vice President – Chief Financial Officer (financial and business controlling and analysis; taxation; treasury; metal and risk management; global business services)
- President – Europe (business area Europe; global R&D and operational excellence)
- President – Americas (business area Americas)
- President – Long Products (business area Long Products; group sustainability)
- Executive Vice President – Supply Chain Management, Europe (supply chain management in business area Europe)
- Executive Vice President – Business Transformation and IT (business transformation and IT)
- Executive Vice President – Communications and Investor Relations (communications, investor relations and marketing)
- Executive Vice President – Human Resources and Organization Development (human resources and organization development)

The Leadership Team typically meets at least once a month.

Internal control procedures and the main features of risk management systems

Internal control and risk management

According to the Finnish Limited Liability Companies Act and the Finnish Corporate Governance Code, the Board of Directors is responsible for ensuring that the company's internal controls are appropriately organized. The purpose of this section is to provide shareholders and other parties with a description of how internal control and risk management of financial reporting is organized in Outokumpu. As a listed company, the Group has to comply with a variety of regulations. To ensure that all the stated requirements are met, Outokumpu has introduced principles for financial reporting and internal control and deployed them throughout the company's organization.

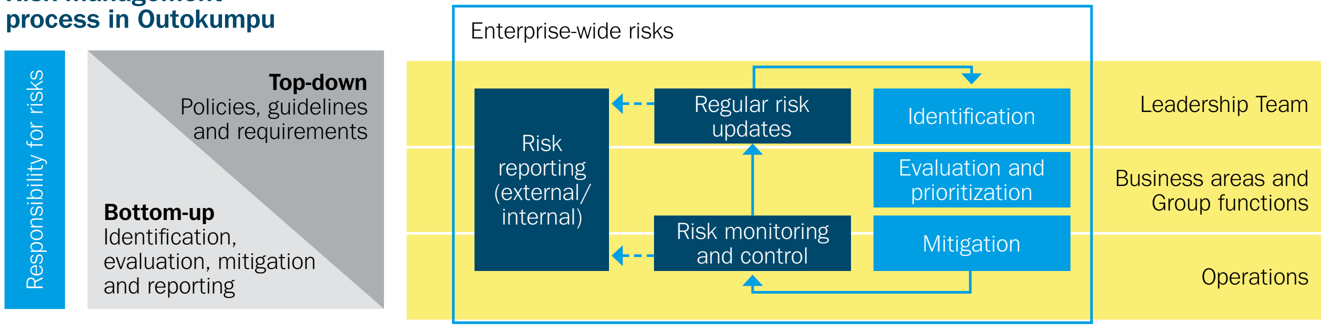
Control environment

The foundation of Outokumpu's control environment is the business culture established within the Group and its associated methods of operation. The basis for the company's compliance and control routines is provided by Group policies and principles, which define the way in which Outokumpu's organization operates. These policies and principles include, for example, the Group's Corporate Responsibility Policy and Ethical Principles. The Outokumpu Code of Conduct describes the Group's basic values and offers standardized, practical guidelines for managers and employees to follow.

The Outokumpu performance management process is a key management activity and an important factor in enabling an efficient control environment. In all sections of the Group's operations, planning activities and the setting of both operational and financial targets are executed in accordance with Outokumpu's overall business targets. Management follow-up of related achievements is carried out through regular management reporting routines and in performance review meetings.

In 2019, Outokumpu has taken specific measures to improve controls in financial reporting and initiated a control environment enhancement program to further develop and improve internal controls, financial reporting, compliance and operational processes in the Group.

Risk management process in Outokumpu



Risk management

Outokumpu operates in accordance with the risk management policy approved by the company's Board of Directors. The policy defines the objectives, approaches, and areas of responsibility in the Group's risk management activities. In addition to 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.

Risk management organization

The Board of Directors carries ultimate responsibility for risk management within Outokumpu. The CEO and members of the Leadership Team are responsible for defining and implementing risk management procedures, and for ensuring that risks are both properly addressed and taken into account in strategic and business planning.

Outokumpu's Risk Management Steering Group, led by the CFO, is the governing body for risk management in Outokumpu. The Business areas and Group functions are responsible for managing risks connected with their own operations. The Risk Management Steering Group and the Board of Directors review both key risks and actions taken to manage these risks on a regular basis. The Treasury and Risk Management function supports the implementation of Outokumpu's risk management policy, facilitates and coordinates risk management activities, and prepares quarterly risk reports for management, the Board Audit Committee and Auditors.

Risk management process

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. Outokumpu's appetite for risk and risk tolerance are defined regularly in relation to earnings, cash flows and capital structure. 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. The Risk management process in Outokumpu is two-fold: a top-down approach to manage the Group's key risks and a bottom-up approach focusing on the operational level.

Within Outokumpu, the risk management process is monitored and controlled at different organizational levels. Regular risk updates are carried out to capture relevant information. The monitoring of results and risk updates also ensure that accurate information is provided both internally – to business area management teams and members of the Leadership Team – and externally to relevant parties such as shareholders and other stakeholders. Risk mitigation actions are defined according to the risk identification and the impact/likelihood assessments.

Focus areas

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 remained to be a realized risk in 2019.

Internal controls for financial reporting

Outokumpu's control process for financial reporting is based on Group policies, principles, and instructions relating to financial reporting as well as on the responsibility and authorization structure within the Group. Policies relating to financial reporting are usually owned and approved by the CEO and the CFO. Financial reporting in Outokumpu is carried out in a harmonized way using a common chart of accounts and principles.

Financial reporting is prepared in accordance with International Financial Reporting Standards (IFRS). The Outokumpu Accounting Principles (OAP) are Outokumpu's application guidance on IFRS. The aim of the OAP and other financial reporting policies and instructions is to ensure that uniform financial processes and reporting practices are used throughout the Group. Policies and instructions for financial reporting are reviewed on a regular basis and revised when necessary. In 2019, Outokumpu implemented the new IFRS 16 Leases standard from the beginning of the financial year. The implementation included an introduction of an IT supported solution to collect, value and report IFRS 16 relevant financial information on Group's lease contracts. In 2018, Outokumpu implemented the IFRS 15 and IFRS 9 standards, as well as changes to the IFRS 2 standard. In 2020, Outokumpu will implement a solution to enable the reporting of financial statements in European Single Electronic Format (ESEF).

Financial statements of the parent company and stand-alone Finnish subsidiaries are prepared in accordance with generally accepted accounting principles in Finland, while foreign subsidiaries follow local accounting principles. Outokumpu also complies with the regulations regarding the financial reporting published by the Financial Supervisory Authority (FIN-FSA) Nasdaq Helsinki and ESMA.

Identification and assessment of risks related to financial reporting

Risks related to the Group's financial reporting are managed according to Outokumpu's risk management process and classified as operational risks which can arise as consequences of inadequate or failed internal processes, employee actions, systems, or other events such as misconduct or crime. The risks related to financial reporting are identified and typically assessed in risk workshops, which are arranged on a regular basis. All major risks are reported to and evaluated by the Audit Committee on a regular basis.

Control activities

In addition to the Board of Directors and Audit Committee, operational management teams in Outokumpu are responsible for ensuring that internal controls relating to financial reporting are in place in Outokumpu units. The aim of control activities is to discover, prevent, and correct potential errors and deviations in financial reporting. Control activities also aim to ensure that authorization structures are designed and implemented in such a way that conflicting divisions of work would not exist (i.e. one person performing an activity and also being responsible for controlling that activity). Control activities consist of different kinds of measures and include reviews of financial reports by Group management and in business area management teams, the reconciliation of accounts, analyses of the logic behind reported figures, forecasts compared to actual reported figures, and analyses of the Group's financial reporting processes, among others. A key component is the monitoring of monthly performance against financial and operational targets. These control activities take place at different levels of the organization. The most important accounting items in Outokumpu are the valuation and reporting of inventories and other items of working capital as well as other items requiring management judgement. Moreover, in difficult market situations, asset impairment calculations and related sensitivity analyses are equally important. These items are carefully monitored and controlled, both within business areas and at the Group level, on a regular basis.

Information technology and solutions play an important role in ensuring appropriate structures for the Group's internal controls. The Group's consolidation system provides timely and uniform financial and management reporting from the Group entities and an effective closing process within the whole Group. Outokumpu is also running a business transformation program to develop and improve business capabilities and to renew parts of its fragmented system environment. This will be achieved mainly by harmonizing and improving the Group's core business processes and implementing supporting IT systems (e.g. ERP). First rollouts of the new ERP together with other related IT systems took place during 2019. As part of the rollouts, internal controls in the affected business processes were implemented, as well, with emphasis on system-based controls.

Outokumpu has centralized majority of its accounting and financial reporting in its global business service centers, which allows further development and harmonization opportunities for internal control activities. The on-going project addressing the quality and consistency of the controls around the financial closing process will be implemented in 2020.

Information and communication

Group-wide policies and principles are available to all Outokumpu employees. Instructions relating to financial reporting are communicated to all the parties involved. The main communication channels employed are Outokumpu's intranet, other easily accessible databases, and email. Face-to-face controller meetings are also organized. Finance and Business Services leadership team meetings are organized regularly to share information and discuss issues of topical interest to the Group.

Furthermore, Outokumpu has established steering groups (e.g. for risk management and compliance topics) in which financial reporting and internal control issues can be discussed and reviewed. These groups typically consist of senior members of management and substance experts. The aim of these bodies is to ensure that common financial processes and reporting practices are followed throughout the Group and that effective internal controls relating to financial reporting are established.

Follow-up

Both management in all Outokumpu companies and personnel in the accounting and controlling functions are responsible for the follow-up and monitoring of internal controls connected with financial reporting. Through its activities, the Internal Audit function monitors that an appropriate control environment exists across the Group. Risk management, compliance function, and external auditors are also engaged in the follow-up of control activities. The findings of the follow-up procedures are reported to the Audit Committee and the Outokumpu Leadership Team on a regular basis.

Internal audit

Internal Audit is an independent and objective assurance, control, and consulting function designated to add value, to improve operations, and to monitor and support the organization in the achievement of its objectives. Through a systematic, disciplined approach, Internal Audit determines whether governance processes, the internal control system, and the risk management system, as designed and represented by the Board of Directors and the Leadership Team, are effective and efficient. As a basic principle, large units are visited at least once per year, medium size units once every 2 to 3 years, smaller units once every 3 to 4 years and sales offices once every 5 years.

With a strong commitment to integrity and accountability, Internal Audit provides value to governing bodies and senior management as an objective and direct source of information, and independent advice. Internal Audit also monitors adherence to Group principles, policies, and instructions, and investigates fraudulent and noncompliant behaviors and activities. Internal Audit performs its function on behalf of and directly reports to the Audit Committee and to the Leadership Team but is functionally assigned to the CEO. The annual internal audit plan is approved by the Audit Committee.

In 2019, Internal Audit performed 15 scheduled operational audits including the Outokumpu Global Business Services Americas located in Mexico, the global Business Support Function Raw Material Procurement, and audits of the Outokumpu subsidiaries in India and Australia. The results of all the audits carried out including their risk appraisals are reported and distributed in writing. In view of the Outokumpu Code of Conduct and the Corporate Responsibility Policy, we did not identify any issues of material risk for the Outokumpu Group. The 2020 internal audit plan covers all major production units, selected Coil Service Centers and Sales Offices and some Corporate and Business Support Functions.

To further strengthen its compliance culture, Outokumpu implemented at the end of year 2019 SpeakUp, an externally operated communication channel, that offers the option to report serious misconduct confidentially and if desired anonymously. SpeakUp replaced the previously used whistleblowing Helpline. SpeakUp is available both internally on company intranet and for external stakeholders via the company web-page. Sixteen unscheduled investigations of potential misconduct were performed in 2019, thereof six cases reported via the Helpline and ten recognized through other channels. Internal Audit observed a small number of cases involving inappropriate behavior, but none of these cases was financially material. Various attempts of fraud through faked e-mails received from external sources resulted in no harm to the company.

Compliance

Outokumpu is strongly committed to the highest ethical standards and observes the laws and other regulations of the countries in which it operates, and it complies with agreements and commitments it has made. Outokumpu's Code of Conduct sets out these ethical standards and provides guidelines for a common way of working with the aim of ensuring that all Outokumpu employees live up to Outokumpu's ethical standards. Outokumpu's Legal, Corporate Affairs and Compliance function is responsible for managing and continuously developing Outokumpu's compliance program. Outokumpu's compliance program is described in more detail as part of Outokumpu & society at www.outokumpu.com. The Legal, Corporate Affairs, and Compliance function reports to the CEO and also reports to the Outokumpu Leadership Team and directly to the Board Audit Committee on compliance-related matters. Compliance-related matters are also regularly handled in the Compliance Steering Group, consisting of the CEO, CFO, Head of HR and Organization Development, Corporate General Counsel and Group Compliance Officer. The Compliance Steering Group met four times in 2019.

Insider management

The company's Insider Rules and the insider laws and regulations, including the EU Market Abuse Regulation, Finnish

Securities Act and the Guidelines for Insiders issued by Nasdaq Helsinki, constitute the primary legal framework for the insider issues relevant to the Group and its employees.

Furthermore, the Regulation on EU Energy Market Integrity and Transparency sets forth similar requirements as the Market Abuse Regulation on dealing with inside information relating to wholesale energy products. As the company is a participant in the wholesale energy market, the company's Insider Rules apply to such energy-related inside information, as applicable.

The persons discharging managerial responsibilities in Outokumpu, in the meaning of the Market Abuse Regulation, include members of the company's Board of Directors, the CEO and other members of the Outokumpu Leadership Team ("the Management"). The Management together with the persons or companies closely associated with a member of the Management constitutes the so-called "Notifying Persons". Outokumpu maintains a non-public list of the Notifying Persons.

Outokumpu applies a restricted period of thirty (30) calendar days before the announcement, as well the day of the announcement, of an interim financial report, interim financial statement and a year-end report (the "Closed Window"). During this period, the Management, the persons subject to trading restrictions and any legally incompetent persons under their custody shall not conduct any transactions, on his/her own account or for the account of a third party, directly or indirectly, relating to the company's shares or debt instruments, or derivatives or other financial instruments linked thereto. Separate, non-public, project-specific insider registers are maintained for insider projects. Persons defined as project-specific insiders are those who, in the course of their duties in connection with a project, receive inside information concerning the Group which, if or when realized, is likely to have a significant effect on the value of the company's publicly traded securities.

The company has the obligation to inform the public as soon as possible of inside information that directly concerns the company, unless the company has decided that the publication of the inside information shall be delayed, in accordance with the applicable insider regulations. The publication of inside information shall be made in accordance with the company's Disclosure Policy.

Outokumpu's Head of Legal, Corporate Affairs and Compliance function is responsible for the coordination and supervision of insider topics.

Related Party Transactions

The Second Shareholders' Rights Directive (EU), the International Accounting Standards IAS 24, the Companies Act and the Securities Markets Act as well as the Finnish Corporate Governance Code constitute the primary legal framework in the Related Party Transaction principles relevant to the Outokumpu Group and its related parties.

Definition of related parties and maintenance of the list of related parties

Outokumpu Oyj's related parties are determined in accordance with the International Accounting Standards (IAS 24) and they include, i.a, the Group subsidiaries, members of the Parent Company's Board of Directors and the Leadership Team as well as their related persons and companies. The Company's Legal, Corporate Affairs and Compliance function maintains a list of Outokumpu Oyj's related parties, which is updated on a regular basis.

Evaluating Related Party Transactions

A related party transaction is any transaction which is conducted between the Outokumpu Group and a related party of Outokumpu Oyj. Transactions between a company and its related parties are allowed, provided that they promote the purpose and interests of the company and are commercially justified.

Any transactions that are not conducted in Outokumpu Group's ordinary course of business or are not implemented under arms-length terms require specific approval according to Outokumpu Group's Approval Policy. Any such transactions are escalated for review on Group executive level and cross-checked against the list of related parties. Any related party transactions that are not conducted in Outokumpu Group's ordinary course of business will require a decision by Outokumpu Oyj's Board of Directors and a transaction which would be deemed material for Outokumpu Oyj's shareholders will also have to be publicly disclosed. The decision making of the Board of Directors also takes provisions on conflicts of interest into account as board members cannot participate in deciding a matter concerning themselves. Board members also have a conflict of interest and cannot participate in decisions concerning a transaction with one of their related parties if that transaction is not part of the company's ordinary course of business or is not implemented under arms-length terms.

Monitoring and Reporting Related Party Transactions

Outokumpu Oyj's Audit Committee monitors the evaluation process. Related party transactions are reported to the Audit Committee on a regular basis. Outokumpu Oyj's finance and control functions monitor related party transactions regularly in arrears as a part of the Company's reporting and control procedures. Information on transactions concluded between the Company and its related parties is disclosed annually in the Company's consolidated financial statement.

Auditors

Under its Articles of Association, the company shall have a minimum of one and a maximum of two auditors. The auditors must be Authorized Public Accountants (KHT) or accounting firms whose mainly responsible auditors are Authorized Public Accountants (KHT). The auditors shall be independent of the company.

The Board of Directors has the duty to make a proposal to the Annual General Meeting as to the election and fees of the auditor. The Annual General Meeting elects the auditors for a term of office ending at the close of the next Annual General Meeting. A proposal to the Annual General Meeting on the election of auditors that has been made known to the Board of Directors prior to the Annual General Meeting will be made public if it is supported by shareholders holding a minimum of 10% of all the company's shares and voting rights and the person or company proposed has consented to such nomination.

The company's auditors submit the statutory auditor's report to the company's shareholders in connection with the company's financial statements. The auditors also report their findings to the Board Audit Committee on a regular basis and at least once a year to the full Board of Directors. The parent company, Outokumpu Oyj, is audited by PricewaterhouseCoopers Oy, and the responsible auditor is Janne Rajalahti, Authorized Public Accountant. PricewaterhouseCoopers Oy is also responsible for overseeing and coordinating the auditing of all Group companies. PricewaterhouseCoopers Oy was elected as the Group Auditor in the Annual General Meeting held on March 27, 2019 and has been the Auditor of Outokumpu for three consecutive terms. Both Outokumpu and PricewaterhouseCoopers Oy emphasize the requirement that the auditor be independent of the company being audited. The PwC Network Independence policy is based on the International Ethics Standards Board for Accountants' (IESBA) Code of Ethics for Professional Accountants.

Outokumpu's Board Audit Committee continuously monitored non-audit services purchased by the Group from PricewaterhouseCoopers Oy at a global level. In 2019, auditors were paid fees totaling EUR 3.1 million, of which non-auditing services accounted for EUR 0.7 million. ■

Key risks

Strategic and business risks

Risks related to Outokumpu's business priorities and targets

Outokumpu's vision remains the same; to be the best value creator in stainless steel by 2020 through customer orientation and efficiency. Outokumpu's strategy defines six must-win battles in order to reach the vision. These must win battles have a direct link to customer orientation and efficiency. As of January 2020, our must-win battles are:

- Safety – A fully implemented, standardized and disciplined approach to safety that correlates with improved quality and operational efficiency, leading to a top decile position in the industry.
- Sustainability – Secure Outokumpu's position as the sustainability leader in the stainless industry to fight climate change and to create a competitive advantage.
- Operational excellence – Implementation of Outokumpu Production System delivering continuous improvement and step change in Quality, Supply Chain and Manufacturing.
- Commercial excellence – Clear segment-driven commercial strategy to drive margin growth. Profitability driven product strategy to match market demand and optimal mix. Lay the foundation for future growth and customer loyalty by creating an industry leading customer experience.
- Americas – The single biggest profitability lever for Outokumpu, with significant improvement potential in both cost and market position.
- Digital transformation – New digital business and manufacturing platforms established and a major step-change towards data driven management.

Outokumpu's current expectations regarding the outcome of the abovementioned must-win battles are based on number of assumptions that are are subject to various risks and uncertainties.

Stainless steel industry and markets

Outokumpu believes that the long-term prospects for stainless steel demand remain firmly positive. Global megatrends including population growth, urbanization, increasing mobility and climate change will drive the need for sustainable materials. There is a possibility that such megatrends will realize more slowly than expected and that the occurrence of natural catastrophes or other adverse changes in the global political and economic environment can impact the stainless steel industry, thereby reducing growth prospects in Outokumpu's core markets. Nonetheless, demand in Outokumpu's main regions and customer segments is expected to be robust and will continue to support long-term growth.

The risk of global overcapacity in stainless steel has the potential to further disrupt industry economics. The commissioning of new export-driven capacity in Asia, particularly in China and Indonesia, has created a regional demand imbalance. This results in a risk of adverse trade flows to Outokumpu's core markets, which when further coupled with trade protectionist measures, can distort the stainless steel market. Given the global nature of its operations Outokumpu has significant exposure to the effects of trade actions and barriers which create a risk to market access, continued growth and stable profitability.

The implementation of additional tariffs on imports of aluminium and steel under Section 232 of the 1962 Trade Expansion Act by the United States of America originally in 2018 has disrupted both the US and the European stainless steel markets. The European Commission's imposition of provisional safeguard measures on steel imports, consisting of a tariff-rate quota system, first in July, 2018 has only been partially successful in mitigating the risks. Definitive measures became effective in February 2019, which were expected to support the restoration of traditional market supply levels and reduce the profitability risk. These measures were further enforced in October as European market continued to suffer of Asian imports. While the markets remained unbalanced and difficult in end of 2019, Outokumpu expects that the market should get more balanced as import quotas get filled and earlier announced anti-dumping and countervailing duties investigations against China, Indonesia and Taiwan by the European Commission should ease the market pressure. Outokumpu's current expectations regarding the market trends are based on a number of assumptions and expectations that are subject to various risks and uncertainties.

With increasing global demand for stainless steel, Outokumpu expects global demand for ferrochrome, a key ingredient in stainless steel production, to increase correspondingly. From its cost competitive chromite mine in Kemi and ferrochrome production facilities in Tornio, Outokumpu supplies a significant amount of ferrochrome to its own stainless steel operations. As a result, Outokumpu is well placed to maintain high utilization rates and support the group's growth and profitability. Risks resulting from its production of ferrochrome are typical operational risks and uncertainties that may cause significant financial impacts due to the costs for power and coke, production downtimes and business interruptions. Risks associated with its external sales of chromite and ferrochrome relate to those from market price of chromium and foreign exchange rates, particularly the US dollar.

Raw materials, supplies, and energy

Outokumpu is exposed to price changes of alloy metals in multiple ways. The underlying exposure consists of price fixed purchase contracts; price fixed sales contracts and physical stocks of priced inventories of nickel, molybdenum, carbon steel and stainless steel scrap as well as various grades and forms of stainless steel. Price changes of alloy metals lead to impacts on earnings, cash flows, and balance sheet structure. Pricing systems are applied in many markets and may cause volatility in demand of stainless steel. A possible adverse consequence of volatility in demand is the negative impact on capacity utilization ratios. In addition, the monetary value of discounts in purchasing (e.g. in connection with purchases of stainless steel scrap) depends on the level of alloy metal prices. Therefore, the price levels of alloy metals have long-term impacts on profitability.

Stainless steel production requires substantial amounts of certain raw materials, primarily nickel, recycled stainless steel, ferrochrome, molybdenum, recycled carbon steel as well as energy and supplies. Most of these are subject to significant price volatility due to fluctuating customer demand, speculation, and scarcity, which may, from time to time, be compounded by decreases in extraction and production due to natural disasters, political or financial instability or unrest.

Increases in the prices of certain raw materials, such as nickel, ferrochrome, molybdenum, and iron, are generally passed on to customers through alloy surcharges. Outokumpu has hedged part of its exposure to changing nickel prices. Although the alloy surcharge mechanism is intended to allow stainless steel producers to pass on the costs of raw materials to customers, it does not eliminate Outokumpu's exposure to raw material price volatility. In 2019, the proportion of fixed price sales increased in Europe compared to alloy surcharge based sales, also impacting Outokumpu's ability to pass on costs of raw materials to customers. This can have negative impacts on Outokumpu's profitability. Financial risks related to raw materials and energy prices are described in note 19 to the consolidated financial statements.

In addition, the production of stainless steel products and ferrochrome requires significant amounts of energy, particularly electricity, natural gas, and to a lesser extent, propane, and fuel oil. Energy costs represent a substantial portion of Outokumpu's total cost of sales and energy prices have historically varied, and may continue to vary significantly, as a result of political and economic factors beyond Outokumpu's control.

Legal risks

In connection with its business activities Outokumpu may become subject to various legal claims and litigations. In addition to legal claims resulting from Outokumpu's daily business, Outokumpu is also exposed to typical litigation risks in connection with mergers and acquisitions. For further information on existing major litigations, please see note 30 to the financial statements.

Outokumpu's products are used in a wide range of applications. For instance, certain products are used in safety-critical applications in the oil, gas, chemical, and petrochemical industries. In addition, a part of Outokumpu's products are used in the automotive and aviation industries, where key customers require extensive third-party certification regarding the products purchased. Therefore, Outokumpu is exposed to product quality related liability claims. Such claims may result in severe damages, impacting Outokumpu's profitability. Outokumpu manages and mitigates its legal risks by running internal processes as well as governance and compliance programs and policies, some of which extending beyond the local minimum legal requirements.

Risks related to environmental regulation

The European Union's unilateral Emission Trading System (ETS) forms a risk for Outokumpu, indirectly in electricity prices and directly in emission allowance costs. Outokumpu's European units cannot transfer these costs to product prices due to global competition. However, Outokumpu has secured part of its future electricity supply – and the associated prices – through long-term contracts. Furthermore, Outokumpu is participating in two nuclear power projects in Finland.

Outokumpu operates in accordance with the prevailing laws and regulations, including environmental, chemical, and product safety legislation. The environmental, chemical and consumer safety legislation are the fastest developing regulation in EU. Some non-fact based changes in this legislation, as proposed in the EU, could have long-term impacts on Outokumpu's operations. Strict compliance with all of the relevant environmental regulations causes increased costs and impacts Outokumpu's competitive position. Outokumpu mitigates these impacts through the systematic identification and management of environmental, chemical, and product safety risks, through emission trading, and by maintaining a proactive dialog with stakeholders involved in the framing of environmental legislation.

Operational risks

Major disasters and business interruptions

Outokumpu's production processes are dependent on the continuous operation of critical production equipment, including smelters, furnaces, continuous casters, rolling mills, and electrical equipment, e.g. electric motors and transformers, and production downtime may occur as a result of unexpected mechanical failures. Operations may also be disrupted for a variety of other reasons, including fire, explosion, flooding, release of harmful substances to the environment or health, failures in information technology, strikes, or transportation disruptions.

Furthermore, accidents may lead to production downtimes that affect specific items of machinery or production plants, or possibly result in plant closures, including closure for the duration of any ongoing investigation. This type of disruption may cause significant business interruptions and have a negative impact on Outokumpu's profitability. Primarily because of the high temperatures required for production, fire is a significant risk for Outokumpu. Most of the production facilities are located in extensive industrial zones and a fire could lead to major damage to property and interruptions in production. Extreme weather conditions and natural disasters may also affect Outokumpu's operations, especially as a result of damage to property or the loss of production through extremely low temperatures, flooding, hurricane, tornado, or drought. Outokumpu monitors such risks by continuously evaluating its production facilities and production processes from a risk management perspective and also by arranging regular fire-safety and loss prevention surveys. Insurance covers a large proportion of the associated risks.

Environmental accidents

The main environmental accident risks at production sites relate to use of acids, hazardous waste, gases, landfill activities, gradually developing pollution and long-term contamination of soil or groundwater or effects of hazardous pollutants. Outokumpu also has environmental liabilities and risks at closed mines and sites. Certified environmental management systems are in place at all production sites to manage the environmental accident risks in a systematic way, including external environmental audits. In addition, Outokumpu has an internal environmental auditing program to monitor and ensure local legal compliance and the level of environmental risk management.

Project risks

Outokumpu has (through a holding company Voimaosakeyhtiö SF) committed to a 14% stake in Fennovoima Oy, which has a parliamentary decision-in-principle to construct a new nuclear power plant in Pyhäjoki, Finland. The company has selected Rosatom Overseas CJSC as the plant supplier. Fennovoima Oy submitted a construction license application to the government in June 2015 and expects to receive the construction license by the end of 2021. Accordingly, Fennovoima plans that commercial operation of the plant would begin in 2028. The project involves a number of potential risks for Outokumpu, including project completion risks such as new delays, cancellations, non-completion, technical risks, possible tightening nuclear safety regulations in the future, and financial risks such as budget overruns, non-competitive cost of power, financing risks, cost and availability of the financing, fair value of shareholding, political and public acceptance risks, and environmental risks. When operational, shareholders will be liable for their pro rata share of the company's fixed energy procurement costs and the right to procure their pro rata share of the energy produced by the company at cost (the "Mankala principle"). Considering the risks involved in the project, there can be no assurance that one or more of the project risks will not occur or that Fennovoima Oy will have adequate financing for the project in the event of any future defaults by the direct or indirect shareholders in Fennovoima Oy.

Outokumpu also faces project risks related to other ongoing investments in the Kemi mine expansion and the digital transformation project Chorus, which focuses on harmonizing business processes, including the ERP renewal. These and other ongoing investments and projects include similar project risks which Outokumpu manages through its project management process.

IT dependency and cyber security risks

Outokumpu relies on various applications and other information technologies that are used globally in all business areas and group functions. Many of these applications and underlying infrastructure are outdated, making them more vulnerable to failure, and could result in business interruptions, for example, in the production and supply chain processes. In addition, the enterprise architecture is complex, and the large number of different and unharmonized information systems increases the risk of loss of critical applications. Furthermore, cyber threats and other security threats could exploit possible weaknesses in Outokumpu's security controls, which in turn, could cause leaks of sensitive information, theft of intellectual property, production outages, or damage to Outokumpu's reputation. Outokumpu is taking necessary steps to ensure that the IT systems, solutions and processes are efficient and reliable, and also aims to ensure secure information management and continuity at all company locations to avoid data loss or situations in which business critical information becomes unavailable. Moreover, Outokumpu has improved its cyber readiness in order to prevent possible cyber attacks, by running and initiating various security development activities based on the detailed cyber threat and risk exposure analyses. Outokumpu continued the business transformation program to harmonize its enterprise level data, processes, and IT systems as well as to develop or enhance business capabilities.

Safety and personnel

Outokumpu has set its safety vision and principles on high level. Safety takes priority over all other activities. All Outokumpu employees are responsible for their own safety, but also for the safety of their colleagues. Outokumpu strongly believes that all injuries can be prevented and the target is zero accidents.

Furthermore, as a part of its vision for 2020, Outokumpu has introduced must-win battles to reach its short-term targets, safety being one of them, aiming at fully implemented, a standardized and disciplined approach to safety that correlates with improved quality and operational efficiency, leading to a top decile position in the industry.

Despite the ongoing efforts and actions, serious incident or fatal accident may occur during working time. Outokumpu considers the risk of fatalities and serious injuries having a significant impact on its safety culture and its reputation as an employer. Moreover, Outokumpu believes that great focus and the systematic development of safety performance and safety culture will have a positive impact on operational performance and discipline. Improving the safety performance through driving the full implementation of our company standards and processes, development of our SafeStart behavioural programme at all sites and learning from good and best practices have been Outokumpu's main focus areas in 2019.

Outokumpu's ability to continue and grow its business as well as provide high-quality products depends, to a large extent, on the contributions made by its key personnel. The loss of key individuals or other employees who have specific knowledge of, or relationships with, trade customers in markets in which Outokumpu operates could have significant impacts on Outokumpu's business. If Outokumpu is unable to attract, retain, motivate, train, and develop qualified employees at all levels, it could have a material adverse effect on Outokumpu's business, financial condition and results of operations. There can be no assurance that Outokumpu will be able to retain such senior managers and other key employees. Outokumpu has implemented HR processes to attract and retain key employees in the Group. Implementation of leadership development programs and succession planning for key positions in the Group are also undertaken as part of the talent review process to maintain development opportunities and to ensure an adequate pipeline of talent to mitigate the potential loss of senior leaders.

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 and enforcement initiatives 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's governance and compliance processes may not prevent breaches of law or governance standards. Outokumpu also faces the risk of fraud by its employees, losses of critical research and development data, misconduct as well as violations by its sales intermediaries or at its joint ventures and other companies in which it has an interest, particularly if it only has a minority stake and does not control accounting or other rules and protocols for the conduct of business.

Outokumpu's failure to comply with the applicable laws and other standards could subject it to fines, loss of operating licenses, loss of business, loss of management time and company focus, breach of its financing agreements, and reputational harm. Effective internal controls are necessary for Outokumpu to provide reliable financial reports and effectively prevent and detect fraud. If Outokumpu cannot provide reliable financial reports or prevent fraud, this could have a material adverse effect on its financial results. Additionally, at the operational level, individual employees may not comply with Outokumpu's statements, policies, instructions and guidelines and, as a result, may incur compliance costs (including fines) and cause reputational damage. Inadequate internal controls could also cause investors and other third parties to lose confidence in Outokumpu's reported financial information and risk manage¬ment processes, which could have a material adverse effect on Outokumpu's business, financial condition and results of operations. Outokumpu's compliance program aims to prevent and mitigate compliance risks from occurring and is further developed continuously. The compliance risk assessment forms the basis for the compliance action plan for the forthcoming year.

Financial risks

Key current financial risks for Outokumpu are:

- Changes in the prices of nickel, iron, molybdenum, electrical power, and fuels;
- Currency developments affecting the euro, the US dollar, the Swedish krona, and the British pound;
- Interest rate changes connected with the euro, the Swedish krona and the US dollar;
- Changes in levels of credit margins applied for Outokumpu;
- Risk related to prices of equities and fixed-income securities invested e.g. under defined benefit pension plans;
- Counterparty risk related to customers and other business partners, including financial institutions;
- Risks related to liquidity and refinancing;
- Breach of financial covenants or other terms and conditions leading to default;
- Changes in fair value of equity investments in energy production.

The financial risks listed above and related processes for risk management are described in further detail in note 19 to the consolidated financial statements.

Corporate responsibility risks and stakeholders' materiality analysis

Outokumpu has also identified its exposures in sustainability and corporate responsibility. Outokumpu's Corporate Responsibility Policy describes the main principles of the sustainable development of economic, environmental, and social aspects in the Group. The Group's sustainability strategy was renewed in 2019. It concentrates on three pillars: climate, environment and society.

Corporate Responsibility risks are based on the previous materiality analysis, which is based on an extensive data tool study of the emerging trends in the steel industry and compared these trends with the material topics of Outokumpu's main peers, customers and suppliers. The company has regular dialog with stakeholders (customers, suppliers, investors, employees, NGOs, authorities, communities, associations) and also assesses the corporate responsibility risks through Outokumpu's risk management process. In the materiality analysis, the material issues were not changed for 2019 and the five focus sustainability issues for business were Occupational health, safety and well-being; Responsible business practices; Energy management; Material efficiency; and Customer experience. However, there was increased focus on climate change related risks, including impacts to Outokumpu Group and on contributing to low carbon society by improving the energy management and material efficiency.

Additional information on the materiality analysis is available on Outokumpu's website. These main topics from the materiality analysis are also partially considered as Outokum¬pu's key risks, which are explained above within several risk scenarios, including: risks related to environmental regulation; environmental accident risks; raw materials, supplies and electricity; compliance; and reputational harm.

Safety is one of the cornerstones in Outokumpu's strategy and ensuring the safety and good health of our employees is the first priority. In addition, Outokumpu takes all labor practice violations and related threats as well as its full transparency and compliance in Environment, Social and Governance (ESG) topics seriously. ■

Remuneration

Board of Directors

As confirmed at Outokumpu's Annual General Meeting 2019, the annual remuneration for the members of the Board is EUR 160,000 for the Chairman of the Outokumpu's Board of Directors, EUR 90,000 for the Vice Chairman and EUR 70,000 for the other members of the Board. The Annual General Meeting 2019 decided that 40% of the annual remuneration will be paid in the Company's shares to be purchased from the market at a price formed in public trading and in accordance with the applicable insider regulations.

The annual fee is paid once a year and members of the Board are not entitled to any other share-based rewards. In addition to their annual remuneration, all the members of the Board of Directors are paid a meeting fee of EUR 600 per meeting for each member of the Board of Directors and EUR 1,200 per meeting when travelling to a meeting held outside the Board member's country of residence.

CEO

Compensation and benefits

The President and CEO's remuneration consists of base salary, taxable benefits (housing benefit, car benefit, phone benefit, pension, medical and life insurance), share-based incentive and annual short-term incentive determined by the Board based on the company's key targets.

The annual target incentive opportunity for the CEO under the short-term incentive was 60% and the maximum incentive opportunity 120% of the CEO's annual base salary. The short-term incentive for 2019 was based on the achievement of net debt and group projects.

Pension benefits and terms of service

The CEO has the right to retire at the age of 63. He participates in the Finnish TyEL pension system in addition to which he is included in a defined contribution pension plan with an annual insurance premium of 25% of his annual earnings, excluding share rewards.

The service contract of the CEO is valid until further notice. The CEO is not entitled to a specific severance payment, and the notice period is three months for both parties.

Other Leadership Team members

Compensation and benefits

The performance-based short-term incentive payable to the members of the Leadership Team based on the targets set for 2019 was based on the achievement of EBITDA, net debt, safety, and individual objectives. The maximum payment varied between 50% and 80% of the annual base salary in line with local market practices for similar positions.

The Leadership Team members are also included in the share-based incentive plans for Outokumpu management. No separate remuneration is paid to the Group CEO or members of the Leadership Team for membership of the Group's internal governing bodies.

Pension benefits and terms of service

For the members of the Leadership Team, the notice period is six months for the employee and either twelve months for the company, without additional severance compensation and with the possibility to stop salary payment during the notice period if the executive finds other employment before the end of the notice period, or 18 months' base salary at the maximum, including salary for the notice period and severance compensation.

The retirement age for the members of the Leadership Team is 63 or 65 years, depending on the country of employment and date of appointment and they participate in the local retirement programs applicable to employees in the country where their employing company is located.

The members employed in Germany are entitled to pension benefits in accordance with the rules of the German Essener Verband. The members employed in Finland participate in the Finnish TyEL pension system, in addition to which they are entitled to a defined contribution pension plan for which the maximum premium is 25% of an individual's annual earnings, excluding share rewards. The pension benefits of the other Leadership Team members vary in line with the local market practices.

Share-based incentive programs

Outokumpu's Board of Directors has confirmed that share-based incentive programs are part of the incentive and commitment scheme for the company's key personnel. The objectives are to reward key personnel for good performance and thereby support Outokumpu's strategy, and to direct management attention towards increasing Outokumpu's profitability and shareholder value. The programs offer the possibility of receiving Outokumpu shares as an incentive, provided that the criteria set by the Board for each earnings period are fulfilled.

Other terms

According to the share ownership plan of the Outokumpu Group, the members of the Leadership Team are obliged to own Outokumpu shares received under share-based incentive programs to the value of their annual gross base salary. Half (i.e. 50%) of the net shares received from the share-based programs must be used to fulfil the above ownership requirement.

Guarantees and business relationships

Outokumpu did not provide any guarantees or other similar commitments on behalf of members of its Board of Directors in 2019.

No members of the Board of Directors or the Leadership Team or closely related persons or institutions have any significant business relationships with the Group. ■

Fees, salaries and benefits paid

2019	Salaries and fees with employee benefits [1]	Performance/ project-related bonuses [2]	Annual remuneration	Share-based incentives [3]	Total
Board of Directors					
Chairman of the Board, Jordan	12,600		160,000		172,600
Vice Chairman of the Board, Malinen	12,600		90,000		102,600
Vice Chairman of the Board, Vaartimo	3,000		0		3,000
Board member, ter Horst	10,200		70,000		80,200
Board member, Sipilä	9,000		90,000		99,000
Board member, Takala	7,200		70,000		77,200
Board member, Vareille	20,400		70,000		90,400
Board member, Woodhouse	10,800		70,000		80,800
CEO, Baan	1,074,495	347,782		1,112,203	2,534,480
Deputy to the CEO, de la Camp (until 28.2.2019)	79,292	162,657		141,700	420,911
Other Leadership Team Members	3,129,923	1,167,006		1,504,688	5,801,617

2018	Salaries and fees with employee benefits [1]	Performance/ project-related bonuses [2]	Annual remuneration	Share-based incentives [3]	Total
Board of Directors					
Chairman of the Board, Jordan	4,200		160,000		164,200
Chairman of the Board, Ollila	2,400				2,400
Vice Chairman of the Board, Vaartimo	6,600		90,000		96,600
Board member, Akermann	4,800				4,800
Board member, Gualdoni	2,400				2,400
Board member, ter Horst	6,600		70,000		76,600
Board member, Malinen	6,600		70,000		76,600
Board member, Sipilä	5,400		70,000		75,400
Board member, Vareille	7,200		70,000		77,200
CEO, Baan	1,075,835	700,997		929,081	2,705,913
Deputy to the CEO, de la Camp	469,111	249,044		211,861	930,016
Other Leadership Team Members	3,380,035	1,595,081		2,041,259	7,016,375

[1] For Board members, meeting fees. For Leadership Team members, salaries and employee benefits.

[2] Actual Short Term Incentive payout of previous year.

[3] Gross, including the value of the shares on the date of delivery and taxes.

December 31, 2019 status of the ongoing Performance Share Plans

Performance Share Plans	PSP 2017–2019	PSP 2018–2020	PSP 2019–2021	CEO PSP 2019–2020
Number of participants	119	129	134	1
Maximum number of gross shares to be paid [1]				
CEO Baan	92,000	72,000	136,000	120,000
Other Leadership Team members	342,000	280,000	602,000	–
Other participants	1,039,600	909,200	1,723,890	–
Total maximum number of gross shares to be paid [1]	1,473,600	1,261,200	2,461,890	120,000
Earning criteria	Outokumpu's return on operating capital compared to a peer group in 2019	Outokumpu's return on operating capital compared to a peer group in 2020	Outokumpu's return on operating capital compared to a peer group in 2021	Outokumpu's return on operating capital compared to a peer group in 2021
Share delivery year	2020	2021	2022	2021

[1] The maximum number of gross shares (taxes included) payable if the set performance targets are achieved in full.

December 31, 2019 status of the ongoing Restricted Share Plans

Restricted Share Pool	RSP 2017–2019	RSP 2018–2020	RSP 2019–2021
Number of participants	54	45	68
Maximum number of gross shares to be paid [1]			
CEO Baan	–	–	–
Other Leadership Team members	–	–	25,000
Other participants	82,600	102,500	182,900
Total maximum number of gross shares to be paid [1]	82,600	102,500	207,900
Share delivery year	2020	2021	2022

[1] The gross number of shares (taxes included) payable if the employment has continued until the delivery date of the shares and no notice of termination has been given prior to the delivery date.

December 31, 2019 status of the ongoing Matching Share Plans

Matching Share Plans	CEO Plan 2019–2020	CEO Plan 2015–2019	Management Plan
Number of participants	1	1	25
Number of gross shares [1]			
CEO Baan	168,888	1,157,156	–
Other Leadership Team members	–	–	753,746
Other participants	–	–	667,000
Total number of gross shares [1]	168,888	1,157,156	1,420,746
Shares delivered (net of taxes) [2]	–	289,289	495,638
Gross shares to be paid [3]	168,888	0	355,181
Share delivery years	2020	2016, 2017, 2018, 2019	2017, 2018, 2019, 2020

[1] The gross number of shares (taxes included) payable for the Matching Share Plan
[2] For the CEO, the same net amount was delivered in 2018, 2017 and 2016
[3] The gross number of shares (taxes included) still payable

Shares and shareholders

Shares and share capital

Outokumpu's shares are listed on the Nasdaq Helsinki Large Cap list under the trading code OUT1V and are incorporated into the Finnish book-entry securities system. The total share capital was EUR 311 million at the end of the year. All shares in Outokumpu carry equal voting and dividend rights.

On December 31, 2019, the total number of Outokumpu shares was 416,374,448. On December 31, 2019, Outokumpu held treasury shares 4,599,733 (Dec 31, 2018: 5,810,729).

Outokumpu in the capital markets

Outokumpu continued its regular and active dialogue with investors and analysts in 2019.

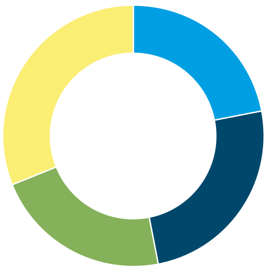
Key topics discussed with investors were Outokumpu's financial targets for 2020, balance sheet topics, Ferrochrome operations, the performance of the business area Americas and market-related topics, especially European market and Asian imports. Also, sustainability topics have been on the table increasingly in 2019 meetings. Outokumpu held its Annual General Meeting in Helsinki, Finland, in March. Outokumpu arranged 16 roadshows in Europe and in the US during the year. The company also met investors at three industry seminars in Barcelona and New York. In total, over 185 one-on-one meetings and conference calls were held with investors during the year.

International shareholders held 22.0% of the total shares at the end of December 2019 compared to 26.7% at the end of the previous year. JPMorgan Chase & Co and M&G Investment Management are the largest non-Finnish shareholders with holdings of over 4%. The largest Finnish shareholder Solidium Oy held 21.7% of Outokumpu shares. The share of Finnish households and private persons increased from 27.3% in 2018 to 31.1% at the end of 2019.

Principal shareholders on December 31, 2019

	Shares	%
Solidium Oy	90,324,385	21.69
Varma Mutual Pension Insurance Company	12,350,112	2.97
Ilmarinen Mutual Pension Insurance Company	10,100,000	2.43
The Social Insurance Institution of Finland	9,298,652	2.23
State Pension Fund	5,827,142	1.40
Mandatum Life	4,320,675	1.04
Elo Mutual Pension Insurance Company	4,215,000	1.01
Tutkimuksen vaikuttavuuden tukisäätiö sr	3,020,000	0.73
Nordea Life Assurance Finland Ltd.	2,816,469	0.68
Keva	2,365,000	0.57
Nordea Bank Abp	2,081,342	0.50
OP-Finland Small Firms Fund	1,777,691	0.43
OP Life Assurance Company Ltd.	1,558,565	0.37
Tuuliainen Veikko	1,336,631	0.32
Sinituote Oy	1,300,000	0.31
	152,691,664	**36.66**
Nominee accounts held by custodian banks	88,647,824	21.29
Treasury Shares	4,599,733	1.10
Other Shareholders	170,435,227	40.95
Total	**416,374,448**	**100.00**

Shareholders by group on December 31, 2019



- Nominee registered and non-Finnish holders **22%**
- Finnish institutions, companies and foundations **25%**
- Solidium Oy [1] **22%**
- Households **31%**

[1] Solidium Oy is wholly owned by the Finnish state

Share price development and market capitalization

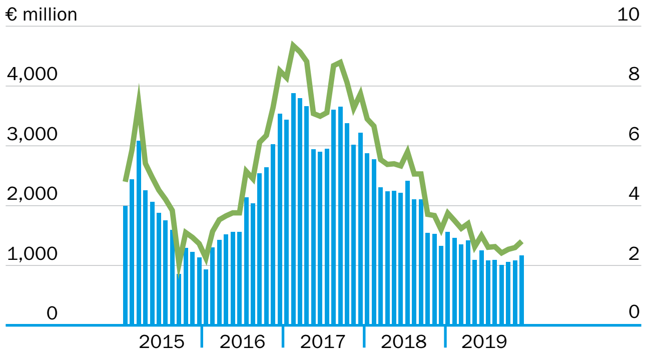
During 2019, Outokumpu's share price peaked at EUR 4.04 and was EUR 2.23 at its lowest (2018 high/low: EUR 8.26/ EUR 3.18). The share price closed at the end of the year at EUR 2.81, marking a decrease of 12.2% from the closing price of EUR 3.20 at the end of 2018. At the end of 2019, the company's market capitalization was EUR 1.168 million, compared to EUR 1,330 million at the previous year's end.

In 2019, the average daily trading volume in Outokumpu shares on Nasdaq Helsinki was 3.5 million shares. In total, 884 million Outokumpu shares were traded on Nasdaq Helsinki during 2019, representing a value of EUR 5,325 million (2018: 827 million shares, which corresponded to EUR 6,277 million).

In addition to Nasdaq Helsinki, Outokumpu's shares are traded also on various alternative trading platforms.

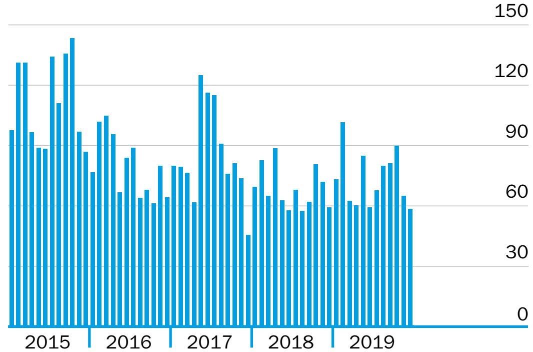
More information about the shares on our website

Market capitalization and share price development



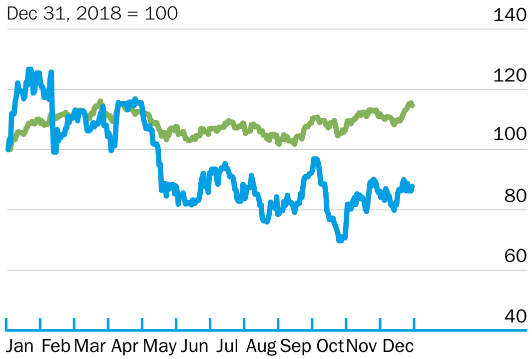
Month-end market capitalization, € million — Share price, €/share
Source: Nasdaq

Monthly trading volume, million shares



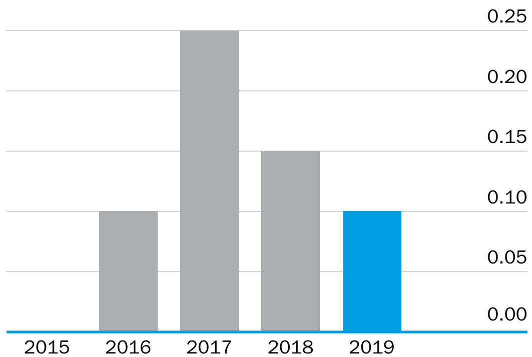
Includes trading on Nasdaq Helsinki.
Source: Nasdaq

Outokumpu share price development in 2019, %



Outokumpu
Nasdaq Helsinki

Dividend/share, €



In 2015 no dividend was paid. 2019 is a proposal by the Board of Directors.

Information for shareholders

Annual General Meeting 2020

Notice is given to the shareholders of Outokumpu Oyj to the Annual General Meeting to be held on Tuesday, March 31, 2020 at 1.00 pm EET at Dipoli congress center in Otaniemi, address: Otakaari 24, 02150 Espoo, entrance through the Gala entrance (Juhlaovi). The reception of persons who have registered for the meeting and the distribution of voting tickets will commence at 12.00 pm EET.

Each shareholder, who is registered on March 19, 2020 in Outokumpu's shareholder register held by Euroclear Finland Oy, has the right to participate in the Annual General Meeting.

A holder of nominee registered shares has the right to participate in the Annual General Meeting by virtue of such shares, based on which he/she on the record date of the Annual General Meeting, March 19, 2020, would be entitled to be registered in the shareholders' register of the company held by Euroclear Finland Oy. Participation in the meeting also requires that the shareholder has been registered into the temporary shareholders' register held by Euroclear Finland Oy at the latest by March 26, 2020 by 10.00 am EET. A holder of nominee-registered shares who wants to participate in the Annual General Meeting has to be registered into the temporary shareholders' register by the account management organization of the custodian bank latest by the time stated above.

A shareholder, who is registered in the shareholders' register of the company and who wants to participate in the Annual General Meeting, shall register for the meeting no later than March 26, 2020 by 4.00 pm EET by giving a prior notice of participation, which shall be received by the company no later than on the above-mentioned date. Such notice can be given as of February 5, 2020 at Outokumpu's Annual General Meeting website, by e-mail: agm.outokumpu@innovatics.fi, by telephone: +358 50 532 5582 (From Monday to Friday at 12.00–4.00 pm EET), by telefax: +358 9 421 2428, or by mail to

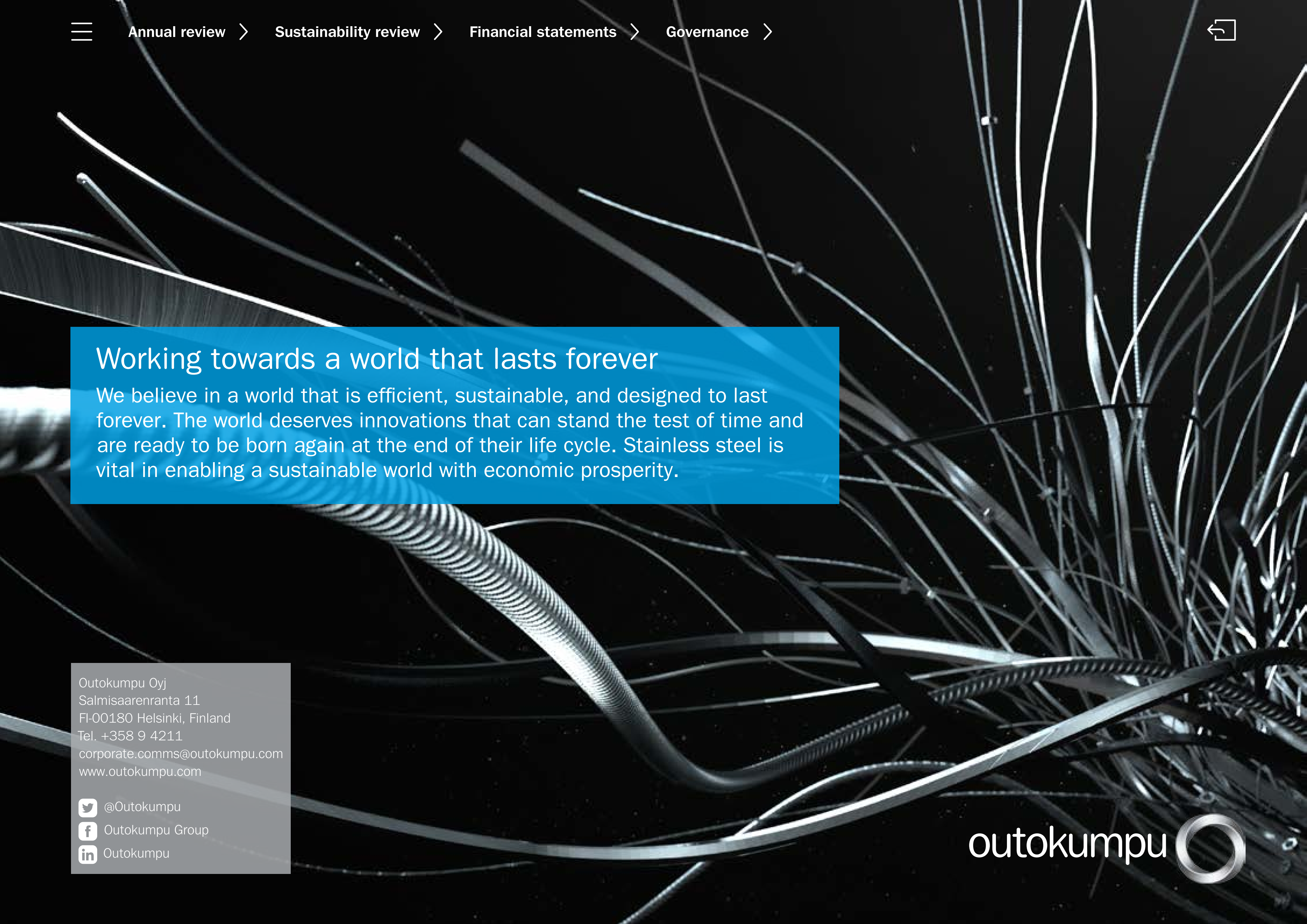
Outokumpu Oyj
Share Register
P.O. Box 245
FI-00181 Helsinki, Finland

A shareholder may participate in the Annual General Meeting and exercise his/her rights at the meeting by way of proxy representation. Proxy documents should be delivered to Outokumpu Oyj, Share Register, P.O. Box 245, FI-00181 Helsinki, Finland before the end of the registration period.

A complete notice to the Annual General Meeting and additional information about it is available at Outokumpu's Annual General Meeting website.

Payment of the dividend

The Board proposes a dividend of EUR 0.10 per share based on the balance sheet adopted for the account period ending December 31, 2019. The dividend will be paid to shareholders registered in the shareholders' register of the company held by Euroclear Finland Oy on the dividend record date April 2, 2020. The Board proposes that the dividend be paid on April 9, 2020. ■



Working towards a world that lasts forever

We believe in a world that is efficient, sustainable, and designed to last forever. The world deserves innovations that can stand the test of time and are ready to be born again at the end of their life cycle. Stainless steel is vital in enabling a sustainable world with economic prosperity.

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