Annual report 2017

outokumpu
working towards a world that lasts forever

Contents

This Annual report combines Outokumpu's sustainability and financial reporting for 2017. Outokumpu's Sustainability review has been assured and Financial statements have been audited.

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 2017

DURABLE BRILLIANCE ■ There is now, more than ever, a powerful need for sustainable and lasting solutions that pass the test of time and can be recycled and used time and again.

There is a need for stainless steel.

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Key figures 2017

Outokumpu's adjusted EBITDA more than doubled to 631 million euros. Profitability improved because of our relentless focus on cost control and productivity measures.

	2017	2016	2015	2014	2013
Net sales, € million	6,363	5,690	6,384	6,844	6,745
Stainless steel deliveries, 1,000 tonnes	2,448	2,444	2,381	2,544	2,585
Adjusted EBITDA, € million	631	309	165	263	–87
Net result for the period, € million	392	144	86	–439	–1,003
Operating cash flow	328	389	–34	–126	34
Net debt, € million	1,091	1,242	1,610	1,974	3,556
Debt-to-equity at the year-end, %	40.1	51.4	69.1	92.6	188.0
Personnel at the year-end*	10,141	10,600	11,002	12,125	12,561

* Personnel in 2014 and 2013 from the continuing operations.

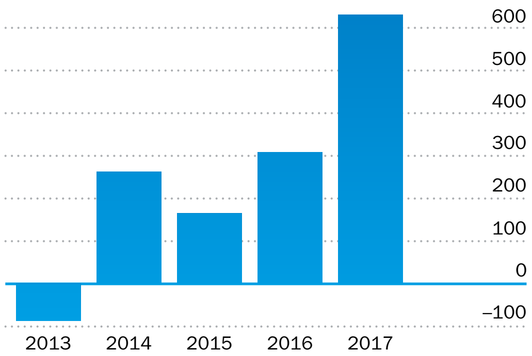
Long-term targets by the end of 2020

Adjusted EBITDA EUR **750** million

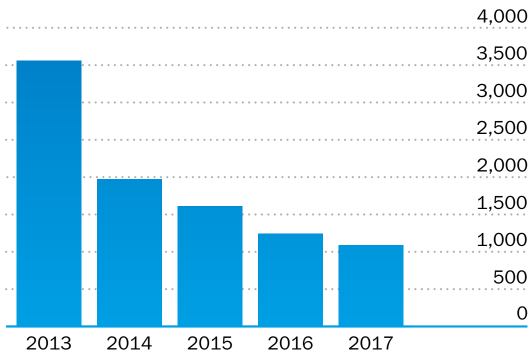
ROCE **12%**

Gearing **<35%**

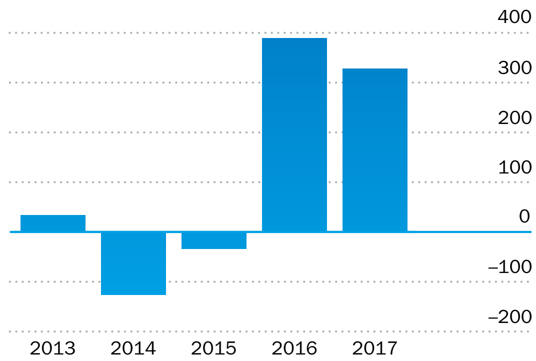
Adjusted EBITDA, € million



Net debt, € million



Operating cash flow, € million



Our year 2017

New patented grades

Outokumpu's latest stainless steel innovations – high-chromium grades – obtained European patents in March 2017. Both the ferritic Core 4622 (EN 1.4622) and austenitic Supra 316plus (EN 1.4420) have been developed in Outokumpu's R&D Center in Tornio, Finland. It has taken only four years to progress from market introduction in 2013 to a patented product. These grades fulfill customer demand for products with enhanced properties and stable raw material cost.

How do you come up with a new stainless steel grade?

Innovative skyscraper

Outokumpu has provided 1,000 metric tonnes of Supra 316L/4404 stainless steel with Deco Linen finish for the 392.5-meters-high China Resources Group headquarters in mainland China. The innovative new building designed by KPF architects employs stainless steel in 56 external columns that support its glass facade, creating an iconic form without the need for internal columns to break up open floor plans. Stainless steel has become a popular material for facade applications in China, replacing other materials, such as aluminum, as it has a longer life cycle and is easy to clean and maintain.

Why is stainless steel an ideal material for this application?

Ratings upgraded twice

Outokumpu has been rated by Moody's since 2015 and, in 2017, the company's ratings were upgraded twice. First the issuer corporate family rating was upgraded to B2 in May and again to B1 in November. Moody's has also upgraded the ratings for Outokumpu's senior secured notes to Ba3 from the previous rating of B1. The outlook of all ratings is stable. Outokumpu is pleased that Moody's has noted our improved operational performance and balance sheet and has consequently upgraded our ratings. Further reduction of net debt and improving of our credit metrics remain key objectives for Outokumpu.

Credit information

Kemi mine to go one kilometer underground

To secure a continuous chrome supply for the coming decades, Outokumpu invests approximately EUR 250 million in the Kemi mine expansion in 2017–2020. The investment will have an employment impact of 300 full-time equivalents. Construction work has started and it will be completed in 2020, when mining will begin in the new levels. So far, Outokumpu's mining operations have been up to 500 meters underground.

New business area: Ferrochrome

Ferrochrome operations were separated from the business area Europe as its own entity as of January 1, 2018. After the change, Outokumpu has four business areas – Europe, the Americas, Long Products and Ferrochrome. Ferrochrome is an integral part of Outokumpu's operations and a clear competitive advantage for us. The reporting change will also increase the transparency of our business internally and externally and, therefore, provide the financial community a better understanding on Outokumpu's business drivers.

Read more on the Ferrochrome business area

Global leader in stainless steel

Outokumpu is the global leader in stainless steel. We aim to be the best value creator in stainless steel by 2020 through our competitive edge of customer orientation and efficiency.

In 2017, Outokumpu's sales amounted to 6.4 billion euros and stainless steel deliveries 2.4 million tonnes. Outokumpu is the clear market leader in Europe and the second largest in the Americas market.

As of January 1, 2018, Outokumpu has four business areas: Europe, the Americas, Long Products and Ferrochrome. Our production units are located in Finland, Germany, the US, Sweden, the UK and Mexico, and we serve our customers through a global sales and service center network. Outokumpu's own chrome mine in Kemi, Finland is the source of the key raw material for stainless steel.

Our most important raw material is recycled steel, and the recycled content in our products is exceptionally high in the industry: nearly 90% of the raw material we use in stainless steel production is recycled – either scrap from the market or recycled from our own operations. At the end of its long life cycle, stainless steel can be recycled infinitely without any quality degradation during reprocessing.

We are proud of our products and competence. Stainless steel is an answer to many challenges posed by the megatrends of urbanization, mobility, climate change and limited resources. It is sustainable, durable and designed to last forever. We melt and mold recycled steel scrap into beauty and functionality that can be used and admired in various forms around the world. You can find us in civilization's basic structures and its most famous landmarks. You can also find us in homes as kitchen sinks, household cutlery and washing machines. Stainless steel is all around us.

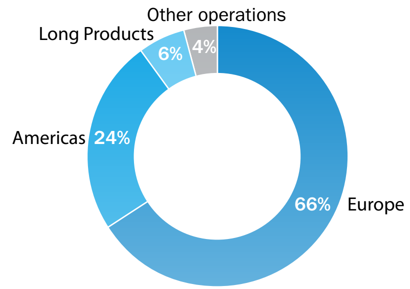
Outokumpu is listed on Nasdaq Helsinki.

10,141
employees

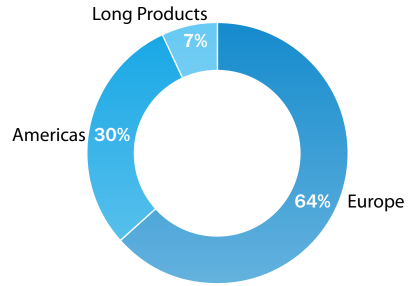
Operations in
over 30
countries

Founded in Finland in
1914

Sales by business area, € 6,363 million



Deliveries by business area, %



CEO's review

2017 was a successful year for Outokumpu: we achieved our key financial targets and made solid progress towards achieving our 2020 vision – to be the best value creator in stainless steel by 2020 through customer orientation and efficiency.

Rigorous execution of our six must-win battles – safety, high-performing organization, world-class supply chain, manufacturing excellence, commercial excellence and the Americas transformation – has resulted in higher profitability and strongly improved financial health of the company.

Outokumpu's adjusted EBITDA more than doubled from EUR 309 million to EUR 631 million. While the positive development in ferrochrome pricing during the first half of the year supported these numbers, the bulk of the improvement can be attributed to our relentless focus on costs and productivity, driving sustainable value creation. An example of this focus is the 25% reduction of our sales, general and administrative costs since 2015 to an annual run rate of EUR 300 million. Furthermore, solid operating cash flow of EUR 328 million brought our net debt below the ambitious target of EUR 1.1 billion set for 2017.

The performance across the businesses reflects the overall company focus. In Europe, the profitability of our stainless business was higher than ever, and the financial performance of our Ferrochrome business was good despite the operational issues that led to lower production volumes. Long Products' profitability returned to healthy levels fueled by decisive cost control, and the business area is well set for further growth.

The strong progress made during 2016 in the Americas continued during 2017. With the full-year adjusted EBITDA of EUR 21 million, the business area delivered its first positive result since the inauguration of the Calvert mill marking a substantial 48-million-euro improvement over 2016.

While financials are important, it's our people who determine our success. Therefore, having a safe and healthy work environment is vital. Best-in-class safety leads to improved quality and operational efficiency, and healthy organizations outperform unhealthy ones many times over. In 2017, we improved in both areas. Our total recordable incident frequency rate decreased substantially from 8.7 to 4.4 which is well below the average industry rate. Also on organizational health as measured through our annual survey, our ranking improved by one quartile. The fact that 80% of our employees participated in the survey reflects commitment to becoming a truly high-performing organization.

Sustainable value creation was driven by relentless focus on costs and productivity.

Sustainability is embedded into all our operations, products and business practices, and our continuous efforts have been widely recognized. As in 2016, the International Stainless Steel Forum (ISSF) granted their Sustainability Award to Outokumpu in 2017, this time for an emission reduction project in our Avesta mill. Reducing our carbon footprint and improving energy efficiency continue to be our key environmental targets going forward.

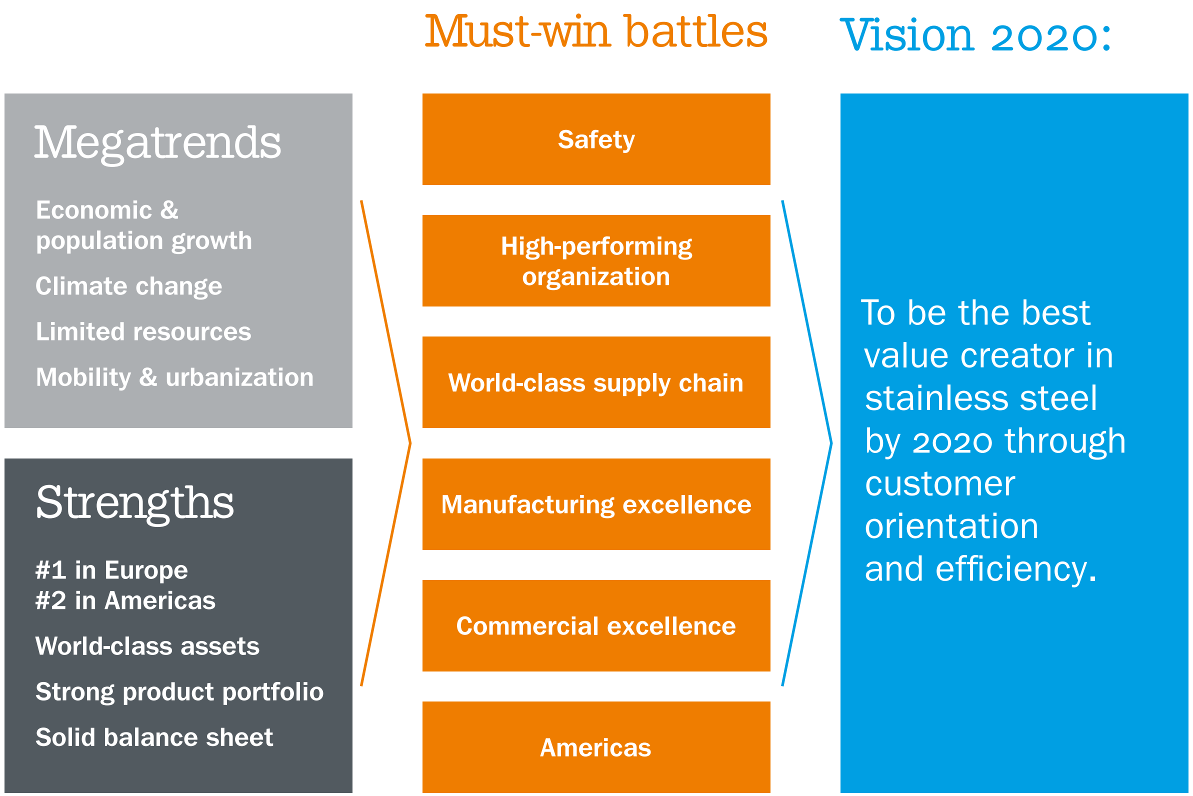
In 2017, we announced two large investments to secure our long-term growth and competitiveness. We are expanding the Kemi mine with a 250-million-euro investment during 2017–2020 to ensure chrome supply for the coming decades. We are also investing more than EUR 100 million in a business transformation program to harmonize our business processes and to prepare for further digitalization as a forerunner in the industry.

I want to thank all Outokumpu employees around the world for their tremendous work, commitment and energy during the past year. We are firmly progressing towards our 2020 vision and creating value for our stakeholders. I also want to thank our customers and shareholders for continued good collaboration and trust.

Roeland Baan
CEO

Outokumpu strategy – becoming the best value creator

Outokumpu's vision is to be the best value creator in stainless steel by 2020 through customer orientation and efficiency. The 2020 vision focuses our efforts on the areas where we need to improve to be able to create the best value for our customers, shareholders and employees. Our strategic targets, the six must-win battles, lead us towards our 2020 vision.



Outokumpu is the clear market leader in Europe and strong number two in the Americas. Our world-class assets, strong product portfolio and solid balance sheet form a sound foundation for our strategy execution. Global megatrends such as urbanization, mobility and climate change require sustainable solutions that last for generations. Due to its superb qualities, stainless steel can often be the optimal choice to tackle many of the challenges posed by the megatrends.

Must-win battles to realize the 2020 vision

Outokumpu's strategy builds on six strategic targets, or must-win battles, through which we aim to drive competitiveness and further improve financial performance. All six must-win battles – safety, high-performing organization, world-class supply chain, manufacturing excellence, commercial excellence and the Americas – are connected to customer orientation and efficiency improvements.

- Disciplined safety practices correlate with improved quality and operational efficiency.
- Flat structure, lean business support functions and shared services drive high performance throughout the organization.
- World-class supply chain will lead to more efficient operations by matching market demand with manufacturing capabilities through sharp planning of required capacity, resources and logistics.
- Manufacturing excellence aims for implementing a standardized operating model to unleash continuous productivity gains to reach industry benchmark competitiveness.
- Commercial excellence focuses on margin growth through a superior product strategy that matches market demand with an optimal product mix.
- The Americas holds the biggest profitability improvement potential, where all the other must-win battles are being capitalized to improve the business area's cost and market position.

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

Megatrends boost demand for sustainable solutions

Stainless steel demand is expected to grow by 23% between 2015–2020. Growth is mainly driven by few megatrends such as urbanization, mobility, economic and population growth and climate change. The need to find sustainable solutions that stand the test of time is tangible, as the megatrends raise concerns about economic, social and environmental sustainability.

Our commitment and contribution to sustainability are an integral part of all our operations from research and development and manufacturing to customer deliveries. Close to 90% of the raw materials we use are recycled which is among the highest in our industry. At the end of its long life cycle, stainless steel is 100% recyclable.

We believe that rigorous execution of our must-win battles coupled with sound and sustainable operations will enable us to reach our 2020 vision and capture a significant part of the market growth and thus provide the best value to our key stakeholders and the wider society. ■

Must-win battles

Must-win battle	Achievements so far	Next steps
Safety	• Total recordable incident frequency improved to 4.4 against the target of less than 8.0 in 2017 • New safety rules implemented and a Group-wide SafeStart training program initiated	• Target 2018: 4.0
High-performing organization	• EUR 100 million savings in sales, administrative and general costs achieved* • Organizational Health Index (OHI) score improved by one quartile to the third quartile in 2017 with an exceptionally high response rate of 80.4%	• OHI target in 2020: top quartile
World-class supply chain	• Improved procurement practices through establishing strategic partnerships with key vendors • Significant reduction of procurement costs	• Reduction of procurement costs by EUR 150 million by 2020
Manufacturing excellence	• Productivity improvement well on track • Consistent manufacturing operations model implemented to drive efficiency	• Annual 3% productivity improvement
Commercial excellence	• Higher contribution margin through value selling, pricing excellence and mix improvement, efficiency and reorganization • Continuously strong market position: #1 in Europe and #2 in the Americas	• Customer satisfaction at 75% in 2020
Americas	• Deliveries increased by 39%* • Significant adjusted EBITDA improvement to EUR 21 million from EUR –27 million in 2016	• Improving profitability and product mix

* Achievements since the launch of the new strategy in 2016 (compared to 2015 figures).

Stainless steel market

The consumption of stainless steel has been growing more rapidly than that of any other metal in the world.

In 2012–2017, consumption of stainless steel has grown about 5% per year, and the long-term prospects for increasing use of stainless steel are positive. The stainless steel consumption has been growing in all areas. Growth has been fastest in the APAC region, while consumption in the Americas and EMEA regions have grown slower.

Global market with a few big players

Outokumpu operates in the global stainless steel market. The market of cold-rolled products totaled approximately 29 million tonnes in 2017, of which Outokumpu's market share globally was approximately 6%. Our cold rolled market share in Europe is approximately 29% and in the NAFTA region approximately 21%. Outokumpu is the market leader in Europe and the clear no 2 in the Americas with a market share of approximately 20% in the US.

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

Overcapacity is decreasing in all markets

The stainless steel industry has been burdened by overcapacity in the recent years especially in Asia. The global stainless steel production capacity of slabs and billets increased in 2017 by roughly 3% to 66.4 million tonnes as a result of new capacity in Indonesia and China. Also, the global utilization rate was assessed to have increased above 70% levels in 2017. As the production of stainless steel is capital intensive, producers generally seek to maintain high capacity utilization in order to maintain and improve profitability.

The global stainless steel* production of slabs and billets grew by some 6% in 2017 from the previous year, reaching 48.0 million tonnes. The output increased most in Asia, namely in Indonesia and China, but also Europe and Americas showed growth in 2017. (Source: SMR)

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 2017, 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.

*Melting capacity of flat and long products.

Major stainless steel producers

Million tonnes	2018	2017
Tsingshan	10.2	8.2
TISCO	5.5	5.5
Outokumpu	3.3	3.3
Posco (incl. ZPSS)	3.2	3.2
Acerinox	3.2	3.2
Beihai Chengde	2.4	2.4
Aperam	2.1	2.1
LISCO	2.0	2.0
Baosteel	1.5	2.3

Source: Global stainless steel capacity, SMR January 2018.

With a growing demand, the long-term market outlook is positive

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

Global real demand for stainless steel products reached 41.2 million tonnes in 2017, an increase of 5.5% from 39.1 million tonnes in 2016. The growth was most pronounced in the APAC region at 6.3%, while demand grew by 3.4% in EMEA and by 3.2% in the Americas.

In 2017, the real demand growth was strongest in Consumer Goods & Medical and ABC & Infrastructure end-use segments at 6.7% and 6.0%, respectively. Meanwhile, Automotive & Heavy Transport achieved growth of 4.5%, followed by growth of 3.7% in Chemical, Petrochemical & Energy and 3.0% in the Industrial & Heavy Industries segment.

In 2017, the global steel production amounted to 1,691 million tonnes of which approximately 3% was stainless steel.

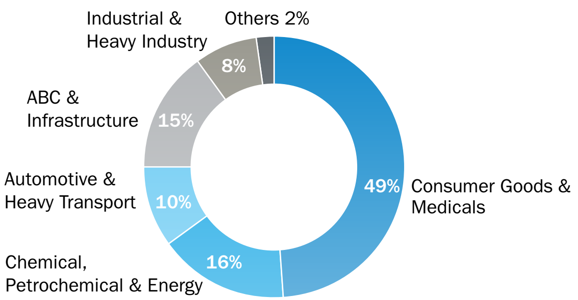
The long-term outlook for stainless steel demand remains positive. Global megatrends such as urbanization, climate change, and increased mobility combined with growing global demand for energy, food, and water are expected to support the future growth of stainless steel demand. Growth in stainless steel consumption between 2017 and 2023 is expected to be relatively well-balanced between the end-use segments. SMR forecasts growth rates of 5.0% in Architecture, Building, Construction & Infrastructure, 3.6% in Chemical, Petrochemical & Energy, 3.4% in Consumer Goods & Medical, 3.3% in Industrial & Heavy Industries and 2.6% in Automotive & Heavy Transport segment.

Raw material prices boosted earnings in 2017

In 2017, both European and US average base prices increased from 2016, having a positive impact on companies' earnings. Of the two major raw materials, nickel prices were up by approximately 9% and ferrochrome prices by 48% from the previous year.

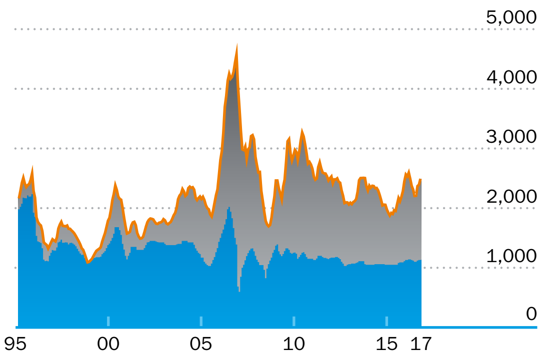
The nickel price was trending downwards in the first half of 2017 due to the expectations of increased ore availability from both Indonesia and the Philippines, as well as cyclically slowing apparent demand from the Chinese stainless steel sector. In the second half of the year, the price was underpinned by increased investor interest, weaker US dollar and the bright outlook for stainless steel demand as a result of global economic recovery. Prices hit the highest level of the year of USD 12,830/tonne in early November, before easing slightly to around USD 12,000/tonne levels at the end of the year. The average price of the year of USD 10,411/tonne was 8.5% higher than the average of USD 9,600/tonne in 2016.

End-uses of stainless steel in 2017



Source: SMR, stainless steel finished products (rolled and forged products excl. 13Cr tubes, profiles), January 2018.

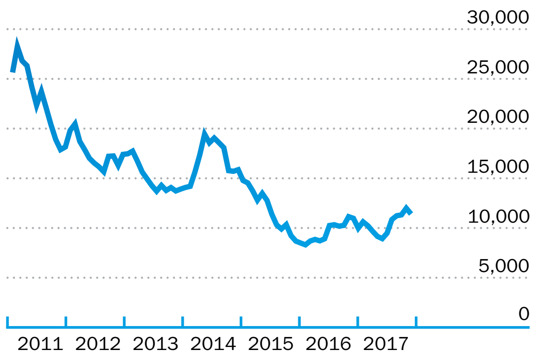
Stainless steel price*, EUR/t



Source: CRU January 2018

* Stainless steel reference price for cold rolled 304 2mm sheet in Europe.

Nickel price, USD/t



Source: LME settlement, monthly average prices.

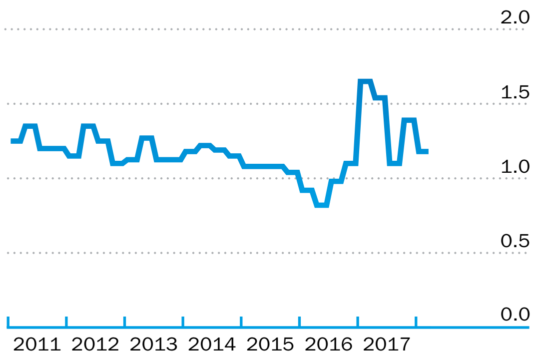
The European benchmark price for ferrochrome increased to USD 1.65/lb in the first quarter of 2017 as a result of weak availability of ore as well as strong demand of ferrochrome due to increased stainless steel production in China. For the second and third quarters, ferrochrome price decreased to USD 1.54/lb and USD 1.10/lb, respectively, as a result of improved availability and declined demand of ferrochrome in China. Prices increased to USD 1.39/lb in the fourth quarter, but retreated to USD 1.18/lb for the first quarter of 2018, following the apparent supply and demand situation of ferrochrome in China.

EU cold rolled imports from third countries are expected to have reached a level of 27.6% of the total consumption in 2017, up from the average 24.6% in 2016. Imports from Malaysia, the US, India and Taiwan were growing, while the volumes from South Korea, Vietnam and Brazil decreased. In the fourth quarter, EU imports are expected to have reached a level of 28.4%, slightly down from 28.6% in the third quarter. (Source: EUROFER January 2018)

The average cold rolled imports into the US are expected to have reached 22.5% of the total US consumption in 2017, lower than the average of 23.3% in 2016. Chinese imports decreased significantly, while imports from almost all other major exporting countries increased. Average cold rolled imports into the US reached 25.0% of the total consumption in October-November 2017, flat compared to the third quarter of 2017. (Source: American Iron & Steel Institute, November 2017)

More on our operating environment

Ferrochrome price, USD/lb



Source: Quarterly contract prices agreed between South African ferrochrome producers and European buyers, including Q1/2018.

Sustainability review 2017

RECYCLING MAXIMIZED ■ Stainless steel is 100% recyclable. It is one of the most recycled material in the world, and its quality is preserved in the process.

Our stainless steel contains a very high proportion of recycled materials, and we keep increasing this further to conserve virgin raw materials. Increasing the share of recycled material is the single most effective way to reduce our environmental impact.

Download the Sustainability review as PDF

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Sustainability at Outokumpu

In Outokumpu's view, sustainability is a precondition for competitiveness in the long run. Outokumpu's biggest contribution to a world that lasts forever is the stainless steel that we produce.

But it is not only what we produce, but how we produce it: Outokumpu produces stainless steel through a sustainable production chain in a responsible manner. Our business is based on the circular economy, as our most important raw material is recycled steel.

Policies and UN sustainable development goals

Sustainability is integrated into all our operations, activities and decision making, from purchasing of the materials to production and logistics. Outokumpu's operations are guided by our Code of Conduct, Ethical Principles (human rights and dignity, corporate responsibility, good corporate citizenship and safe and healthy workplace), Environment, Health & Safety and Quality Policy and Policy on Sustainable Development. We expect our business partners, subcontractors and suppliers to follow similar standards.

All our policies on sustainable development are available on outokumpu.com.

Outokumpu is part of the United Nation's sustainable development goals. We contribute to several of these goals either through the way we operate or through our products.

Materiality analysis

Outokumpu has evaluated the most material topics in sustainability together with its stakeholders. The main material topics are: safe and healthy workplace, resource efficiency in energy and materials, environmental impacts and climate change. The developments in material aspects are presented in this sustainability review.

The results of the latest materiality analysis

Certified management systems

All Outokumpu's sites are certified according to ISO 9001 and ISO 14001 management systems. Sustainability issues are built into these and safety management systems. The functioning of the systems is monitored by both internal and external audits. Outokumpu is also implementing an integrated management system through ISO 18001 standard for occupational health and safety.

> Our business is based on the circular economy, as our most important raw material is recycled steel. Sustainability is integrated in all our operations.

Sustainable performance in 2017

Outokumpu has set challenging goals and environmental key performance indicators for 2020. The company also follows up and measures other selected economic, social and environmental indicators.

Workplace accidents decreased significantly

Target 2017: Result 2017:

<8.0 4.4

Outokumpu believes that all accidents are preventable and therefore strives towards a goal of zero accidents. We overachieved our target for 2017, and our total recordable incident frequency rate (TRIFR, per million working hours) was 4.4 compared to the target of less than 8.0, which in absolute terms marks a 52% improvement from the previous year.

More on safety and health

100% of administrative employees had a regular discussion with their manager

Target 2017: Result 2017:

100% 100%

Outokumpu's clear target is that each employee has a regular performance and development discussion with their manager. In 2017, the discussion process was unified within the Group, and we reached the target of 100% of administrative employees in applicable countries having these discussions. Of all employees, 53% had a performance and development discussion with their supervisors.

More on personnel and organization

Specific CO_2 emissions reduced

Target 2017: Result 2017:

–0.7% –0.2%

As a result of further development in target setting according to the Science Based Target initiative, we revised our commitment to reduce CO_2 emissions: Outokumpu targets to reduce the direct, indirect, upstream and downstream transport emission intensity by 14% by 2023 compared to the baseline 2014–2016.

In 2017, Outokumpu maintained its CO_2 intensity at the level of the baseline 2014–2016. As some ferrochrome was bought externally because of production issues, the upstream emissions increased. This was compensated by our own excellent energy efficiency and recycled content.

Before following a target on CO_2 emission intensity, Outokumpu set an ambitious low carbon program in 2010 to reduce its carbon profile (including electricity and transport) by 20% until 2020. In 2017, Outokumpu reached this target three years ahead of schedule.

More on climate change

Energy efficiency improved

Target 2017: Result 2017:

10.3% 10.4%

(cumulative increase)

Outokumpu aims to improve the energy efficiency of its operations by 1% each year until 2020 and compares the cumulated efficiency increase to the baseline of 2007–2009. In 2017, Outokumpu further improved its energy efficiency by 2% from the previous year for the current operations. This corresponds to a saving of about 1.1 million MWh this year compared to the baseline.

More on energy efficiency

High recycled content in stainless steel production

Target 2017: Result 2017:

88.5% 87.0%

Outokumpu aims to raise the recycled content in its stainless steel to 90% by 2020 from the already highest content in the industry.

In 2017, the recycled content stayed at the level of the previous year. The target was not reached as our Calvert site had scrap delivery problems caused by the hurricanes in the Gulf of Mexico in the third quarter.

More on resource efficiency

No significant environmental incidents

Target 2017: Result 2017:

Zero Zero

Outokumpu's target is to have no significant environmental incidents, and the company has had no such incidents for many years. Certified management systems in all sites and global policies and processes help to reduce all kinds of environmental risks.

More on environmental compliance

All sustainability figures

Sustainability highlights in 2017

What if goods could be transported electrically?

In Sweden, Outokumpu is participating in an electric road project, the first of its kind in the world. The project aims to reduce the use of fossil fuels with the help of electrification in road transport. Outokumpu is committed to reducing emissions throughout its entire supply chain, including transport, and therefore we are proud to take part in this project along with other industrial companies.

An electric road has been built for part of the way from the industrial area where our mill is located in Avesta towards the harbor. The aim is to build more electric roads to cover the entire way. In 2017, Outokumpu received a Sustainability Award from International Stainless Steel Forum (ISSF) for its participation in this project and for efforts to decrease emissions from the transportation by using, for instance, biofueled trucks. ■

First ever shipment of LNG to Northern Finland

Outokumpu is part of a joint venture to diversify the gas and fuel market in Northern Finland with local liquefied natural gas i.e. LNG supply. The terminal was built in our production site in Tornio, and the first shipment for the new terminal arrived in November. The commercial distribution of LNG will begin in 2018.

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. For Outokumpu, the new LNG terminal means being able to switch from propane to LNG. The change will increase our competitiveness, reduce our production costs thanks to more stable energy prices and decrease direct carbon dioxide emissions. ■

When renewable meets unbreakable

Building an offshore wind farm is a feat of human engineering, but building one in the North Sea takes this challenge to another level. In an environment where freezing temperatures, strong currents and corrosive sea spray are the norm, there is no room for failure.

Under these extreme conditions, only the best materials are able to perform: Outokumpu provided Merkur offshore wind farm Forta DX 2205 duplex stainless steel, which delivers extraordinary mechanical properties and superior resistance to corrosion. Stainless steel is used in transition pieces built by industrial equipment manufacturers Idesa and Windar Renovable. Once completed in 2019, the wind farm is expected to generate 1,750 gigawatt-hours per year, enough to cover the energy needs of about half a million homes. ■

Game-changing LNG tanker

Finnish tank manufacturer LNGTainer launched a new game-changing liquefied natural gas (LNG) tank. The most revolutionary aspect of LNGTainer's new tank container is that the structure includes a light, flexible inside tank and outside pressure vessel. For the light inside tank, LNGTainer chose Outokumpu's Supra 316plus steel grade.

With the new patented structure, the customer could decrease the weight of the tank by 30% and increase its capacity by 15%. By having excellent low temperature properties, Supra 316plus enables thinner gauges, which translates into savings in weight, fuel, energy costs, as well as a lower carbon footprint. LNGTainer's new tank container is a real breakthrough, and it demonstrates the best use of stainless steel properties in extreme conditions. ■

Ecosystem review in Avesta

Outokumpu's Avesta mill in Sweden participated in a one-year ecosystem review (ESR) arranged by Jernkontoret, the Swedish steel producers' association. The ESR presents a broader perspective on how Outokumpu connects with the world outside and on our dependences and impacts.

The review highlighted the importance of clean water available to Outokumpu, essential in stainless steel making, and the importance of sand ridges and their filtering power. Society is putting that filtering capacity under threat by digging out large volumes of sand. For instance, steel slag can be used to replace sand in various applications, like concrete-making. By promoting slag utilization, high-volume uses of these sand ridges can be minimized, and they can be preserved. ■

Safe and healthy working environment

At Outokumpu, safety is the number one priority. Everyone who works or visits the company's premises – employees, contractors, and visitors – has the right to a safe and healthy environment.

Outokumpu's safety philosophy is based on our strong belief that all accidents are preventable. Safety takes priority over all other activities at Outokumpu, and we strive towards our ultimate goal of zero accidents through continuous improvements in safe working practices.

Outokumpu has defined six must-win battles, focus areas that will help us reach our vision 2020. Safety remains our first must-win battle, and we aim to reach a position among the top industry leaders in safety through a standardized and disciplined approach that also correlates with improved quality and operational efficiency.

Safety first

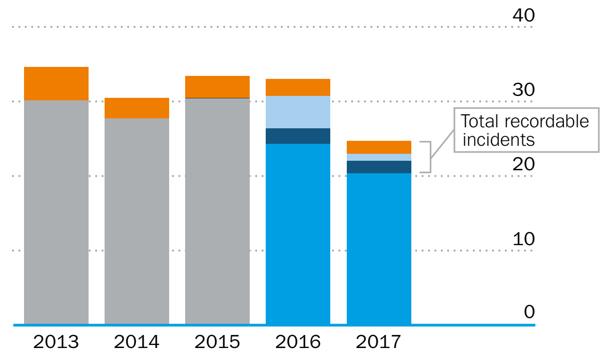
Training our employees to recognize risks and potentially hazardous behaviors is a fundamental part of preventive safety work at Outokumpu. In 2017, we started the behavioral safety training program SafeStart at selected production sites in Europe and the Americas, with plans to train all Outokumpu employees in 2018. New training for conducting Safety Behavior Observations, an important safety leadership tool, was also introduced.

In 2017, Outokumpu established group-wide Cardinal Safety Rules – ten fundamental rules set to ensure the safety of everyone at Outokumpu. Covering the most severe breaches of safety behavior, these common rules form the foundation of safety for all Outokumpu employees, contractors, and visitors.

Monthly Safety Calls hosted by the CEO continued with a focus on the past month's safety performance, lost-time incidents, and sharing best safety practices across all Outokumpu sites. The annual Outokumpu Safety Week was held again in April with a focus on improving risk assessments and hazard observations.

Safety statistics were reported to a common reporting system on a monthly basis. The definitions of both leading and lagging safety performance indicators are based on international standards. Incident rates and the rate

Workplace accidents*



* Per 1 million working hours.

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

of proactive actions (leading indicators) were reported per million working hours.

In May, a fatal accident involving an Outokumpu contractor occurred in Degerfors, Sweden. Full measures were taken to thoroughly investigate the incident together with the authorities. Following the incident, comprehensive improvements have been implemented across all Outokumpu sites to avoid similar risks in the future.

Outokumpu uses total recordable incidents per million working hours (TRIFR) as the main safety performance indicator. Group TRIFR improved significantly from 2016 and was 4.4 against the target of < 8.0 (2016: 8.7). Group LTIFR (lost-time incidents per million working hours) was 1.8 against the target of < 1.7 (2016: 2.2). The rate for all workplace accidents (total recordable incidents and first aid treated incidents per million working hours) was 24.7. The lost-day rate (more than one calendar day absence from the day after the accident per million working hours) was 71.2 (2016: 55.1). The frequency of proactive safety actions (per million working hours) increased to 3,240.6 (2016: 3,013.7).

Occupational health

Health activities at Outokumpu focus on continuously improving the working environment and occupational health and safety to promote the well-being of our employees and prevent occupational diseases. In improving and monitoring the working environment, Outokumpu cooperates with universities, specialist institutions, external associations as well as our suppliers. For example, in Tornio, Finland, Outokumpu has cooperated with a supplier to develop personal protective equipment for melting shop conditions.

Systematic occupational hygiene measurements and health checks are carried out at sites according to standards and legislation. For example, to protect the health and hearing of employees in the US, audiometric testing and hearing conservation training is conducted for all employees working in areas where noise exposure meets or exceeds 85 dBA (8-hour weighted average). In Tornio, Finland, 1,088 occupational hygiene measurements were conducted to measure the noise, vibration, and impurities in the ambient air.

The number of occupational diseases diagnosed in the Group decreased. In 2017, there were no occupational diseases (2016: 4). The total absentee rate was 4.0% (2016: 4.1%); in Europe, the rate was 5.6%, in the Americas 0.5%, and in the rest of the world 1.0%.

Workplace accidents by region, accident and employee type

	Group	Europe	Americas	Asia and rest of the world	Female	Male	Employees	Contractors
TRIFR [1]	4.4	5.0	3.0	0.0	0.3	4.1	3.8	6.4
LTIFR [2]	1.8	1.9	1.4	0.0	0.1	1.7	1.5	2.9
Total recordable incidents [3]	100	79	21	0	7	93	69	31
Fatalities	1	1	0	0	0	1	0	1
Lost-time incidents	40	30	10	0	3	37	27	13
Restrictive work incidents	21	17	4	0	4	17	15	6
Medically treated incidents	38	31	7	0	0	38	27	11
Lost-day rate	71.2	65.4	85.5	0.0	2.7	67.9	71.7	69.2

[1] Total recordable incident frequency includes fatalities, lost-time incidents, restrictive work incidents and medically treated incidents, per million working hours.
[2] Lost-time incident frequency incuding fatalities and lost-time incidents, per million working hours.
[3] Includes fatalities, lost-time incidents, restrictive work incidents and medically treated incidents.

Well-being at work

Outokumpu wants to ensure that every employee can return home after their working day in good health, both physically and mentally. The health and well-being of our personnel is an important asset in our day-to-day operations as well as a driver for our success in the long term.

We offer various health examinations and preventive checks to support the health of our employees. For example, in the Netherlands, Outokumpu provides regular occupational health checks for employees every three years. In Sweden, voluntary blood pressure and blood sugar checks as well as fitness tests were offered to employees during a wellness awareness week. In the US, Outokumpu arranged voluntary medical tests such as free cancer screenings. A campaign was launched to raise awareness of breast cancer. Other preventive medical care activities, such as influenza immunization, were offered at various Outokumpu sites.

Outokumpu sponsors employees' recreational activities and voluntary wellness programs in many ways. To encourage activity during the work day, a hiking trail has been set up close to our facilities in the Netherlands so that employees can take short walks and enjoy the fresh air during their breaks. In Germany, Outokumpu apprentices had the possibility of participating in a five-day preventive wellness program including topics such as ergonomics, nutrition, and exercise. Healthy lifestyles were also promoted in the US with a non-sugar campaign and guidance from a nutritionist.

A year of learning and boosting organizational health

At Outokumpu, 2017 was a year of rolling out a new, common performance management process, a year of capability building, and a year of learning how to work together in the new organization.

Becoming a healthier organization

During 2017, Outokumpu conducted its second annual Organizational Health Index (OHI) survey among all the employees. The survey is one element of becoming a "high-performing organization", one of Outokumpu's six must-win battles. To succeed long-term, high-performing organizations need to measure and manage organizational health with the same consistency as performance itself. OHI is a tool that allows Outokumpu to clearly link the day-to-day behaviors and mindsets of employees to its strategy and must-win battles, and to benchmark its score against 1,300 other companies. The results of the second annual OHI survey serve as the main building block for future people development.

The 2017 survey response rate was 80.4% (2016: 70%), which is an extremely good result for any company but particularly high in manufacturing. Employees provided more than 14,400 open comments, recommendations and opinions. The overall score landed Outokumpu in the third quartile, leading to an improvement of one quartile up versus the previous year, as targeted. Based on the survey, leadership and empowerment were identified as key development areas for 2018. The progress with action plans for these areas will be closely monitored throughout 2018. The company target is again to move one quartile up in the next OHI survey in autumn 2018. This would move Outokumpu to the top half among all companies using the OHI methodology.

Striving toward cost competitiveness

The vision of Outokumpu is to be the best value creator in stainless steel by 2020 through customer orientation and efficiency. For reaching the vision, Outokumpu defines a mission for each year and, in 2017, the mission was to secure cost competitiveness by the end of 2017. One of the key initiatives to reach that goal was setting up the new, simplified organization to achieve a lighter cost base and help in bringing in EUR 100 million in total savings in sales, general and administrative costs.

In 2017, the simplified organizational setup with fewer layers of management proceeded as the implementation of personnel reductions negotiated in 2016 continued further with 100 German administrative employees leaving the company during the year. For the coming years, there are already fixed contracts in place that will further help reduce the headcount in Germany. Overall, the number of employees decreased by 4% or 459 persons globally during 2017 due to the sale of two plants in the US and the continued restructuring measures and previously agreed site closures.

Collaboration towards goals

Ongoing cooperation with personnel takes place in a joint consultative body, the Personnel Forum, as an information channel between management and employees. The Personnel Forum discusses issues concerning transnational interests, such as financial performance, employment issues, reorganization, health and safety, and technology and research. The forum has 33 representatives from European countries and it 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 2017, the Personnel Forum met once and the Working Committee convened four times.

A year of capability building

Following the new, common processes throughout the company, hundreds of Outokumpu employees participated in training programs during 2017. Both face-to-face classroom training sessions and virtual e-learning courses were held. Sales Academy activities continued, to enhance sales competences. Manufacturing Excellence initiatives were kicked off during 2017, including training sessions and development projects for employees in Operations. In the SafeStart program, focusing on behavioral safety awareness aimed at reducing accidents, rollouts at the Outokumpu sites around the globe started during the summer 2017 and continue also in 2018. The License to Lead training program for building leadership skills for first-line managers was initiated in May and continued throughout the year. During 2017, the overall company learning landscape and strategy were reviewed and, in 2018, the new plans will be taken into practice.

Overall, the average number of training and development days was 14,500 (2016: 10,990) and 103,218 hours (2016: 87,916) during the year.

The global talent management work in 2017 focused on organizational development and succession planning. To this end, the career development of 54 young talents was assessed using a method where the talents participated in group exercises, case studies and interviews. Each participant received concise feedback and a report about their strengths and development areas afterwards. Furthermore, the succession plans for each of the main functions were reviewed. The talent management system for the Outokumpu Group was updated and is now owned by the Outokumpu Leadership Team, who regularly reviews the process.

Common performance review tool and process for everyone

A common, global employee data platform was taken into use in 2017 and it is available for all employees. Building the infrastructure and the processes behind the tool and providing training for all employees was a big effort for the company, as this is the first time all production and administrative employees are included in the same system globally. The tool includes all the basic HR processes and helps every employee in managing their learning curriculum and performance management process. The new HR platform also supports managing the compensation processes effectively, and managers have clear visibility to the compensation details of their team members. Each employee can also check their own data. Furthermore, all internal and external recruitments go through the platform, helping both HR and recruiting managers with a well-structured process.

The new HR platform enabled the rolling out of a global performance management process for all employees globally. The target is that everyone at Outokumpu, both production and administrative employees, has a regular performance and development discussion with their respective managers in 2018. In 2017, 53% of all employees and 100% of administrative employees in applicable countries had a regular performance development discussion with their manager. In those countries where local contracts or regulations do not make it possible to have performance development discussions, Outokumpu follows a different local procedure.

Outokumpu's principles and framework for salaries and incentive plans remained mostly unchanged and salary increase budgets were limited in 2017. More on remuneration

Zero tolerance for any discrimination

Outokumpu 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. Outokumpu fosters equal opportunities and diversity. Employment decisions will be based solely on business reasons and will be made according to the national employment laws.

Our people by region

	2017	2016	2015
Germany	**2,744**	3,004	3,186
Finland	**2,377**	2,363	2,396
Sweden	**1,619**	1,656	1,760
The United Kingdom	**538**	513	560
Other Europe	**624**	611	577
Europe	**7,902**	8,147	8,479
The United States	**1,077**	1,220	1,216
Mexico	**1,000**	1,058	1,095
South America	**85**	88	92
Americas	**2,162**	2,364	2,403
Asia/Rest of the world	**77**	89	120
Group total	**10,141**	10,600	11,002

In 2017, nine alleged incidents were recorded in Outokumpu (2016: 6). The Group reviews and investigates all incidents. When required, corrective actions are taken accordingly.
Read more on compliance

Outokumpu complies with the 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. The majority of Outokumpu operations are located in Europe, in the US, and Mexico, where the risk related to the human rights in our operations is not considered to be high.

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. Employees are free to join trade unions according to the local rules and regulations, and in 2017 altogether 82% of the Group's employees were covered by collective agreements (2016: 86.5%). In 2017, 408 days were lost due to strikes (2016: 2,254.8).

Focus areas for 2018

Year 2018 provides a significant milestone for the development of the organization and for leadership growth within Outokumpu. The whole company will be working toward further improving business capabilities through various learning and development initiatives for employees and, at the same time, positively impacting the organizational health.

Leadership will stay as one of the most important areas of competence development and, therefore, the leadership program for shift leaders continues in 2018 and the program is extended to include the foremen working at our service centers in Europe. Other managerial levels will also be included into the development landscape in 2018.

The implementation phase of the Outokumpu business transformation program will substantially increase the training needs for the employees. The first rollouts of the program will take place in 2018, and linked to that, more than 90 different training courses will be offered to 1,400 employees. In addition to the need to learn how to use the new tools, the business transformation will introduce new processes and ways of working throughout the company.

The performance management process will be developed further with evaluation calibrations to ensure consistent and transparent evaluation process throughout the global teams and fuctions. A similar approach will be used in talent management, where the process will be enhanced with management audits prior to management appointments.

There is a new graduate program planned to recruit new, young talents in the house. Graduates will be hired to entry-level positions and the target is to develop an international, versatile group of professionals. On-the-job development is enriched by an onboarding program as well as network and training activities.

The new HR platform launched in 2017 will be fine-tuned for further optimization. Processes managed through the tool will get more self-service features so that processes such as recruiting can be managed more by the recruiting organization itself, instead of relying heavily on the HR organization.

Preparations were made for the European Union's upcoming General Data Protection Regulation (GDPR), taking effect in May 2018. As the potential sanctions are sizeable, all companies need to be well-prepared for this change. ■

Outokumpu and society

Goals for 2017 and 2018

Goals for 2017	Status	Goals for 2018
Mission critical behaviors	Launched to support the company in reaching our vision: leadership, sense of urgency – execution with speed, relentless drive for improvement, decisiveness, collaboration, and effective communication	Further strengthening the mission critical behaviors within the company to support the Outokumpu strategy and business targets.
O'Leader training program	Continued in 2017.	Evaluate the success of the program and define the next steps.
Employee engagement survey (Organizational Health Index, OHI)	Second annual OHI survey conducted in the autumn 2017, targeted improvement achieved by moving one quartile up.	Moving one quartile up, to the top half of companies using the OHI methodology. Improvements throughout the functions planned, follow-up survey in the autumn 2018.
Employer branding and employer value proposition	Planning and definition work continued.	Employer value proposition to be defined and communicated. Employer branding action plan for 2018 to be implemented.
Competence development activities in functions (Sales Academy, Manufacturing Excellence, Supply Chain Excellence initiatives)	Training sessions held throughout 2017.	Developing sales competences, supply chain and manufacturing excellence continue.

Responsible sourcing, responsible supplier

As a producer of stainless steel, Outokumpu is a supplier to the leading brands in the most demanding industries. Our customers operate in building and construction, produce energy and manufacture appliances and cars.

Our customers need a fully traceable and transparent supply chain: they want to be assured that the materials for their applications are produced and procured in an ethically responsible manner.

Recycled steel is the most important raw material

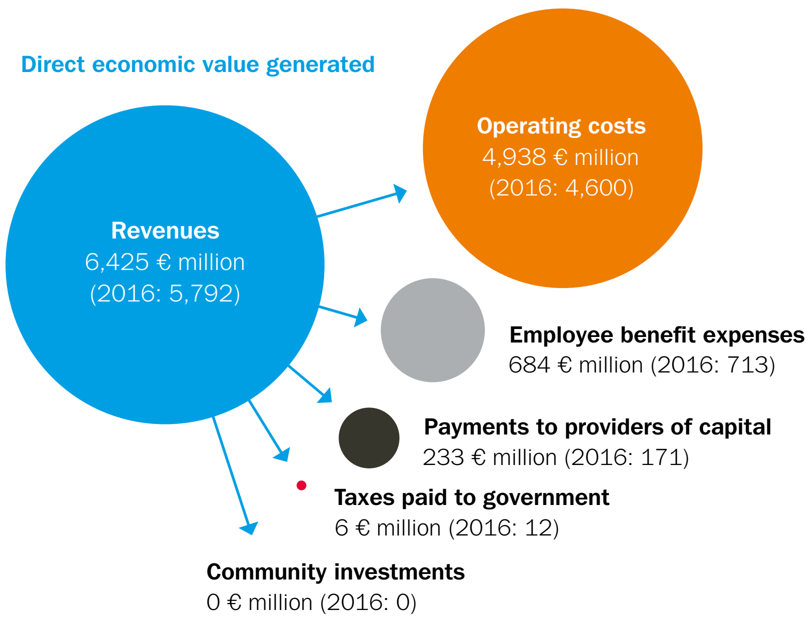
Outokumpu's business is based on recycling. The most important raw material for Outokumpu is recycled steel. With the use of recycled steel and recycled metal from the process, only 13% of steel came from primary sources in 2017.

We require a lot from ourselves and our suppliers

As the only company in stainless steel with fully integrated production – covering the production from mining of chrome and ferrochrome production to the melting, hot rolling, cold rolling and finishing of stainless steel – means that we know and control this supply chain to the fullest extent.

Direct economic value generated and distributed

Economic values retained in business
565 € million (2015: 295 € million)



As our customers require a lot from us as a supplier, we place the most stringent requirements on ourselves, and require the same from our suppliers. All suppliers and subcontractors must comply with our Code of Conduct and meet our supplier requirements, which expect our suppliers to act according to 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 and there has been no improvement, Outokumpu will discontinue purchasing from the supplier. Outokumpu has declined business opportunities in cases where it has been established that the business partner is not following the principles of our Code of Conduct.

Suppliers in 2017

Outokumpu monitors its suppliers through self-assessment, screenings and audits. Outokumpu has a regular compliance screening in place that covers the majority of the suppliers. In addition, 60% of the suppliers are going through a monthly compliance screening for sanctions. Outokumpu renewed and enhanced its supplier requirements and the related supplier assessment approach in 2017. The new approach was piloted with six suppliers, who completed self-assessment, and two on-site audits including environmental and social aspects. No misconducts were identified in the assessments. Approximately 40 suppliers completed the previous version of the self-assessment, which was less comprehensive.

In 2017, Outokumpu had 10,173 suppliers in 60 different countries. 87% of the suppliers are located in Finland, Germany, Sweden, the United Kingdom, the US and Mexico, where Outokumpu has production. In those locations where we have significant production sites with melt shops, local suppliers account for 12% of purchases. There were no major changes in the supplier base during the year.

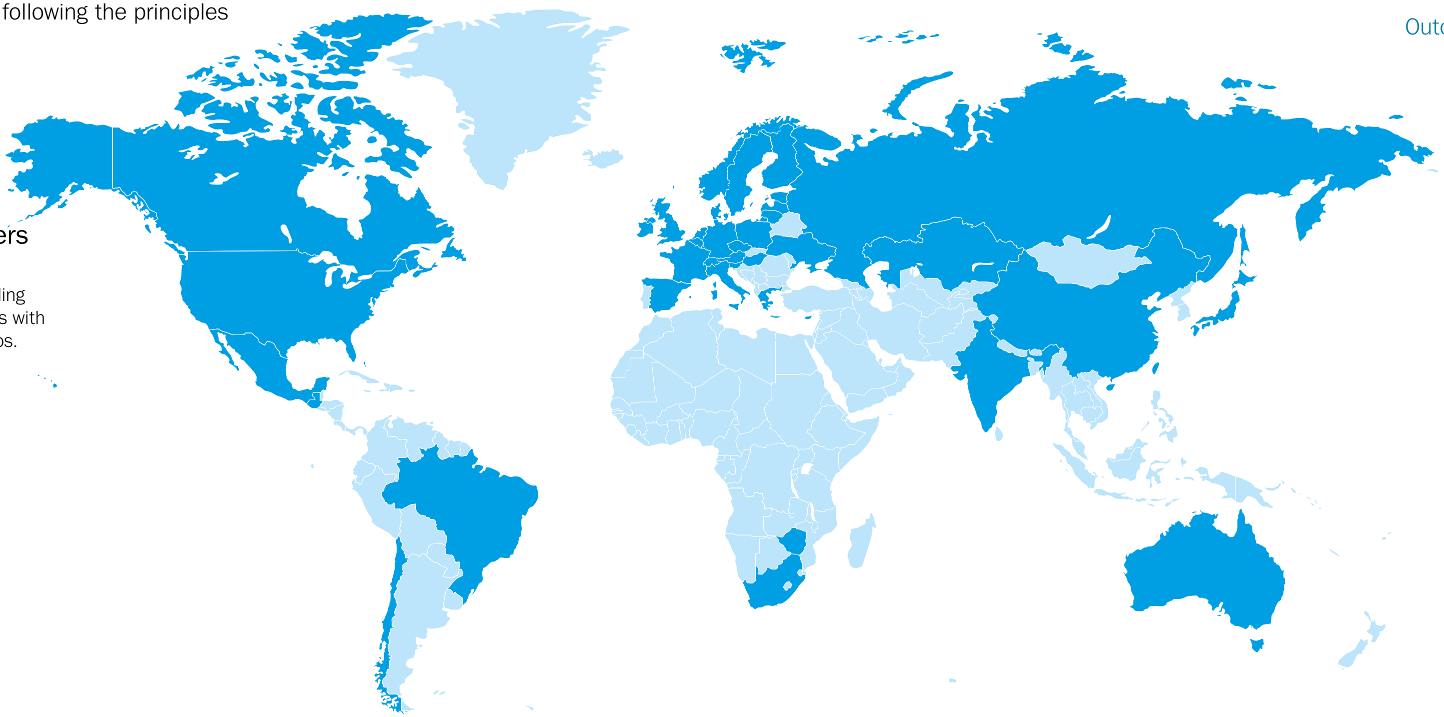
Moving to rail and ships

Outokumpu's target is to transport as much of its products by rail and ship as possible. In 2017, 55% of our product transports was done by trains and ships and 45% by trucks. Our mills have various programs and targets to make transportation more environmentally friendly. Although the total shipments increased by over 50% in 2017, the emissions of transport increased only by 12%. For example, our mill in Avesta is participating in a local electric road project and switching to biofueled trucks. ■

Outokumpu and society

Material and service suppliers

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



Resource efficiency and the circular economy

Outokumpu operates in the circular economy. Stainless steel is one of the most recycled materials in the world.

Our stainless steel mills are in fact giant recycling facilities, producing new products out of scrap, recovering and recycling everything reasonable in our own production and finally selling by-products from the manufacturing process to replace natural resources. Our approach is two-fold: we aim to both reduce the total volume of landfill waste from our own operations and increase the proportion of materials sold as by-products.

Very high recycled content

84.1% of our raw material in 2017 was recycled steel, both stainless and carbon steel. The entire recycled content of our stainless steel is even higher, at 87.0%, since we recover and recycle metals from the production processes, for instance from dust. Dust recovery is either carried out on the site or by an external facility.

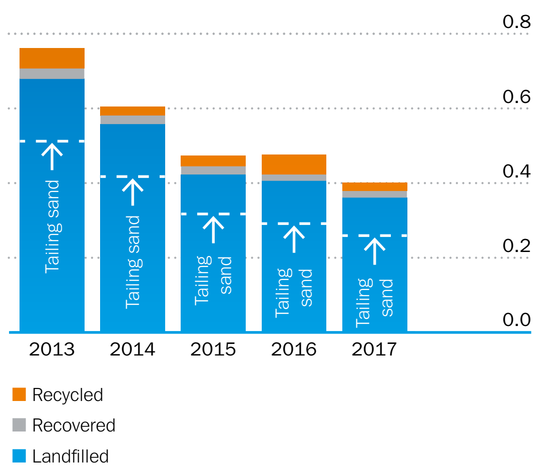
Our recycled content is already very high. To produce stainless steel we have used about 87% of recycled materials, while according to the estimates, recycled content of all steel production is around 35% and about 78% for stainless steel in the Western world*. Outokumpu follows the ambitious target to reach 90% recycled content by 2020.

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. As far as reasonable, these are also recovered and recycled in the process. Some of these additives are used to minimize or prevent emissions to the environment.

All materials used

*Source: For global steel production Bureau of International Recycling: Ferrous report 2017 and World Steel Association, and for stainless steel ISSF 2015.

Total waste development, tonnes per tonne steel



Waste to landfill decreased

The biggest waste items at Outokumpu are slag that cannot be reused, tailing sand from the mining operations and 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 landfill waste, and we follow a strategy towards zero landfill waste.

The amount of tailing sands from the mining operations was lower in 2017 compared to the previous year, as the production of chrome concentrate decreased. Tailing sands are deposited in tailing ponds in the mine area.

In 2017, Outokumpu was able to reduce landfill waste by more than 8% even if our production increased by 3%. The total amount of waste was 1.2 million tonnes. Slags which are utilized are not reported as waste. 65% of waste was tailing sand deposited in the pond of mining area itself and further 25% was landfilled waste. 5.4% of waste could be recycled and 4.4% recovered. However, Outokumpu was not able to increase the share of recycled waste because one of our suppliers for dust processing ran into production issues. Recycled metals from dust, scales or sludges are used for steel making. Other recovered material like lime, bricks and some sludges are mostly used in our melting shops to substitute virgin additive materials like slag formers.

Our slag use rate is 91.1%. Using slag saves virgin resources and reduces the amount of waste.

Total waste development

Turning slag into by-products

Outokumpu produced 2.3 million tonnes of slag as main by-product of operations. Slag is essential material in the steel melting process, and it is made from limestone or other natural minerals. One of the most important ways to reduce the amount of waste of steel production is to turn slag into products for useful use. Outokumpu has developed slag-based mineral products for road construction, refractory and concrete production and for water treatment. By using our slag by-products, not only does the amount of waste reduce, but virgin materials can be saved and CO_2 emissions reduced. For example, in road construction, slag saves both environment and money.

In 2017, the use rate (including use, end-of-waste and recycling) of all slag was 91.1%. Remaining 8.9% was 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.

Total and hazardous waste

Tonnes	2017	2016	2015
Tailing sand	**784,585**	856,245	830,874
Other waste	**423,383**	540,150	407,996
of which hazardous waste	**144,617**	139,224	127,007
recycled	**14,506**	13,224	14,337
recovered	**41,171**	43,521	44,900
landfilled	**88,939**	82,485	67,769

Data has been restated for the current sites.

Energy efficiency

Outokumpu operates in an energy intensive industry. For the recycled steel to melt, it is heated up to 1,400°C. The best available technique for melting recycled steel is to use electric arc furnaces.

It is our responsibility to make the energy consumption as efficient as possible. Outokumpu is minimizing the total energy usage and its environmental impact. Although the melting of recycled steel and the production of stainless steel use a lot of energy, stainless steel enables more energy efficient solutions from a life-cycle perspective by saving energy during its use phase.

Efficient production

Outokumpu continuously strives to make its production operations more energy efficient. Our target is a yearly 1% improvement in energy efficiency. The most important remaining energy-saving potential lies in the high utilization rate of facilities and recovery of waste heat. Energy reduction and efficiency plans are included in our environmental management systems. Over the past years, we have restructured production sites and optimized the internal supply chain and have increased our global capacity utilization. This has improved the overall energy efficiency of our operations.

The biggest item in our energy consumption is electricity but Outokumpu also uses natural gas, propane and other fuels, such as diesel. Fossil fuels cover about 83% of our total fuel consumption. In Tornio, we are recovering and reusing carbon monoxide process gas from ferrochrome production in our operations. Process gases and their heat are also used to heat buildings on the site.

In 2017, Outokumpu prepared for the use of liquefied natural gas (LNG) to replace propane at its Tornio mill. The first LNG shipment arrived at the end of the year. With LNG, we improve our competitiveness and cut our direct CO_2 emissions.

The energy intensity per tonne stainless steel has continuously reduced during the past years. In 2017, we improved our energy efficiency by 2% compared to 2016. Cumulative improvement in the past eight years, against the baseline of 2007–2009, was 10.4%, corresponding to the savings of 1.1 million MWh of energy during 2017. Several energy efficiency initiatives contributed to the savings. In 2017, Outokumpu focused on improving implemented energy efficiency projects.

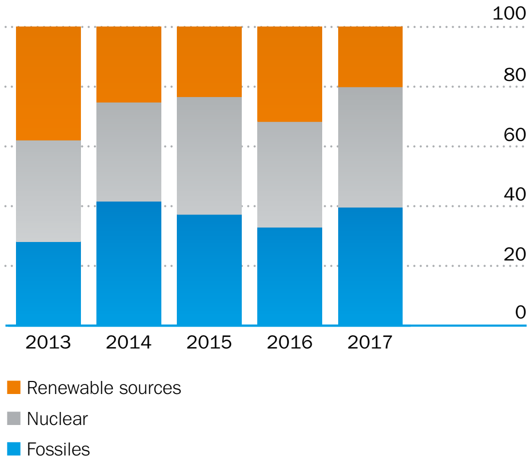
Towards low-carbon energy

Outokumpu's energy procurement is centralized. Its aim is to secure sufficient energy supply; to ensure predictable, competitive and stable energy prices and to optimize the energy portfolio.

Outokumpu has participated in low-carbon energy programs in wind power, hydropower, combined heat and power as well as nuclear power. For example, we are a shareholder in a wind power park located in our Tornio mill area, Finland; LNG terminal in our Tornio harbor as well as in a hydropower plant in Norway. A 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 the nuclear power plant to be built by Finnish Fennovoima.

The aim of all these measures is ensure our energy supply and to reduce our CO_2 emissions. In 2017, 60% of our electricity sources came from low-carbon (renewable and nuclear) sources. ■

Origin of electricity, %



Energy used

Terajoules, TJ	2017	2016	2015
Electricity	**16,326**	16,733	16,116
Carbon monoxide gas	**2,003**	2,405	2,241
Natural gas	**4,241**	4,307	4,139
Propane	**5,016**	4,639	4,466
Diesel, light and heavy fuel oil and other	**580**	613	613
Energy	**28,164**	28,697	27,576
Energy use in GJ per tonne crude steel	**9.3**	9.8	10.5

Data for the current sites.

Environmental impacts to a minimum

Outokumpu's target is to keep the environmental impacts to a minimum as much as economically and technically possible.

Water ponds at our Kemi mine are nesting or feeding habitats for waterfowl, birds and wildlife. The mine cooperates with the local ornithological society to monitor the local biodiversity.

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 waste created in the production process. We reduce the impact on the environment by proactively developing our production processes, energy and material efficiency and solutions for by-products of our operations.

Dust emissions kept at low levels

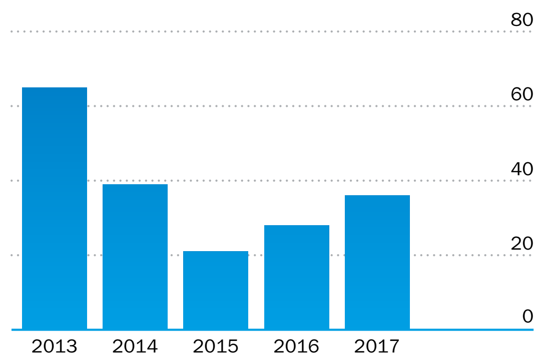
Dust and scales are generated in our operations by steel melting and rolling processes. Dust and scales are collected, treated and, whenever possible, recycled at our own production or elsewhere. For example, raw material metals (chromium, nickel and molybdenum) are recovered from dust and scales through specialist recovery equipment.

Our dust filtering systems are extremely efficient and remove 99% of the particles. With the production of 3,022,000 tonnes of stainless steel, the measured particle emissions from all of our production processes was 366 tonnes in 2017 (2016: 569 tonnes). The majority of particles were emitted from the ferrochrome production process where the emissions were 95 tonnes lower than in 2016. But emission measurement results in this process include high uncertainty causing remarkable fluctuation in results year by year. On the other hand, specific particle emissions from melt shops increased as the estimation of high efficiency dust abatement is varying based on the operation and measurement conditions.

The level of dust emissions from the melt shops is well within the limits of environmental permits. Therefore, 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. Despite these precautionary measures, mercury or radioactive material is sometimes noted only when the steel is melted. There was one incident involving radioactive material in 2017. The mercury emissions measured at our plants and their surroundings in 2017 were minor and amounted to less than 200 kilograms from all European melt shops. We work together with our suppliers to decrease the amount of unwanted materials in our production processes.

Melt shop particle emissions, grams/tonne



Water is reused in production

Water is needed in stainless steel production for cooling, pickling and cleaning. Outokumpu reuses water as much as possible in its own operations. Naturally some water also evaporates and leaves the system. All wastewater is treated in the company's own treatment plants before it is discharged or in municipal water treatment systems. The main discharges into water are metals and nitrates.

Water used in the production is mainly surface water. Withdrawal of water increased, as the stainless steel production increased. The decrease in water discharges was driven by the Kemi mine, as the mine is expanding further underground and one of the tailings ponds has been raised. At the same time, the metal discharge could be reduced.

Not all reported nitrate emissions are discharged to the environment. The nitrate increase is caused by the production increase at the cold rolling mill in Krefeld, Germany. But the wastewater from Krefeld is sent to be treated in a municipal water treatment plant before discharging to surfaces water. Nitrate discharge to surface water stayed on the same level as during the previous three years.

Outokumpu operates a cold rolling mill in San Luis Potosí, Mexico, in a dry, arid area, where groundwater is a scarce resource for people. Water is used in our production process in annealing, pickling and cooling. Water is undergoing an exceptional treatment and recycled as much as possible, and only a few cubic meters are discharged to municipal water system. Small amounts of cleaned water percolates to groundwater again.

Impacts of the mining operations are limited

The environmental impacts of our mining operations in Kemi, Finland are very limited due to the nature of the process, as the minerals are very stable, and chemicals are not used in the beneficiation process. There were no major changes in 2017, and the emissions have remained stable at very low levels. Dust emissions are minimal due to the underground mining. The biggest impact on environment from the mine are nitrates in the wastewater which originates from explosives. However, nitrates are efficiently reduced in the internal water recycling of the mine. Only small amounts of water is conducted to local water recipient. Tailing sand basins are landscaped as forests when full.

Water withdrawal and discharges

Million m³	2017	2016	2015
Surface water	**38.2**	37.9	36.6
Municipal water	**1.2**	1.2	1.1
Groundwater	**1.2**	1.4	1.1
Rainwater	**2.4**	1.7	1.7
Water withdrawal by source	**43.1**	42.2	40.5
Water discharges by type and destination			
Wastewater out	**20.5**	21.6	21.0
Discharge to surface water	**19.2**	20.2	19.6
Emissions to water			
Metal discharges to water, tonnes	**24**	36	50
Nitrogen in nitrates, tonnes	**2,478**	2,258	1,767

Part of the nitrates is treated in a municipal treatment plant.

Cost of actions related to environment

Costs for environmental-related activities for 2017 amounted to EUR 114 million. Operational costs were EUR 104 million and include process-related treatment, disposal and remediation costs of waste and emission reduction into air and water. In 2017, some EUR 2 million was invested in the on-going capacity upgrade of one tailing sand area in Kemi mine. Also, EUR 4.2 million was invested in the joint venture of a liquefied natural gas (LNG) terminal, where Outokumpu's share is 45%.

Environmental provisions

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 listed for example by UNESCO, and none of our sites have been found to disturb biodiversity in any way. However, Outokumpu has identified areas of high biodiversity value that are owned by the company or adjacent to our sites in Dahlerbrück, Germany, Kemi and Tornio, Finland, and Calvert, Alabama, the US.

Outokumpu regularly monitors the environment of its production sites together with authorities and other third parties. Areas once utilized by production are remediated for further use.

More on biodiversity

Protecting the climate

Climate change is one of the major challenges in today's world. For Outokumpu, it means both the reduction of our carbon footprint and the possibility that our products can reduce the carbon footprint of our customers and their customers in turn.

Reducing carbon footprint by using stainless steel

Using Outokumpu cold rolled stainless steel products diminishes the carbon footprint of our customers' products. For instance, when comparing the life-cycle impacts of Outokumpu stainless steel and painted carbon steel in Myllysilta bridge project in Finland, the global warming potential in terms of carbon dioxide emissions of our stainless steel is 38% of that of carbon steel*. The manufacturing of stainless steel causes greater environmental impacts than carbon steel, but these are offset by the higher need of maintenance and eventual replacement of the carbon steel cladding. The environmental effects of the use of stainless steel, that requires no painting or maintenance on the environment are considerably lower – for example the creation potential of photochemical ozone is only a fraction (around 1%) of that of carbon steel.

Our environmental product declarations or EPDs offer life-cycle inventory data of our main products, making it possible for our customers to calculate sustainability performance over their products' life cycle. EPDs are standardized and verified externally.

* International Molybdenum Association's case study on the use of molybdenum in 2015.

Where does carbon come from?

The major greenhouse gas emissions from Outokumpu operations are limited to CO_2 emissions. These emissions come both directly from the production (scope 1), indirectly from the use of electricity (scope 2) and mainly from upstream emissions of the use of materials (scope 3). More than half of our emissions come from upstream emissions from our supply chain, and the other half is split to direct emissions of the production and indirect emissions from the use of electricity.

Direct emissions originate from the carbon content of our raw materials – recycled steel, ferroalloys and graphite electrodes, which are used in the electric arc furnace in the melting process. The use of these materials cause process-related CO_2 emissions, which cover about 20% of our direct CO_2 emissions. The other direct emissions come from the use of fossil fuels as the energy source for the process heat.

Indirect emissions are caused by the use of electricity. These emissions are followed by market-based emission factors of Outokumpu's electricity mix. Electricity emissions are also published on a location-based factor for the first time.

Other indirect emissions for steel productions are mainly upstream emissions of material use and to a lesser extent from product transportation. At the moment, there are no estimation methods for downstream emissions of stainless steel available.

Towards less carbon

Improving our energy efficiency directly reduces the need of primary energy and CO_2 emissions. Our efforts towards a circular economy reduce emissions by replacing raw materials and emissions from their productions processes.

Outokumpu follows the Science Based Targets initiative. In 2017, the target setting was further developed. Outokumpu follows the steel industry's decarbonization approach: to reduce emission intensity by 55% by 2050. Specific electricity emissions follow the electricity decarbonization approach, where the specific emission reduction target is 95% by 2050.

The company commits to contribute to the 2°C-scenario and to decouple growth from emissions on the level required to keep global temperature increase below 2°C compared to pre-industrial temperatures. According to the steel industry approach, Outokumpu aims to reduce the direct (scope 1), indirect from electricity (scope 2), upstream and transport (scope 3) emission intensity by 14% by 2023 compared to the baseline of 2014–2016. 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 produced steel.

Outokumpu's reduction targets include our direct CO_2 emissions, indirect emissions from the use of electricity and upstream emissions from the production of raw materials, use of other inputs and from the transportation and business travel.

CO_2 emission intensity remained on the baseline level

In 2017, Outokumpu reduced the total energy consumption by about 500 TJ compared to the last year, although the production increased by 3%. This reduction was mainly driven by electricity efficiency improvement. Total specific energy factors dropped down from 9.8 GJ/tonnes stainless steel in 2016 to 9.3 GJ/tonnes stainless steel in 2017. The high recycled content is our main contribution also to the reduction of scope 3 emissions. In 2017, Outokumpu sourced ferrochrome also externally because of own production issues, which increased upstream emissions. For the whole year the total specific CO_2 emissions remained on the level of baseline 2014–2016, as the higher upstream emissions could be compensated by high energy efficiency and recycled content.

Investments in productivity during the past few years have made Outokumpu's production sites highly efficient in their use of energy and other resources. This is also an opportunity to stay competitive under the emissions trading system.

All data on CO_2 emissions

Emissions trading and fair competition

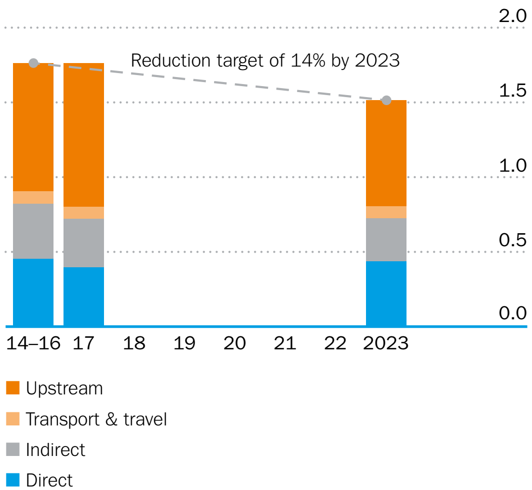
Besides voluntary commitments, Outokumpu's European mills fall under the European Union Emissions Trading Scheme. In total, almost 0.95 million tonnes of total 1.2 million tonnes of CO_2 emissions are covered by the system.

The EU Emissions Trading Scheme (ETS) is continuing by the third trading period 2013–2020. Outokumpu's European operations under the EU ETS will continue to receive free emissions allocations according to efficiency-based benchmarks and historical activity. The total phase allocation will be sufficient for the European operations during the rest of the trading period 2018–2020, although individual plants are in deficit.

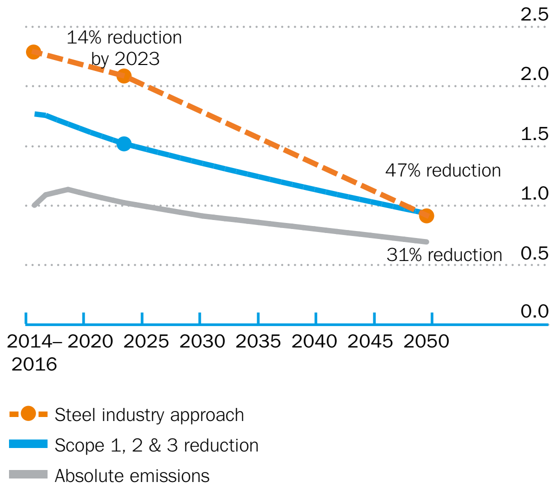
The main risk of the emissions trading system to Outokumpu involves the pass-through costs of allowances to the electricity price, which also depend on the allowance trading price. Therefore, national electricity price compensations are important for energy intensive European industry also in the future. These small compensations are supporting producers in the intense international competition against non-European competitors who do not have additional carbon costs in their product prices. Outokumpu collaborates with the industry associations to determine and promote this position.

Target for science based target criteria

Outokumpu's CO_2 emission intensity, tonnes of CO_2 per tonne steel



Outokumpu's emissions forecast under SBT conditions, tonnes of CO_2 per tonne steel



Environmental compliance

Our environmental network follows closely the quarterly environmental performance of our operations, their permit status and legal compliance.

The company's environmental network conducts internal site audits in the production units according to risk screening. In 2017, emissions and discharges were generally at normal levels within our environmental permits. There were 18 incidents of non-compliance or breach, but all were temporary and insignificant. Outokumpu reported each incident to environmental authorities, carried out corrective actions immediately or resolved the incidents together with the authorities. No environmental damage was reported, and there were no significant environmental incidents.

Environmental permits

All Outokumpu production sites have environmental permits and certified ISO 14001 environment management systems. During 2017, some local environmental permits were renewed or updated. The local supervising environment authority and independent ISO certification body are both auditing our production sites, environment permit conditions and compliance.

Outokumpu is not a party to any significant judicial or administrative proceeding concerning environmental issues, nor is it aware of any realized environmental risks that could have a material adverse effect on the company's financial position.

Outokumpu did not receive any monetary or non-monetary sanctions in 2017.

Closed sites

During recent years, Outokumpu has completed restructuring and closures of its Kloster production site in Långshyttan, Sweden and production sites in Benrath and Bochum and the melt shop in Krefeld, Germany. These areas have been examined or are under examination in close cooperation with the authorities and communities. In Krefeld, some areas of the melt shop site are being revegetated to exclude the potential exposure route of soil to humans. Development on the future use of closed sites is ongoing.

Emerging legislation

Outokumpu follows emerging environmental initiatives and legislation closely to prepare for future changes. In 2017, we studied the following initiatives:

- EU CO_2 emission trading rules post 2020
- EU Resource efficiency & Circular economy initiatives
- EU Non-toxic environment initiative
- Cobalt hazard classification proposal in the EU
- Ambient air standards in the US.

In case there are impacts from emerging legislation, Outokumpu analyzes the situation and takes action through industry associations and federations, such as EUROFER.

Outokumpu and society

Sustainable stainless

As a material, stainless steel is strong, corrosion resistant, durable, safe and hygienic. It is also fully recyclable and its quality does not degrade during reprocessing.

In many ways, stainless steel is the perfect answer to the challenges the world is now facing – limited resources, urbanization, climate change, and clean water.

Recycling, durability, and improved performance

Due to its recycling characteristics, stainless steel is well poised to meet the demands of a future sustainable society: the possibility of recycling a product saves resources, as it reduces the need to extract new minerals from the ground. Stainless steel is 100% recyclable and Outokumpu stainless steel has one of the highest contents of recycled materials in the industry.

Durability is also important. Manufacturing an application only once, instead of several times during a certain time period due to breakdowns and repair, naturally consumes a lower amount of resources. Stainless steel helps to prolong the lifetime of applications, for example in bridges because they are susceptible to corrosion or in components like a car's exhaust pipe system.

Outokumpu strives to improve the properties of stainless steel even further and support customers to utilize them in their applications. An example is the new Outokumpu stainless grade, Supra 316plus, which was chosen for tanks carrying liquefied natural gas (LNG). Supra 316plus was selected due to its strength and excellent properties at extremely low temperatures of –164°C at which LNG is transported. Thanks to this material choice, the weight of the tanks could be decreased by 30% and the capacity increased by 15%. Read more

The durability of stainless steel also has a cost-effective impact from a life cycle perspective. Requiring only minimal maintenance, stainless steel is both economical and good for the environment and society. The combination of corrosion resistance and durability increases product lifetimes and saves money. When Outokumpu Forta LDX2404 stainless steel was chosen for the renovation of railway bridges in central Stockholm it was considered the best economical choice, paying for itself within 30 years. Read more

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

Safe stainless

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 that cover 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.

Product, application, and technical market development

The direction of Outokumpu's product, application, and technical market development is driven by global trends, such as economic and population growth, mobility, urbanization, climate change, and limited resources. We work closely together with customers in order to align our activities with our customers' current and future needs. The key focus is the development of long-lasting, sustainable material solutions providing advantages over the entire product life cycle.

In 2017, Outokumpu extended its product portfolio by introducing the austenitic, nickel-based alloy Outokumpu Ultra Alloy 825. It is primarily used for processing equipment in the chemical and oil&gas industries due to its exceptional corrosion resistance. Outokumpu stands out as the only major stainless steel company that can offer this nickel-based alloy in coils up to a width of 1,500 mm. Read more

The recent stainless steel product innovations, Outokumpu Core 4622 and Supra 316plus, were granted European patents in March 2017. These grades satisfy the customer demand for products with enhanced properties and a stable raw material cost. Read more

An example of our recent solution development is the weldable sandwich technology, which was awarded this year's prize in the Material category in the 15th Materialica Design and Technology Awards 2017, presented at the eMove360 materials and electromobility trade fair in Munich, Germany. The weldable sandwich is the first directly weldable steel-polymer compound (sandwich) structure for car body manufacture. The weldable sandwich can make a decisive contribution in the automotive industry toward fulfilling lightweight construction and CO_2 emission goals, while providing a high level of safety and component rigidity at the same time. Read more

Furthermore, the bionic lightweight structure for battery vehicles, constructed using Outokumpu Forta H1000 2H high strength steel, received the Gold Award in the Awards for the Best New Applications featuring New Technology by the International Stainless Steel Forum (ISSF).

Our German R&D team moved to new premises in Krefeld in 2017. During a one year construction phase, a competence center with new laboratory facilities including state-of-the-art equipment was built. The new competence center will guarantee the optimum quality of R&D support.

Process and technology development

Continuous development of our production processes and technologies is at the core of our R&D. Process and technology development focuses on the reduction of the environmental impacts and improvement of the cost efficiency of our production processes as well as on the optimization of product quality.

The process development actively leverages our R&D collaboration networks. In October 2017, the project Morse, which was funded by the European Commission, was started. In this project, European companies and research organizations join forces to renew the steel industry by developing new enhanced software tools for the improvement of steel quality and the management of complex processes. The project is looking for new ways to manage the entire production chain and to reduce the consumption of energy and raw materials and to reduce yield losses. The project aims at developing new models and process management tools to improve the capacity utilization and product quality, and to reduce energy consumption and carbon dioxide emissions. Read more

External R&D collaboration

Outokumpu has an extensive network of external R&D partners and participates in both national and international research programs to supplement Outokumpu's own R&D capabilities. Outokumpu collaborates with various top-class universities and research institutes. Examples of collaboration forums in which Outokumpu is involved include the Finnish Digital, Internet, Materials & Engineering Co-Creation platform (DIMECC), Research Fund for Coal and Steel (RFCS), and Jernkontoret (the Swedish Steel Producers' Association). In Germany, we collaborate, among others, with the Fraunhofer Institute and the Max-Planck-Institut für Eisenforschung. Outokumpu is also a member of the European Steel Technology Platform (ESTEP) and actively involved in European R&D projects, such as the project Morse described in the Process and technology development section. ■

Scope of the report

Outokumpu has published its sustainability review as part of the Annual Report 2017. Sustainability information is also available at www.outokumpu.com/sustainability.

Outokumpu reports on the material developments of continuing sites and changes in 2017 as part of the Annual Report. Additional information is published on the company's website. The Annual Report 2016, including Sustainability Review, were published in February 2017.

Outokumpu's reporting follows the Global Reporting Initiative standard in accordance with the GRI standards' Core option. The materiality assessment from 2015 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 on and checking the consistency of the sustainability reporting in the Sustainability review and Review by the Board of Directors is available on p. 25 in the Sustainability review. The Financial statements 2017 have been audited, and the auditor's report is available on p. 68 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 city or municipality as the Outokumpu location. Significant locations for suppliers are production units that have a melt shop, ie. Avesta, Calvert, Sheffield and Tornio.

Environmental responsibility

Outokumpu's climate change target of the carbon profile of stainless steel is replaced by the science-based target proposal on CO_2 intensity of direct and indirect emissions of electricity and upstream emissions. Emissions are consolidated on production control.

CO_2 emissions of electricity are calculated and monitored by the emissions factor of Outokumpu's electricity mix of 216 kg CO_2/MWh (2016: 194 kg CO_2/MWh), given by the electricity supplier for the used electricity. In addition, the location-based electricity emissions are disclosed for the first time. They are calculated by the country-specific emissions factors of the electricity generation of 2016.

CO_2 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.
- For business travel: by estimated driven kilometers with emissions factors for a car, and for flights by CO_2 reports of the flight companies.

Upstream transport was assessed on data of environmental product declaration of 2014 but excluded from scope 3 emissions

The recycled content is calculated as the sum of all recycled steel and metals entering the melt shop compared to stainless steel production.

Energy efficiency is defined as the sum of specific energy of all processes calculated as energy consumption compared to the product output of that process. It covers ferrochrome, melt shop, hot rolling and cold rolling processes..

Social responsibility

Health and safety figures

Health and safety figures reflect the scope of Outokumpu's operations as they were in 2017.

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 incident (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.
- Restrictive work incident (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 incident (MTI) has to be treated by a medical professional (doctor or nurse).
- First-aid treated incident (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 incident (TRI) includes fatalities, LTIs, RWIs and MTIs, but FTIs are excluded.
- All workplace accidents include total recordable incidents (TRI) and first aid treated incidents (FTI)

Proactive safety actions

Near-miss incidents and 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 G4 Guidelines. 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 assurance report

To the Management of Outokumpu Oyj

We have been engaged by the Management of Outokumpu Oyj (hereafter Outokumpu) to provide limited assurance on Outokumpu's Sustainability Review 2017 presented in Outokumpu's Annual Report for the reporting period from January 1, 2017 to December 31, 2017 (hereafter Sustainability Information).

Global Reporting Initiative's Sustainability Reporting Standards as listed in the GRI Standards Content Index were used as the assurance criteria (hereafter GRI Standards).

Inherent limitations on the engagement

The inherent limitations on accuracy and completeness of data related to the Sustainability Information are to be taken into account when reading our assurance report. The presented Sustainability Information is to be considered in connection with the explanatory information on data collection, consolidation and assessments provided by Outokumpu.

The Management of Outokumpu is responsible for the measuring, preparation and presentation of the Sustainability Information in accordance with the GRI Standards.

Our responsibility is to express an independent conclusion on the Sustainability Information. We have conducted the engagement in accordance with ISAE 3000 (Revised). To the fullest extent permitted by law, we accept no responsibility to any party other than Outokumpu for our work, for this assurance report, or for the conclusions we have reached.

We are independent from the company according to the ethical requirements in Finland and we have complied with other ethical requirements, which apply to the engagement conducted.

We apply the International Standard on Quality Control 1 (ISQC 1) and accordingly maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Summary of the work performed

A limited assurance engagement consists primarily of making inquiries of persons responsible for the preparation of the Sustainability Information presented, and applying analytical and other appropriate evidence gathering procedures. The procedures performed in a limited assurance engagement vary in nature and timing from and are less in extent than for a reasonable assurance engagement and consequently the level of assurance obtained in a limited assurance engagement is substantially lower.

In our engagement we have performed the following procedures:

- Interview with Outokumpu Senior Management;
- An assessment of conformity with the reporting principles of GRI 101: Foundation (2016) in the presentation of the Sustainability Information;
- An assessment of coverage of the material aspects selected for the Sustainability Information and the definition of reporting boundaries in the context of Outokumpu's business operations and sector;
- An assessment of data management processes, information systems and working methods used to gather and consolidate the Sustainability Information;
- A review of the presented Sustainability Information with an assessment of information quality and reporting boundary definitions;
- An assessment of data accuracy and completeness through a review of the original documents and systems on a sample basis;
- One site visit and two video conferences conducted to Outokumpu subsidiaries.
- A consistency check of the non-financial information presented according to the Finnish Accounting Act Chapter 3a in a separate section in Outokumpu's Review by the Board of Directors ("Non-financial development at Outokumpu") with Outokumpu's Sustainability Review 2017.

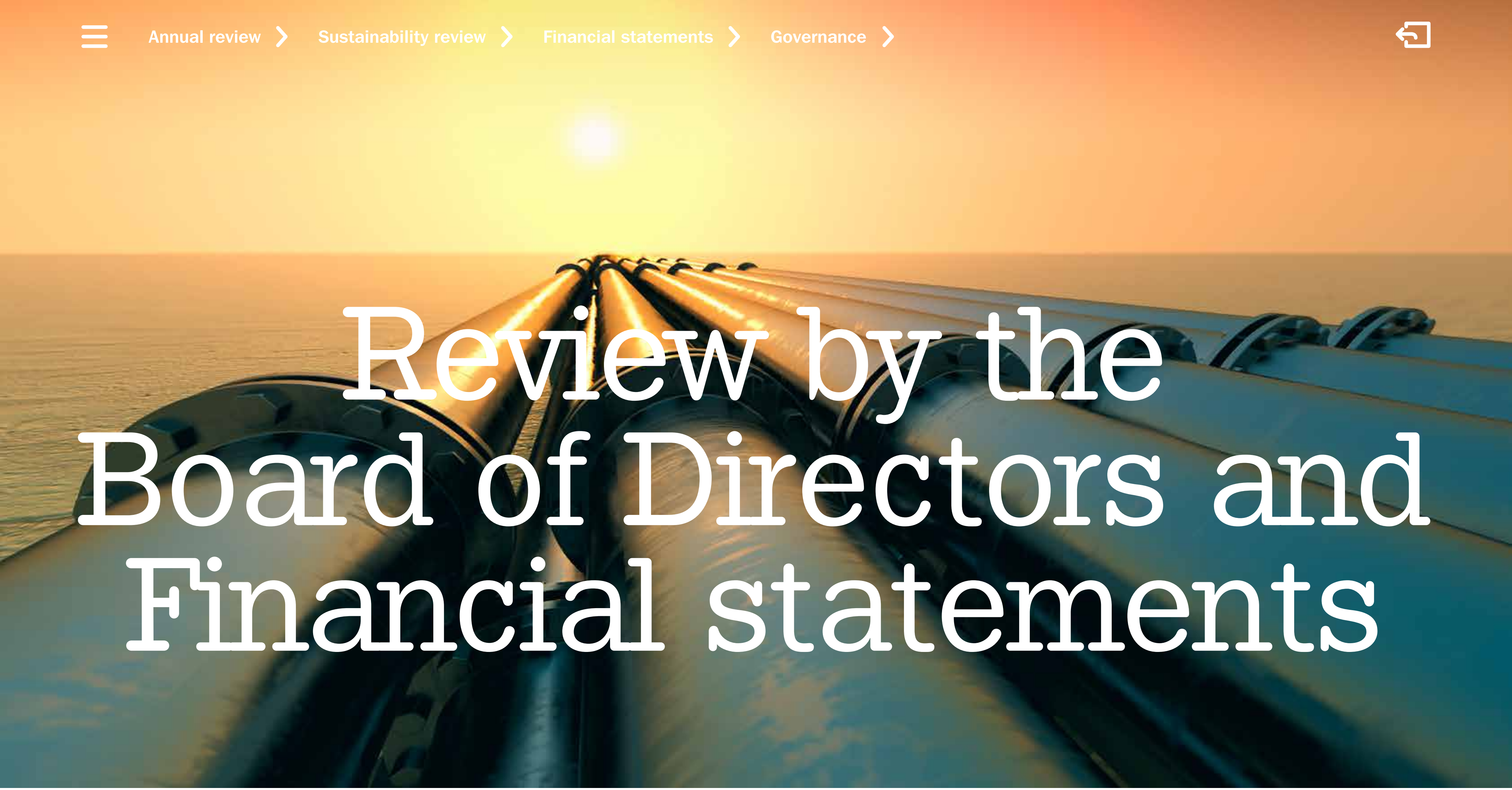
Conclusions

Based on the assurance procedures performed, nothing has come to our attention that causes us to believe that the information subject to the assurance engagement is not prepared in accordance with the GRI Standards in all material respects.

Helsinki, 16 February 2018

KPMG Oy Ab

Tomas Otterström Partner, Advisory	Petri Kettunen Authorised Public Accountant, KHT



Review by the Board of Directors and Financial statements

CONTROLLED CONFIDENCE ■ When working within extremes, overconfidence can be a pitfall. But if you lack belief, it might be even worse. What separates our experts from the rest is complete command of their abilities, and knowledge of the possibilities of stainless steel.

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

outokumpu

working towards a world that lasts forever

Review by the Board of Directors

The year 2017 was a successful year for Outokumpu. The company continued its strategy execution to become the best value creator in stainless steel by 2020. As an evidence, Outokumpu's adjusted EBITDA more than doubled to EUR 631 million compared to the previous year. While the profitability was supported by the market, the company also achieved tangible results in reducing its cost base and improving its efficiency and productivity. Outokumpu's financial position strengthened significantly and net debt decreased below EUR 1.1 billion. However, while the company has made solid progress towards its vision, it is clear that there is still more work to be done. In 2017, the company's performance was impacted by reliability issues, particularly in the ferrochrome operations, and hence, Outokumpu's primary focus for 2018 will be to improve the reliability of its operations.

Market development

Stainless steel demand

Global apparent stainless steel consumption[1] increased by 6.0% in 2017 compared to the previous year. APAC contributed with a growth of 6.5% followed by growth of 4.7% in the Americas and 4.6% in EMEA. Global real demand for stainless steel products reached 41.2 million tonnes in 2017, an increase of 5.5% from 39.1 million tonnes in 2016. The growth was most pronounced in the APAC region at 6.3%, while demand grew by 3.4% in EMEA and by 3.2% in the Americas. (Source: SMR January 2018)

In 2017, the real demand growth was strongest in Consumer Goods & Medical and ABC & Infrastructure end-use segments at 6.7% and 6.0%, respectively. Meanwhile, Automotive & Heavy Transport achieved growth of 4.5%, followed by growth of 3.7% in Chemical, Petrochemical & Energy and 3.0% in the Industrial & Heavy Industries segment. (Source: SMR January 2018)

EU cold rolled imports from third countries are expected to have reached a level of 27.6% of the total consumption in 2017, up from the average level of 24.6% in 2016. Imports from Malaysia, the US, India and Taiwan were growing, while the volumes from South Korea, Vietnam and Brazil decreased. (Source: EUROFER January 2018)

The average cold rolled imports into the US are expected to have reached 22.5% of the total US consumption in 2017, lower than the average of 23.3% in 2016. Chinese imports decreased significantly, while imports from almost all other major exporting countries increased. (Source: American Iron & Steel Institute, November 2017)

Price development of alloying metals

The nickel price was trending downwards in the first half of 2017 due to the expectations of increased ore availability from both Indonesia and the Philippines, as well as cyclically slowing apparent demand from the Chinese stainless steel sector. In the second half of the year, the price was underpinned by increased investor interest, weaker US dollar and the bright outlook for stainless steel demand as a result of global economic recovery. Prices hit the highest level of the year of USD 12,830/tonne in early November, before easing slightly to around USD 12,000/tonne levels at the end of the year. The average price of the year of USD 10,411/tonne was 8.5% higher than the average of USD 9,600/tonne in 2016.

The European benchmark price for ferrochrome increased to USD 1.65/lb in the first quarter of 2017 as a result of weak availability of ore as well as strong demand of ferrochrome due to increased stainless steel production in China. For the second and third quarters, the ferrochrome price decreased to USD 1.54/lb and USD 1.10/lb, respectively, as a result of improved availability and declined demand of ferrochrome in China. Prices increased to USD 1.39/lb in the fourth quarter, but retreated to USD 1.18/lb for the first quarter of 2018, following the apparent supply and demand situation of ferrochrome in China.

Business areas

Europe

The overall stainless steel market was robust in 2017. Underlying stainless steel demand was particularly strong during the first half of the year and started to soften in the summer. During the third quarter, demand started to gradually strengthen again. Base prices increased from 2016 with the CRU reported European base price averaging to EUR 1,123/tonne, EUR 60/tonne higher than in 2016. The share of import volumes in the European market increased during the first half of the year and stabilized at higher levels during the second half.

Europe's stainless steel deliveries amounted to 1,582,000 tonnes in 2017. Deliveries were lower than 1,625,000 tonnes in 2016 which included deliveries of 65,000 tonnes from the Benrath mill that was closed in September 2016. However, business area Europe's sales increased by 13.5% to EUR 4,455 million (EUR 3,927 million[2]) due to higher prices resulting from a strong market and improved product mix. The average base price in the business area's coil product deliveries was EUR 70/tonne higher than in 2016.

Business area Europe's full-year adjusted EBITDA improved by EUR 241 million to EUR 615 million (EUR 374 million). In addition to the support from ferrochrome price particularly during the first half of the year, earnings were further supported by solid progress in improved cost efficiencies and commercial initiatives. Furthermore, higher base prices had a positive impact on profitability. However, the positive impacts were partially offset by technical issues and maintenance of a ferrochrome furnace, resulting in lower ferrochrome production volume of 415,000 tonnes in 2017 compared to 469,000 tonnes in 2016. Further negative impacts arose from higher coke and electricity prices, as well as higher maintenance costs, raw material-related inventories and metal derivatives had a negative impact of EUR 24 million on the result (negative impact of EUR 1 million).

[1] Apparent consumption = real demand + stock change

[2] Figures in parentheses refer to year 2016, unless otherwise stated.

Americas

The US stainless steel market was healthy overall in 2017. The demand remained strong throughout the year and the base prices were on an increasing trend for the first ten months of the year, until a clear decline in prices in November and December. The CRU reported US base price averaged USD 1,374/tonne, USD 88/tonne higher compared to 2016. The share of import volumes in the US market remained stable at reasonably modest levels during the year.

Stainless steel deliveries increased in 2017 to 742,000 tonnes compared to 690,000 tonnes in 2016. Driven by higher deliveries, the Americas' sales increased to EUR 1,546 million (EUR 1,325 million). The average base price in the business area's coil product deliveries was USD 60/tonne higher compared to 2016.

In 2017, business area Americas achieved a tangible improvement in profitability and recorded a positive adjusted EBITDA of EUR 21 million, a clear improvement compared to 2016 (EUR –27 million). The improved performance was a result of higher deliveries and base prices, as well as increased operational efficiency with clearly decreased variable and SG&A costs. Raw material-related inventories and metal derivatives had a positive impact of EUR 7 million (EUR 10 million) on the result in 2017.

Long Products

During 2017, underlying demand for long products grew both in Europe and in the US compared to the previous year, driven particularly by Automotive, Oil & Gas and Aerospace segments. Prices remained stable throughout the year and started to gradually increase towards the end of the year. Import pressure in the US remained relatively high due to the lack of antidumping duties for long products.

Deliveries in 2017 increased to 264,000 tonnes compared to 245,000 tonnes in 2016 driven by strong demand. The product mix improved during the year. The adjusted EBITDA amounted to EUR 16 million, a clear improvement compared to EUR –1 million in 2016. The net impact of raw material-related inventories and metal derivatives amounted to EUR 3 million (EUR –1 million).

Financial performance

Deliveries

For 2017, stainless steel deliveries remained flat at 2,448,000 tonnes (2,444,000 tonnes). Deliveries increased clearly in business area Americas and Long Products but decreased in business area Europe.

Deliveries

1,000 tonnes	2017	2016	2015
Cold rolled	**1,713**	1,731	1,767
White hot strip	**428**	425	346
Quarto plate	**79**	100	102
Long products	**70**	65	63
Semi-finished products	**262**	247	222
Stainless steel [1]	**157**	121	95
Ferrochrome	**105**	126	128
Tubular products	**1**	1	9
Total deliveries	**2,553**	2,570	2,509
Stainless steel deliveries	**2,448**	2,444	2,381

[1] Black hot band, slabs, billets and other stainless steel products.

Sales and profitability

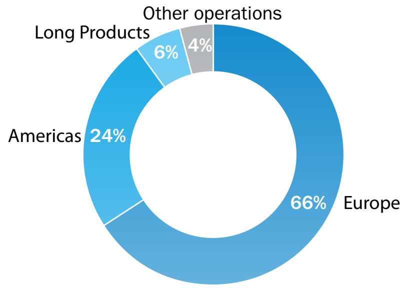
Sales amounted to EUR 6,363 million in 2017, 11.8% higher than in 2016 (EUR 5,690 million). The increase was mainly a result of higher alloy surcharges and average base prices in both Europe and the Americas.

Sales

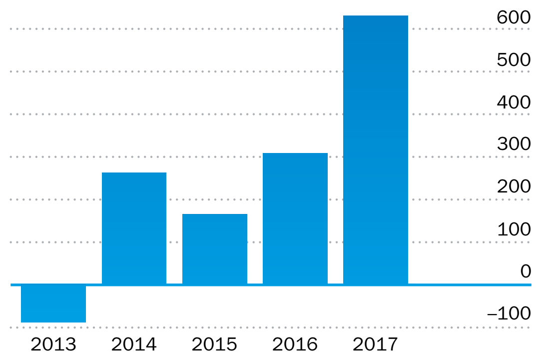
€ million	2017	2016	2015
Europe	**4,455**	3,927	4,318
Americas	**1,546**	1,325	1,214
Long Products	**591**	487	551
Other operations	**507**	567	974
Intra-group sales	**–737**	–615	–673
The Group	**6,363**	5,690	6,384

The profitability improved significantly in 2017, with adjusted EBITDA more than doubling to EUR 631 million (EUR 309 million). This was primarily a result of higher ferrochrome

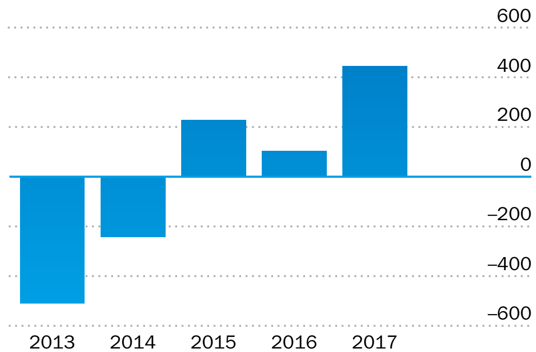
Sales, € 6,363 million



Adjusted EBITDA, € million



EBIT, € million



and base prices, as well as improved cost efficiency. Raw material-related inventory and metal derivative losses for the full year 2017 were EUR 20 million (gains of EUR 11 million).

Profitability

€ million	2017	2016	2015
Adjusted EBITDA			
Europe	**615**	374	312
Americas	**21**	–27	–120
Long Products	**16**	–1	10
Other operations and intra-group items	**–22**	–37	–37
Group adjusted EBITDA	**631**	309	165
Adjustments	**31**	47	366
EBITDA	**663**	355	531
EBIT	**445**	103	228
Share of results in associated companies and joint ventures	**9**	5	49
Financial income and expenses	**–127**	–121	–149
Result before taxes	**327**	–13	127
Income taxes	**64**	156	–41
Net result for the financial year	**392**	144	86
EBIT margin, %	**7.0**	1.8	3.6
Return on capital employed, %	**11.3**	2.6	5.3
Earnings per share, €	**0.95**	0.35	0.23
Diluted earnings per share, €	**0.90**	0.35	0.23
Net cash generated from operating activities	**328**	389	–34

Income taxes for 2017 include deferred tax income of EUR 125 million (EUR 189 million) related to previously unrecognized deferred tax assets mainly in Germany. For the full year 2017, the net result amounted to EUR 392 million (EUR 144 million) and the earnings per share was EUR 0.95 (EUR 0.35).

Outokumpu has remaining tax loss carry forwards of EUR 1,922 million mainly in the US for which deferred tax assets have not been booked. They can be recognized as deferred tax income when the company starts generating sufficient taxable income in respective countries.

Cash flow

Operating cash flow amounted to EUR 328 million in 2017 (EUR 389 million), negatively impacted by an increase of EUR 180 million in working capital (decrease of EUR 307 million).

Financial position

Cash and cash equivalents were EUR 112 million at the end of 2017 (EUR 204 million) and overall liquidity reserves were approximately EUR 0.8 billion (EUR 1.0 billion). Overall liquidity reserves decreased mainly due to a cancellation of EUR 30 million long-term credit facility, a redemption of EUR 250 million notes due in 2019, and a partial redemption of EUR 47.5 million of notes due in 2021.

Net debt decreased to EUR 1,091 million compared to EUR 1,242 at the end of 2016. Gearing decreased to 40.1% (51.4%).

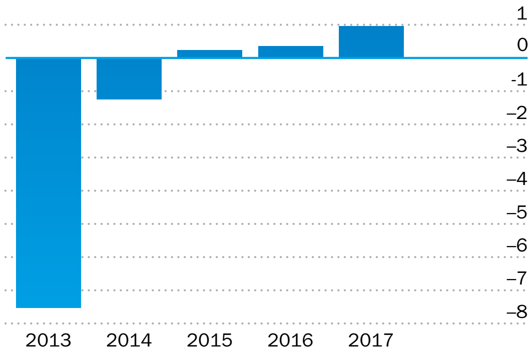
During 2017, net financial expenses were relatively flat at EUR 127 million (EUR 121 million). Interest expenses decreased to EUR 92 million (EUR 105 million).

Key financial indicators on financial position

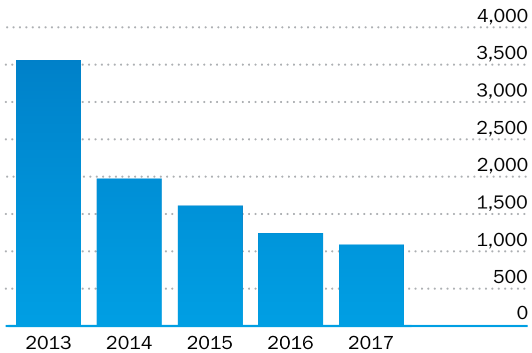
€ million	2017	2016	2015
Net debt			
Non-current debt	**698**	987	1,249
Current debt	**505**	458	547
Cash and cash equivalents	**–112**	–204	–186
Net debt	**1,091**	1,242	1,610
Shareholders' equity	**2,721**	2,416	2,329
Return on equity, %	**15.4**	6.4	3.9
Debt-to-equity ratio, %	**40.1**	51.4	69.1
Equity-to-assets ratio, %	**46.3**	40.4	39.6
Interest expenses	**92**	105	130

In order to decrease interest expenses further, Outokumpu prematurely redeemed its 6.625% senior secured fixed rate notes due in 2019. The notes with a total nominal amount of EUR 250 million were redeemed in full in December 2017. In addition, Outokumpu redeemed partially its outstanding EUR 250 million senior secured notes due in 2021.

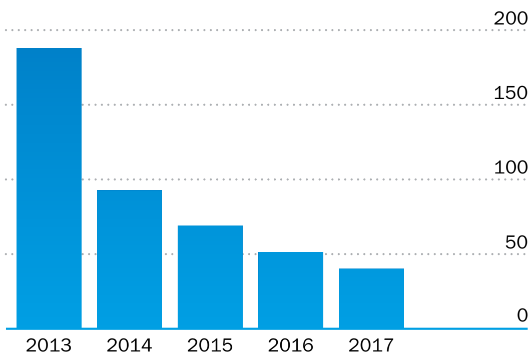
Earnings per share, €



Net debt, € million



Debt-to-equity ratio, %



The redemptions were done in June and December 2017 with 10% of the outstanding amount each time. As a consequence, the total aggregate outstanding nominal amount of the notes due in 2021 was EUR 203 million at the end of December 2017. The interest rate for the notes is 7.25%.

Furthermore, Outokumpu signed an amendment and extension of its committed syndicated revolving credit facility in December 2017 and agreed a partial security release with its key lenders. The restated facility of EUR 650 million has its maturity in May 2021 and will be used for general corporate purposes.

Outokumpu is rated by Moody's Investors Service. In November 2017, Moody's upgraded Outokumpu's issuer corporate family rating to B1 from the previous rating of B2 and its probability default rating to B1-PD from the previous B2-PD. Moody's also upgraded the ratings for Outokumpu's senior secured notes to Ba3 from the previous rating of B1. The outlook of all ratings is stable.

Capital expenditure

Capital expenditure was EUR 174 million in 2017 compared to EUR 164 million in 2016.

Capital expenditure

€ million	**2017**	2016	2015
Europe	**104**	101	96
Americas	**18**	17	19
Long Products	**8**	8	7
Other operations	**44**	37	32
The Group	**174**	164	154
Depreciation and amortization	**216**	226	302

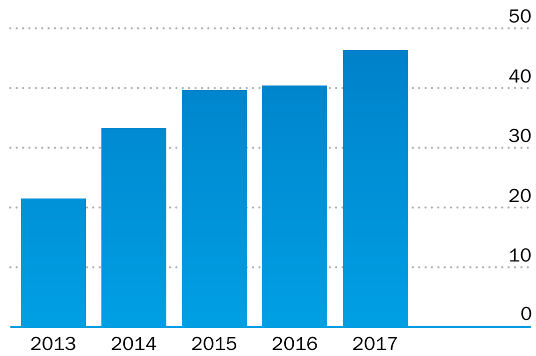
Non-financial development at Outokumpu

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. Outokumpu produces stainless steel, which is its biggest contribution 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. These properties have ensured that stainless steel consumption has been growing more rapidly than any other metal in recent decades (source: CRU, August 2017).

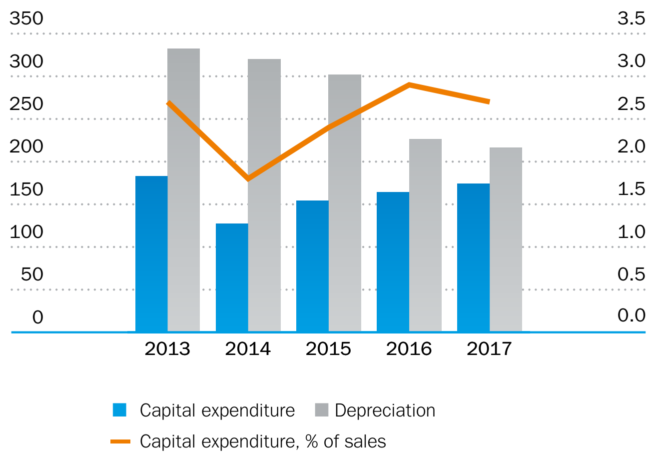
87.0% of the raw material used in Outokumpu's stainless steel production is recycled. By converting scrap and metal waste into new products the company also protects virgin resources. Throughout the process, Outokumpu aims to minimize the environmental impact of its production. At the end of its long life-cycle, stainless steel is fully recyclable, without any loss of quality. Outokumpu's business is therefore based on a circular economy. 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.

The majority of external deliveries are austenitic (76%) and ferritic (18%) standard and specialty stainless steels with the remaining 3% of duplex and 3% of other stainless steel grades. In 2017, Outokumpu sold 55% of produced steel directly to end-user customers (architecture, building and construction and infrastructure, consumer goods and medical, industrial and heavy industries, chemical, petrochemical and energy industry, and automotive and heavy transport) and 45% to distributors and processors such as re-rollers and tube makers. Outokumpu's production process is very integrated, starting from the company's own chrome mine for the main raw material of stainless steel, ferrochrome operations, melting, hot rolling and cold rolling, all the way to finishing and services. In this integrated value chain, each business area, mill, and function has a clear role. Outokumpu's strengths include efficient procurement and access to key raw materials, an efficient and integrated production set-up, world-class supply chain management, a leading product portfolio and quality, established and balanced customer base across all key markets, and leading technical R&D and expertise.

Equity-to-assets ratio, %



Capital expenditure and depreciation, € million



Policies and principles of sustainability management

The most important policies guiding Outokumpu's operations are the company's Ethical Statement, Code of Conduct, and Policy on Environment, Health, Safety and Quality. These policies are available at www.outokumpu.com/en/sustainability/corporate-responsibility/. Outokumpu also follows the Science Based Targets Initiative and contributes to the UN Social Development Goals. 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 of Outokumpu employees are free to join trade unions according to local rules and regulations. Outokumpu expects its suppliers and contractors to comply with applicable laws and regulations as well as Outokumpu's Code of Conduct, and to meet the company's supplier requirements.

Outokumpu's Ethical Statement describes ethical principles of human rights and dignity, the future of the planet, good corporate citizenship, and a safe and healthy workplace. Outokumpu's Code of Conduct defines the common way of operating in the Group, built on the equal treatment of all people, and sets principles for legal compliance and ethical conduct. In practice, this means keeping each other safe at work, treating everyone with respect, complying with laws, doing what is ethically right, and conducting business in an environmentally sustainable way. Outokumpu's Code of Conduct sets zero tolerance for corrupt practices and requires compliance with antitrust and competition laws. Outokumpu has also issued an Anti-Corruption Instruction providing more detailed guidance on responsible business practices. Outokumpu respects human rights and promotes diversity, and condemns discrimination and intolerance of any kind. At Outokumpu, 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's Policy on Environment, Health, Safety and Quality describes the company's commitment to continuous improvement in these fields, the company's corporate responsibility, compliance with legislation in all areas the company operates in, and the fulfilment of stakeholder requirements to which the company subscribes.

In addition to the EHSQ policy, Outokumpu has strict guidelines for safety through the Outokumpu Safety Principles and Health and Safety Standard. Outokumpu provides its employees with a healthy and safe working environment. The health of personnel and their well-being at work are important preconditions for Outokumpu's success in day-to-day operations as well as in its long-term competitiveness. Outokumpu also believes that all accidents are preventable and therefore works towards a goal of zero accidents.

Corporate statements, policies and instructions serve as the formal back-bone of the Outokumpu operating model in governance, risk, and compliance. Policies and instructions are implemented through internal communication, mandatory training and internal control mechanisms. In 2017, Outokumpu initiated a governance, risk and compliance project to further enhance and develop internal control processes. As part of this project, Outokumpu is implementing an operating model that emphasizes the three lines of defense model. Businesses and operation forms the first line of defense based on the Group policies and instructions. Business support functions monitor and facilitate compliance as the second line of defense, and internal and external audits form the third line of defense providing independent assurance. 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 addition, annual environmental audits are performed based on an internal risk assessment. Environmental compliance screenings of suppliers are carried out regularly. As part of the overall management set-up, the established incentive systems support the achievement of strategic targets, such as safety which is the highest priority.

Long-term sustainability targets

Outokumpu's corporate responsibility aims to improve the Group's resource efficiency by minimizing the use of virgin materials and primary energy and by contributing to climate protection. The Group's targets are:

- Recycled content of 90% by 2020
- Improvement of energy efficiency by 1% yearly until 2020
- Reduction in direct and indirect CO_2 emissions intensity by 14% by 2023, compared to the baseline of 2014–2016 (including upstream emissions from the supply chain)
- Top decile position in safety in the industry by 2020 and long-term target of zero incidents.

Outokumpu follows the Science Based Target Initiative to decouple growth and emissions. Targets adopted by companies to reduce greenhouse gas emissions are considered "science-based" if they are in line to limit the temperature increase in the atmosphere to 2 degrees by 2050, compared to the pre-industrial era. Outokumpu's emissions intensity trajectory includes the upstream emissions from supply and is in line with the sectoral decarbonization approach of the steel industry.

Environmental performance

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

Outokumpu uses extremely 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 by-products from its production (such as slag) outside the company – for example, in road construction, concrete production and water treatment – to reduce the amount of landfilled waste and to reduce the use of virgin materials. On top of production waste, tailing sand from mining is the most significant waste item to be deposited in the mine site.

In 2017, Outokumpu maintained the level of recycled content at 87.0% (2016: 87.1% and 2015: 87.2%). The cumulative increase in energy efficiency was 10.4% (2016: 9.1% and 2015: 7.6%) compared to the baseline of 2007–2009 on a comparable basis. There were no significant environmental incidents.

All in all, Outokumpu is well on track to reach its long-term sustainability targets, of which only recycled content is slightly behind. In 2017, Outokumpu maintained CO_2 intensity at the level of the baseline 2014–2016. As some ferrochrome was externally bought because of production interruptions, the upstream emissions increased. This could be compensated by Outokumpu's own excellent energy efficiency, which also resulted in a decrease of total energy consumption compared to 2016, even though stainless steel production increased by more than 3%. Landfilled waste could be reduced, as the use of slag increased.

All Outokumpu's sites have environmental permits that set the basic framework for production operations. In 2017, 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. The total allocation was sufficient for the Group's operations during 2017 and will be sufficient for 2018. Outokumpu is not a party to any significant legal or administrative proceedings concerning environmental issues, nor is it aware of any realized environmental risks that could have a material adverse effect on its financial position.

Environmental impacts

	2017	2016	2015
Climate change			
Direct CO_2 emissions, tonnes	**1,203,614**	1,208,918	1,231,843
Indirect CO_2 emissions (electricity), tonnes	**979,394**	901,750	1,016,234
Indirect CO_2 emissions (upstream), tonnes	**3,136,946**	2,503,880	2,491,876
Direct and indirect CO_2 emission intensity, tonnes per tonne stainless steel [1]	**1.760**		
[1] 2014–2016 baseline 1.764			
Energy			
Fuel consumption, TJ	**11,839**	11,964	11,460
Secondary energy (electricity) consumption, TJ	**16,326**	16,733	16,116
thereof renewable or low carbon sources, %	**60.0**	67.3	62.9
Energy intensity, GJ per tonne stainless steel	**9.3**	9.8	10.5
Slag by-products			
Slag used of steel and FeCr production, tonnes	**2,280,862**	1,531,326	1,502,716
Use rate of slag including slag from ferrochrome production, %	**91.1**	90.2	92.0
Waste			
Total waste from stainless steel production, tonnes	**423,383**	540,150	407,996
Deposited tailings from mining, tonnes	**784,585**	856,245	830,874
Mining waste intensity, tonnes per tonne concentrated ore	**0.81**	0.80	0.88
Total landfill waste intensity, tonnes per tonne stainless steel	**0.361**	0.406	0.423

Social performance

Outokumpu's main indicator for safety performance is the total recordable incident frequency rate (TRIFR), which includes fatal accidents, lost-time incidents, restrictive work incidents, and medically treated incidents per million working hours. In 2017, safety developed in line with the target, and TRIFR was reduced to 4.4 against the target of less than 8. During the year, Outokumpu started a behavioral safety training program at selected production sites in Europe and the Americas, with plans to train all Outokumpu employees in 2018. Outokumpu also established Group-wide Cardinal Safety Rules – ten fundamental rules set to ensure the safety of everyone at Outokumpu. Covering the most severe breaches of safety behavior, these common rules form the foundation of safety for all Outokumpu employees, contractors and visitors.

Outokumpu's headcount decreased by 459 during the year and totaled 10,141 at the end of December 2017 (2016: 10,600 and 2015: 11,002). The decrease was driven primarily by divestments of quarto plate mill in New Castle, Indiana, US and pipe plant in Wildwood, Florida, US, as well as other continued restructuring and efficiency measures. All in all, Outokumpu plans to reduce its personnel to a level of 9,300 in the coming years. Total wages and salaries amounted to EUR 549 million in 2017 (2016: EUR 562 million, 2015: EUR 585 million). Indirect employee benefit expenses totaled EUR 135 million in 2017 (2016: EUR 151 million, 2015: EUR 177 million).

Key social indicators

	2017	2016	2015
Diversity			
Employees			
male, %	**86**	84	86
female, %	**14**	16	14
Board of Directors			
male, %	**71**	67	75
female, %	**29**	33	25
Safety			
Total recordable incident frequency rate, per million working hours	**4.4**	8.7	N/A

In 2017, Outokumpu recorded nine alleged incidents of potential misconduct. 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 2017 two compliance-related e-learning courses. The Code of Conduct e-learning course was mandatory for white-collar employees and achieved a completion rate of 98%. The second Competition Law compliance training was directed at management, sales, procurement, and business support functions, and obtained a completion rate of 99%.

Outokumpu's governing bodies are the Annual General Meeting of Shareholders, the Board of Directors, and the President and Chief Executive Officer. All the members of the Board of Directors in 2017 were independent of the company and of its significant shareholders.

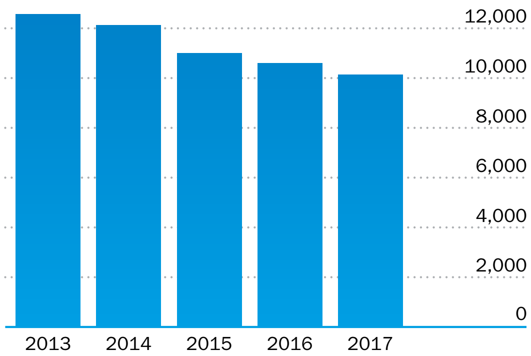
Research and development

Outokumpu's research and development (R&D) involves process, product and application development. R&D works closely together with sales, operations and customers to align 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 2017, Outokumpu's R&D expenditure totaled EUR 13 million, 0.2% of net sales (2016: EUR 20 million and 0.4%, 2015: EUR 23 million and 0.4%). During the year, the company implemented a new IT solution for R&D project management, which improved R&D efficiency substantially. Another major event boosting R&D effectiveness was the inauguration of the new R&D premises in Krefeld.

The process development teams continued to focus on supporting the operations and in transferring technological knowhow between Outokumpu's operational units. The major achievement of the product development was the launch of Outokumpu Ultra Alloy 825. Outokumpu stands out as the only major stainless steel company that can offer this nickel-based alloy in coils up to width of 1,500 mm. Another highlight of 2017 was the prize awarded to patented weldable sandwich

Personnel on December 31



technology in 15th Materialica Design and Technology Awards 2017.

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: risk identification, evaluation/prioritization, mitigation and reporting. Key risks are assessed and updated on a regular basis.

The focus in risk management in 2017 was in securing the steps in improving Outokumpu's cost competitiveness as well as continuous improvement of risk management, including actions in safety, securing liquidity, managing project risks and improving the efficiency and controls of Outokumpu's operations as part of large business transformation program aiming to renew fragmented IT systems going forward. Outokumpu continued its systematic fire safety and loss prevention audit programs, which also included machinery breakdown loss prevention. In total, some twenty fire safety and machinery breakdown loss prevention audits were carried out in 2017 using in-house expertise in cooperation with external advisors. The main realized risks in last year were a fatal accident to a contractor at Degerfors, Sweden in May, risks related to production stability, especially in ferrochrome, and inadequate profitability in the business area Americas.

Strategic and business risks

Outokumpu's key strategic and business risks currently include: risks and uncertainties in implementing the announced vision, including measures to improve operational reliability, drive competitiveness and further improve financial performance; 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 and availability of financing; fluctuations in exchange rates affecting the global competitive environment in stainless; and the risk of litigation or adverse political action affecting trade.

Operational risks

Operational risks 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. 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 project implementation risks, especially related to implementation of new ERP systems. 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. During the last year further measures were taken to improve cyber security.

Environmental risks

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

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 environmental liabilities and risks at closed mines and sites.

Safety- and personnel-related risks

The main risks related to safety, personnel and compliance are the risk of fatalities and serious injuries to own employees and contractors having a significant impact on Outokumpu's safety culture and the company's reputation as an employer; the risk of fatalities or severe incidents; 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; 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 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 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.

Sustainability and corporate responsibility risks

Outokumpu aims to actively identify its exposures in sustainability and corporate responsibility, including human rights related topics. 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 human rights is not considered to be high.

Financial risks

Key financial risks for Outokumpu include: changes in the prices of nickel, iron, molybdenum, power, and fuels; currency developments affecting the euro, the US dollar, the Swedish krona, and the British pound; interest rate changes connected to the US dollar, the euro, and the Swedish krona; 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; 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 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, improve operational reliability, drive competitiveness and further improve financial performance; risks and uncertainties related to market development in stainless steel, ferrochrome and certain critical supplies as well as competitor actions; the risk of changes in metal prices impacting cash tied up in working capital; changes in the prices of electrical power, fuels, ferrochrome, nickel, iron and molybdenum; currency developments affecting the euro, the US dollar, the Swedish krona, and the British pound; fair value of shareholdings; dependencies on certain critical suppliers; project implementation risks; IT dependency and cyber security risks; risks due to fragmented system environment; counterparty risks related to customers and other business partners, including suppliers and financial institutions. Possible adverse changes in the global political and economic environment may have a significant adverse impact on Outokumpu's overall business and access to financial markets.

Significant legal proceedings

Dispute over invention rights, Outotec vs. Outokumpu

Outokumpu and Outotec Oyj had a dispute since 2013 relating to innovations on ferroalloy technology. On January 9, 2017, the companies reached an agreement whereby both parties withdrew their claims. Outotec was granted an exclusive right to sell and license the relevant innovations and technology against an agreed license fee payable to Outokumpu. Outokumpu retains the right to use the innovations in its own business.

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 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 Bilbao court of first instance in Spain has accepted the claim of EUR 20 million brought against Outokumpu and the two other companies. Outokumpu and the two other companies have appealed the court's decision.

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 claims 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. The EUR 23 million claim resulted from former tax installments paid by ThyssenKrupp Italia in 2006 which have not been properly settled towards AST in the following years. The matter is currently pending in court.

Antitrust investigation in Germany

On September 22, 2016, Outokumpu's subsidiary in Germany (Outokumpu Nirosta GmbH) received a letter from the German Federal Cartel Office stating that the company has been included in an ongoing investigation of possible infringements of antitrust laws in the past. Following an internal investigation, Outokumpu's view is that the official investigation on it is without merit.

Shares and shareholders

During 2017, the Outokumpu share price peaked at EUR 10.05 and was EUR 6.61 at its lowest (2016 high/low: EUR 8.51/ EUR 2.08). The share price closed at the end of the year at EUR 7.74, marking a decrease of 9% from the closing price of 2016 (Dec 31, 2016: EUR 8.51). At the end of 2017, the company's market capitalization was EUR 3,223 million, compared to EUR 3,541 million at the previous year's end. In total, 1,022 million Outokumpu shares were traded on Nasdaq Helsinki during 2017, representing a value of EUR 8,295 million.

Outokumpu's share capital was unchanged at EUR 311 million at the end of 2017. The total number of shares was 416,374,448 and the average number of shares outstanding in 2017 was 412,363,204.

Between February 6, 2017, and February 17, 2017, Outokumpu repurchased 2,000,000 of its own shares through public trading at Nasdaq Helsinki intending to use them for the reward under the share-based payment plans. On December 31, 2017, Outokumpu held 3,702,899 of its own shares, i.e. treasury shares.

Management shareholdings and share based incentive programs

On December 31, 2017, the members of the Board of Directors and the members of the Outokumpu Leadership Team (OLT) altogether held 1,915,835 shares, or 0.5% 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 and Matching Share Plans for the CEO and other key employees. In 2017, after deductions for applicable taxes, a total of 813,066 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 2016–2018 and 2017–2019 and their continuation for the period 2018–2020 was already approved by the Board of Directors in December 2017. The Performance Share Plan for the period 2017–2019 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: www.outokumpu.com/en/investors/governance.

Annual General Meeting

The Annual General Meeting of Outokumpu Oyj was held on March 21, 2017. The Meeting approved the financial statements and discharged the management of the company from liability for the financial year 2016. The Meeting decided that a dividend of 0.10 euro per share be paid for 2016. The Board of Directors was authorized to repurchase the company's own shares and decide on the issuance of shares as well as special rights entitling to shares. The Meeting also approved the amendments in the articles of association and the proposals of the Nomination Board regarding the members of the Board of Directors and their remuneration.

The Annual General Meeting decided that the Board of Directors would consist of eight members. Markus Akermann, Roberto Gualdoni, Kati ter Horst, Heikki Malinen, Saila Miettinen-Lähde, Jorma Ollila and Olli Vaartimo of the previous members of the Board of Directors were re-elected, and Eeva Sipilä was elected as a new member for the term of office ending at the end of the next Annual General Meeting. The Annual General Meeting re-elected Jorma Ollila as the Chairman and Olli Vaartimo as the Vice Chairman of the Board of Directors.

Changes in the Board of Directors and the Outokumpu Leadership Team

Saila Miettinen-Lähde resigned from Outokumpu's Board of Directors as of June 9, 2017. The Board of Directors continues to operate with seven members until the next Annual General Meeting.

Outokumpu Chief Technology Officer Pekka Erkkilä retired as of February 2, 2017. He continues to support the company in selected areas and to represent Outokumpu's interest in for example Fennovoima and the Association of Finnish Steel and Metal Producers.

In March 2017, Reeta Kaukiainen joined Outokumpu serving as Executive Vice President, Communications and Investor Relations and a member of the Outokumpu Leadership Team. Reeta joined Outokumpu from Accenture, where she led its communications and marketing activities in Finland.

In December 2017, Maciej Gwozdz, member of the Outokumpu Leadership Team, was appointed President of Business Area Europe as of January 1, 2018. He took over the position from CEO Roeland Baan who was leading the business area since 2016.

Nomination Board

Outokumpu's Shareholders' Nomination Board consists of the representatives of the four largest shareholders registered in the shareholders' register of the company on October 1 and the Chairman of the Board of Directors as an expert member. 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 October 1, 2017 the four largest shareholders of Outokumpu were Solidium Oy, Varma Mutual Pension Insurance Company, The Social Insurance Institution of Finland and Ilmarinen Mutual Pension Insurance Company, 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
- Tuula Korhonen, Investment Director at The Social Insurance Institution of Finland
- Timo Ritakallio, President and CEO at Ilmarinen Mutual Pension Insurance Company

The Nomination Board submitted its proposals to Outokumpu's Board of Directors on January 31, 2018 at the latest. The proposals were published as a part of the notice to the Annual General Meeting.

Board of Directors' proposal for profit distribution

The Board of Directors updated Outokumpu's dividend policy on January 31, 2018. According to the new policy, the dividend pay-out ratio throughout a business cycle shall be in a range of 30–50 percent of net income.

According to the parent company's financial statements on December 31, 2017 distributable funds totalled EUR 2,413 million, of which retained earnings were EUR 289 million.

The Board of Directors is proposing to the Annual General Meeting to be held on March 22, 2018 that a dividend of EUR 0.25 per share is paid for 2017 and the remaining distributable funds are allocated to retained earnings.

Events after the reporting period

Outokumpu has changed its segment structure as of January 1, 2018 by separating Ferrochrome operations from Business Area Europe as a new reportable segment. In the new structure, Outokumpu has four reportable segments – Europe, the Americas, Long Products and Ferrochrome. Outokumpu's financial reporting will be changed accordingly as of the first-quarter interim statement 2018.

Group key figures

		2017	2016	2015	2014	2013
Scope of activity						
Sales	€ million	**6,363**	5,690	6,384	6,844	6,745
– change in sales	%	**11.8**	–10.9	–6.7	1.5	48.6
– exports from and sales outside Finland, of total sales	%	**96.5**	96.4	96.6	96.7	96.9
Capital employed on Dec 31 [1]	€ million	**3,929**	3,816	4,133	4,072	4,265
Capital expenditure [2]	€ million	**174**	164	154	127	183
– in relation to sales	%	**2.7**	2.9	2.4	1.8	2.7
Depreciation and amortization	€ million	**216**	226	302	320	332
Impairments	€ million	**2**	26	1	27	13
Research and development costs	€ million	**13**	20	23	23	26
– in relation to sales	%	**0.2**	0.4	0.4	0.3	0.4
Personnel on Dec 31 [3]		**10,141**	10,600	11,002	12,125	12,561
– average for the year [4]		**10,485**	10,977	11,833	12,540	13,150
Profitability						
Adjusted EBITDA	€ million	**631**	309	165	263	–87
EBITDA	€ million	**663**	355	531	104	–165
EBIT	€ million	**445**	103	228	–243	–510
– in relation to sales	%	**7.0**	1.8	3.6	–3.6	–7.6
Result before taxes	€ million	**327**	–13	127	–459	–822
– in relation to sales	%	**5.1**	–0.2	2.0	–6.7	–12.2
Net result for the financial year	€ million	**392**	144	86	–439	–1,003
– in relation to sales	%	**6.2**	2.5	1.4	–6.4	–14.9
Return on equity [1]	%	**15.4**	6.4	3.9	–21.8	–41.4
Return on capital employed [1]	%	**11.3**	2.6	5.3	–5.8	–10.3

		2017	2016	2015	2014	2013
Financing and financial position						
Net debt	€ million	**1,091**	1,242	1,610	1,974	3,556
– in relation to sales	%	**17.1**	21.8	25.2	28.8	52.7
Net financial expenses	€ million	**127**	121	149	223	310
– in relation to sales	%	**2.0**	2.1	2.3	3.3	4.6
Interest expenses	€ million	**92**	105	130	141	210
– in relation to sales	%	**1.5**	1.9	2.0	2.1	3.1
Net debt to Adjusted EBITDA		**1.7**	4.0	9.8	7.5	neg.
Share capital	€ million	**311**	311	311	311	311
Total equity	€ million	**2,721**	2,416	2,329	2,132	1,891
Equity-to-assets ratio	%	**46.3**	40.4	39.6	33.3	21.5
Debt-to-equity ratio	%	**40.1**	51.4	69.1	92.6	188.0
Net cash generated from operating activities [5]	€ million	**328**	389	–34	–126	34

[1] Key figure definition changed in 2016. Figures for 2015 have been restated. Figures for 2014 and 2013 have not been restated.

[2] Capital expenditure for 2014 and 2013 presented for continuing operations.

[3] Personnel reported as headcount. Year 2013 reported for continuing operations.

[4] Years 2014 and 2013 reported for continuing operations.

[5] Cash flows for 2014 and 2013 presented for continuing operations.

Reconciliation of key financial figures

Key figure	Definition of the key figure or source in the consolidated financial statements		2017	2016
Sales	Consolidated statement of income	€ million	**6,363**	5,690
– change in sales	Comparison to previous year's sales	%	**11.8**	–10.9
Sales by destination to Finland	Note 3. Segment information	€ million	**224**	204
Exports from and sales outside Finland	Sales – Sales by destination to Finland	€ million	**6,139**	5,486
– exports from and sales outside Finland, of total sales	Comparison to sales	%	**96.5**	96.4
Depreciation and amortization	Note 6. Income and expenses	€ million	**216**	226
Impairments	Note 6. Income and expenses and Note 8. Financial income and expenses	€ million	**2**	26
Research and development costs	Consolidated statement of income	€ million	**13**	20
– in relation to sales	Comparison to sales	%	**0.2**	0.4
Adjusted EBITDA	EBITDA – Items classified adjustments to EBITDA	€ million	**631**	309
Adjustments to EBITDA	Note 6. Income and expenses	€ million	**31**	47
EBITDA	EBIT before depreciation, amortization and impairments in Note 6. Income and expenses	€ million	**663**	355
EBIT	Consolidated statement of income	€ million	**445**	103
– in relation to sales	Comparison to sales	%	**7.0**	1.8

Key figure	Definition of the key figure or source in the consolidated financial statements		2017	2016
Capital employed is a sum of:				
Total equity	Consolidated statement of financial position	€ million	**2,721**	2,416
Net debt	Defined in the next page	€ million	**1,091**	1,242
Defined benefit and other long-term employee benefit obligations	Consolidated statement of financial position	€ million	**337**	356
Net interest rate derivative liabilities	Note 20. Fair values and nominal amounts of derivative instruments	€ million	**3**	5
Net accrued interest expenses	Note 28. Trade and other payables	€ million	**6**	11
Less:				
Net assets held for sale	Consolidated statement of financial position	€ million	**–**	25
Defined benefit plan assets	Consolidated statement of financial position	€ million	**70**	45
Loans receivable	Note 22. Trade and other receivables	€ million	**–**	6
Available-for-sale financial assets	Consolidated statement of financial position	€ million	**68**	53
Investments at fair value through profit or loss	Consolidated statement of financial position	€ million	**17**	17
Investments in associate companies and joint ventures	Consolidated statement of financial position	€ million	**73**	67
Capital employed on Dec 31		€ million	**3,929**	3,816
Capital employed on Dec 31 of previous year	Defined above	€ million	**3,816**	4,133
Capital employed on March 31		€ million	**4,075**	3,973
Capital employed on June 30		€ million	**3,991**	3,905
Capital employed on Sept 30		€ million	**3,830**	3,815
Capital employed on Dec 31	Defined above	€ million	**3,929**	3,816
Capital employed (4-quarter average)	Average of the opening and 4 quarter-end values	€ million	**3,928**	3,928
Return on capital employed	EBIT / Capital Employed (4-quarter average)	%	**11.3**	2.6

Key figure	Definition of the key figure or source in the consolidated financial statements		**2017**	2016
Result before taxes	Consolidated statement of income	€ million	**327**	–13
– in relation to sales	Comparison to sales	%	**5.1**	–0.2
Net result for the financial year	Consolidated statement of income	€ million	**392**	144
– in relation to sales	Comparison to sales	%	**6.2**	2.5
Share capital	Consolidated statement of financial position	€ million	**311**	311
Total equity	Consolidated statement of financial position	€ million	**2,721**	2,416
Total equity on Dec 31 of previous year	Consolidated statement of financial position	€ million	**2,416**	2,329
Total equity on March 31		€ million	**2,502**	2,229
Total equity on June 30		€ million	**2,561**	2,148
Total equity on Sept 30		€ million	**2,543**	2,137
Total equity on Dec 31	Consolidated statement of financial position	€ million	**2,721**	2,416
Total equity (4-quarter average)	Average of the opening and 4 quarter-end values	€ million	**2,549**	2,252
Return on equity	Net result for the financial year / Total equity (4-quarter average)	%	**15.4**	6.4

Key figure	Definition of the key figure or source in the consolidated financial statements		**2017**	2016
Non-current debt	Consolidated statement of financial position	€ million	**698**	987
Current debt	Consolidated statement of financial position	€ million	**505**	458
Cash and cash equivalents	Consolidated statement of financial position	€ million	**112**	204
Net debt	Non-current debt + current debt – cash and cash equivalents	€ million	**1,091**	1,242
– in relation to sales	Comparison to sales	%	**17.1**	21.8
Net financial expenses	Consolidated statement of income	€ million	**127**	121
– in relation to sales	Comparison to sales	%	**2.0**	2.1
Interest expenses	Consolidated statement of income	€ million	**92**	105
– in relation to sales	Comparison to sales	%	**1.5**	1.9
Net debt to Adjusted EBITDA	Net debt / Adjusted EBITDA		**1.7**	4.0
Total assets	Consolidated statement of financial position	€ million	**5,886**	5,990
Advances received	Note 28. Trade and other payables	€ million	**8**	7
Equity-to-assets ratio	Total equity / (Total assets – advances received)	%	**46.3**	40.4
Debt-to-equity ratio	Net debt / Total equity	%	**40.1**	51.4
Net cash generated from operating activities	Consolidated statement of cash flows	€ million	**328**	389

Share-related key figures

		2017	2016	2015	2014	2013
Earnings per share [1] [2]	€	**0.95**	0.35	0.23	–1.24	–7.52
Diluted earnings per share [1] [2]	€	**0.90**	0.35	0.23	–1.24	–7.52
Earnings per share, continuing operations [2] [3]	€	**–**	–	–	–1.27	–6.23
Diluted earnings per share, continuing operations [2] [3]	€	**–**	–	–	–1.27	–6.23
Cash flow per share [1] [2]	€	**0.79**	0.94	–0.08	–0.36	0.26
Equity per share [2] [4]	€	**6.59**	5.84	5.60	5.13	14.23
Dividend per share	€	**0.25** [5]	0.10	–	–	–
Dividend payout ratio	%	**26.3**	28.8	–	–	–
Dividend yield	%	**3.2**	1.2	–	–	–
Price/earnings ratio		**8.15**	24.31	11.85	neg.	neg.
Development of share price [6]						
Average trading price	€	**8.11**	4.51	4.49	5.16	4.64
Lowest trading price	€	**6.61**	2.08	2.06	3.37	3.03
Highest trading price	€	**10.05**	8.51	7.76	7.50	7.39
Trading price at the end of the period	€	**7.74**	8.51	2.73	4.77	3.55
Change during the period [7]	%	**–9.0**	211.3	–42.7	34.2	–48.8
Change in the OMX Helsinki index during the period	%	**6.4**	3.6	10.8	5.7	26.5
Market capitalization at the end of the period	€ million	**3,223**	3,541	1,138	1,987	845
Development in trading volume						
Trading volume [8]	1,000 shares	**1,021,607**	955,682	1,345,515	695,235	178,989
In relation to weighted average number of shares [1]	%	**247.7**	230.6	323.9	198.9	135.0
Adjusted average number of shares [9]		**412,363,204**	414,411,287	415,473,976	349,558,854	132,579,577
Diluted average number of shares [9]		**450,247,639**	414,411,287	415,473,976	349,558,854	132,579,577
Number of shares at the end of the period [9] [10]		**412,671,549**	413,860,600	415,489,308	415,426,724	2,077,105,460

[1] 2014 and 2013 calculated based on the rights-issue-adjusted weighted average number of shares.

[2] 2013 adjusted to reflect the reverse split in June 2014.

[3] 2013 calculated based on the rights-issue-adjusted weighted average number of shares.

[4] 2013 calculated based on the rights-issue-adjusted number of shares

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

[6] 2013 share prices adjusted according to the effect of the rights issue and the reverse split.

[7] 2014 calculated based on the adjusted comparable share prices. 2013 calculated based on the unadjusted comparable share prices.

[8] Includes only Nasdaq Helsinki trading.

[9] Excluding treasury shares.

[10] 2013 not adjusted according to the effect of the rights-issue-adjusted and the reverse split.

Definitions of share-related key figures

Earnings per share	=	$\dfrac{\text{Net result for the financial year attributable to the equity holders}}{\text{Adjusted average number of shares during the period}}$
Cash flow per share	=	$\dfrac{\text{Net cash generated from operating activities}}{\text{Adjusted average number of shares during the period}}$
Equity per share	=	$\dfrac{\text{Equity attributable to the equity holders}}{\text{Adjusted number of shares at the end of the period}}$
Dividend per share	=	$\dfrac{\text{Dividend for the financial year}}{\text{Adjusted number of shares at the end of the period}}$
Dividend payout ratio	=	$\dfrac{\text{Dividend for the financial year}}{\text{Net result for the financial year attributable to the equity holders}} \times 100$
Dividend yield	=	$\dfrac{\text{Dividend per share}}{\text{Adjusted trading price at the end of the period}} \times 100$
Price/earnings ratio (P/E)	=	$\dfrac{\text{Adjusted trading price at the end of the period}}{\text{Earnings per share}}$
Average trading price	=	$\dfrac{\text{EUR amount traded during the period}}{\text{Adjusted number of shares traded during the period}}$
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	2017	2016
Sales	3	**6,363**	5,690
Cost of sales		**–5,626**	–5,298
Gross margin		**736**	392
Other operating income	6	**51**	88
Selling and marketing expenses		**–74**	–90
Administrative expenses		**–219**	–221
Research and development expenses		**–13**	–20
Other operating expenses	6	**–35**	–46
EBIT		**445**	103
Share of results in associated companies and joint ventures	14	**9**	5
Financial income and expenses	8		
Interest income		**3**	4
Interest expenses		**–92**	–105
Market price gains and losses		**–7**	–6
Other financial income		**0**	6
Other financial expenses		**–30**	–18
Total financial income and expenses		**–127**	–121
Result before taxes		**327**	–13
Income taxes	9	**64**	156
Net result for the financial year		**392**	144
Earnings per share for result attributable to the equity holders of the Company	10		
Earnings per share, EUR		**0.95**	0.35
Diluted earnings per share, EUR		**0.90**	0.35

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

Consolidated statement of comprehensive income

€ million	Note	2017	2016
Net result for the financial year		**392**	144
Other comprehensive income			
Items that may be reclassified subsequently to profit or loss:			
Exchange differences on translating foreign operations			
Change in exchange differences		**–83**	–3
Reclassification adjustments from other comprehensive income to profit or loss		**–3**	–2
Available-for-sale financial assets	17		
Fair value changes during the financial year		**0**	5
Reclassification adjustments from other comprehensive income to profit or loss		**–**	–5
Cash flow hedges	20		
Fair value changes during the financial year		**–1**	–5
Reclassification adjustments from other comprehensive income to profit or loss		**–1**	0
Income tax relating to cash flow hedges	9	**1**	1
Items that will not be reclassified to profit or loss:			
Remeasurements of defined benefit plans	25		
Changes during the financial year		**18**	–63
Income tax relating to remeasurements	9	**37**	20
Share of other comprehensive income in associated companies and joint ventures	14	**–1**	0
Other comprehensive income for the financial year, net of tax		**–32**	–53
Total comprehensive income for the financial year		**359**	91

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

Consolidated statement of financial position

€ million	Note	2017	2016
ASSETS			
Non-current assets			
Intangible assets	11, 13	**535**	504
Property, plant and equipment	12, 13	**2,633**	2,874
Investments in associated companies and joint ventures	14	**73**	67
Available-for-sale financial assets	17	**68**	53
Investments at fair value through profit or loss		**0**	1
Derivative financial instruments	20	**1**	–
Deferred tax assets	9	**295**	204
Defined benefit plan assets	25	**70**	45
Trade and other receivables	22	**1**	2
		3,675	3,750
Current assets			
Inventories	21	**1,380**	1,232
Investments at fair value through profit or loss		**16**	16
Derivative financial instruments	20	**43**	34
Trade and other receivables	22	**659**	687
Cash and cash equivalents	23	**112**	204
		2,211	2,173
Assets held for sale	5	**–**	67
TOTAL ASSETS		**5,886**	5,990

€ million	Note	2017	2016
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		**3**	4
Retained earnings		**–409**	–716
Total equity	24	**2,721**	2,416
Non-current liabilities			
Non-current debt	27	**698**	987
Derivative financial instruments	20	**3**	4
Deferred tax liabilities	9	**10**	22
Defined benefit and other long-term employee benefit obligations	25	**337**	356
Provisions	26	**79**	118
Trade and other payables	28	**34**	37
		1,160	1,525
Current liabilities			
Current debt	27	**505**	458
Derivative financial instruments	20	**37**	63
Provisions	26	**14**	15
Current tax liabilities		**7**	12
Trade and other payables	28	**1,441**	1,459
		2,004	2,007
Liabilities directly attributable to assets held for sale	5	**–**	43
TOTAL EQUITY AND LIABILITIES		**5,886**	5,990

Consolidated statement of cash flows

€ million	Note	2017	2016
Cash flow from operating activities			
Net result for the financial year		**392**	144
Adjustments for			
Taxes	9	**–64**	–156
Depreciation and amortization	11, 12	**216**	226
Impairments	8, 11, 12, 13	**2**	26
Share of results in associated companies and joint ventures	14	**–9**	–5
Gain/loss on sale of intangible assets and property, plant and equipment	6	**–16**	–2
Gain/loss on sale of financial assets	8	**0**	–5
Gain/loss on disposal of subsidiaries	4	**–22**	–34
Interest income	8	**–1**	–2
Interest expense	8	**85**	94
Exchange rate differences		**55**	–4
Other non-cash adjustments		**13**	–4
		259	134
Change in working capital			
Change in trade and other receivables		**–54**	–17
Change in inventories		**–222**	39
Change in trade and other payables		**97**	285
		–180	307
Provisions, and defined benefit and other long-term employee benefit obligations paid		**–60**	–94
Interest and dividends received		**3**	1
Interest paid		**–78**	–94
Income taxes paid		**–8**	–9
Net cash from operating activities		**328**	389

€ million	Note	2017	2016
Cash flow from investing activities			
Acquired businesses, net of cash		**–**	–9
Purchases of available-for-sale financial assets	17	**–15**	–14
Purchases of property, plant and equipment	12	**–144**	–116
Purchases of intangible assets	11	**–27**	–25
Proceeds from the disposal of subsidiaries, net of cash and tax	4	**90**	72
Proceeds from sale of property, plant and equipment	12	**21**	8
Proceeds from sale of intangible assets	11	**12**	–
Other investing cash flow		**–1**	3
Net cash from investing activities		**–63**	–81
Cash flow before financing activities		**264**	308
Cash flow from financing activities			
Dividends paid	24	**–41**	–
Treasury share purchase	24	**–20**	–7
Borrowings of non-current debt		**190**	369
Repayments of non-current debt		**–541**	–656
Change in current debt		**162**	–13
Repayments of finance lease liabilities		**–65**	–28
Other financing cash flow		**–37**	45
Net cash from financing activities		**–353**	–291
Net change in cash and cash equivalents		**–89**	17
Cash and cash equivalents at the beginning of the financial year		**204**	186
Net change in cash and cash equivalents		**–89**	17
Foreign exchange rate effect on cash and cash equivalents		**–3**	1
Cash and cash equivalents at the end of the financial year	23	**112**	204

Consolidated statement of changes in equity

€ million	Note	Share capital	Premium fund	Invested unrestricted equity reserve	Other reserves	Fair value reserves	Cumulative translation differences	Remeasure-ments of defined benefit plans	Treasury shares	Other retained earnings	Total equity
Equity on Jan 1, 2016		**311**	**714**	**2,103**	**5**	**6**	**8**	**–92**	**–21**	**–704**	**2,329**
Net result for the financial year		–	–	–	–	–	–	–	–	144	144
Other comprehensive income		–	–	–	–	–4	–5	–43	–	0	–53
Total comprehensive income for the financial year		–	–	–	–	–4	–5	–43	–	144	91
Transactions with equity holders of the Company											
Contributions and distributions											
Share-based payments	18	–	–	–	–	–	–	–	9	–7	3
Treasury share purchase	24	–	–	–	–	–	–	–	–7	–	–7
Other		–	–	–	–2	–	–	–	–	2	–
Equity on Dec 31, 2016		**311**	**714**	**2,103**	**2**	**1**	**3**	**–135**	**–19**	**–564**	**2,416**
Net result for the financial year		–	–	–	–	–	–	–	–	392	392
Other comprehensive income		–	–	–	–	–1	–86	56	–	–1	–32
Total comprehensive income for the financial year		–	–	–	–	–1	–86	56	–	391	359
Transactions with equity holders of the Company											
Contributions and distributions											
Dividends paid	24	–	–	–	–	–	–	–	–	–41	–41
Share-based payments	18	–	–	–	–	–	–	–	13	–6	7
Treasury share purchase	24	–	–	–	–	–	–	–	–20	–	–20
Changes in ownership interests											
Quarto plate mill and pipe plant divestments	4	–	–	–	–	–	3	8	–	–11	–
Other		–	–	–	1	–	–	–	–	–1	–
Equity on Dec 31, 2017		**311**	**714**	**2,103**	**3**	**0**	**–81**	**–72**	**–26**	**–232**	**2,721**

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 and creates advanced materials that are efficient, long lasting and recyclable – helping to build a world that lasts forever. Stainless steel is an ideal material to create lasting solutions in demanding applications from cutlery to bridges, energy to medical equipment. Stainless steel is 100% recyclable, corrosion-resistant, maintenance-free, durable and hygienic. Outokumpu employs some 10,000 professionals in more than 30 countries.

In its meeting on January 31, 2018 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 for the financial year 2017 covering the period from January 1 to December 31, 2017.

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, 2017. 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.

The consolidated financial statements of Outokumpu for 2017 have been prepared on a going concern basis.

As from January 1, 2017 Outokumpu has applied the following amended standards.

- **Amendments to IAS 12 Income Taxes – Recognition of Deferred Tax Assets for Unrealised Losses** (effective for financial years beginning on or after January 1, 2017). The amendments clarify that the existence of a deductible temporary difference depends solely on a comparison of the carrying amount of an asset and its tax base at the end of the reporting period, and is not affected by possible future changes in the carrying amount or expected manner of recovery of the asset. The amendments had no impact on Outokumpu's consolidated financial statements.
- **Amendments to IAS 7 Statement of Cash Flows Disclosure Initiative** (effective for financial years beginning on or after January 1, 2017). The changes were made to enable users of financial statements to evaluate changes in liabilities arising from financing activities, including both changes arising from cash flow and non-cash changes. The amendments had an impact on the disclosures in Outokumpu's consolidated financial statements. See note 27.

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 will adopt 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 (* not yet endorsed by the European Union as at December 31, 2017).

- **IFRS 15 Revenue from Contracts with Customers** (effective for financial years beginning on or after January 1, 2018) and **Amendments to IFRS 15 – Clarifications to IFRS 15 Revenue from Contracts with Customers** (effective for financial years beginning on or after January 1, 2018): IFRS 15 introduces a five-step model to determine when to recognize revenue and at what amount. Revenue is recognized when a company transfers control of goods to a customer either over time or at a point in time. The standard also introduces new disclosure requirements.

  Outokumpu will adopt IFRS 15 as of January 1, 2018, using the retrospective approach. Outokumpu has assessed its current accounting policies and has concluded that the adoption will have no material impact on the quantitative information or on the presentation of the consolidated financial statements. Outokumpu's performance obligations are sales of stainless steel and ferrochrome, as well as arranging transportation of these goods to the customer when "C" Incoterms are applied in the customer delivery. Outokumpu ships goods to customers under variety of Incoterms, and considers the transfers of physical possession and risks and rewards related to the ownership of the goods accordingly. Consequently, Outokumpu considers that performance obligations related to sales of stainless steel and Ferrochrome are satisfied at a point of time. Performance obligations related to arranging transportation are satisfied over time of the transportation. The transaction price is allocated to the performance obligations on relative stand-alone selling price basis. Stainless steel and ferrochrome sales prices are fixed before delivery, and volume discounts accrued in the revenue accounting are the only variable component in pricing. The volume discounts are already according to current principles accrued in revenue accounting.

- **IFRS 9 Financial Instruments** (effective for financial years beginning on or after January 1, 2018): IFRS 9 replaces the existing guidance in IAS 39 Financial Instruments: Recognition and Measurement. IFRS 9 includes revised guidance on the classification and measurement of financial instruments, including a new expected credit loss model for calculating impairment on financial assets, and the new general hedge accounting requirements. It also carries forward the guidance on recognition and derecognition of financial instruments from IAS 39.

  The main impact of the new standard to Outokumpu is the requirement to value all equity instruments at fair value. According to IAS 39, Outokumpu has valued its investment in Voimaosakeyhtiö SF at cost as fair valuation has not been reliable due to early stage of the Fennovoima project. Once the Fennovoima project progresses and reliability of fair value measurement improves, the value can differ from the current fair value estimate based on cost. Depending on assumptions used, management estimates result in a wide range for fair value.

  Outokumpu will apply simplified approach to analyze and recognize expected credit losses on trade receivables. The change will not have material impact on Group's consolidated financial statements. Regarding hedge accounting, the changes will not have material impact on Group's current hedge accounting program. However, Group will analyze the opportunities for a wider application of hedge accounting in the future.

- **IFRS 16 Leases** (effective for financial years beginning on or after January 1, 2019): The new standard replaces the current IAS 17 standard and related interpretations. IFRS 16 requires the lessees to recognize the lease agreements as right-of-use assets and lease liabilities in the statement of financial position. The accounting model is similar to current finance lease accounting according to IAS 17. The exceptions available relate to short-term contracts in which the lease term is 12 months or less and to low value items. The standard will increase Outokumpu's non-current assets and non-current and current debt, affecting primarily the accounting for the Group's leases that have currently been classified operating leases. The change will improve adjusted EBITDA which is Outokumpu's main performance measure.

- **Amendments to IFRS 2 Share-based Payments – Classification and Measurement of Share-based Payment Transactions** (effective for financial years beginning on or after January 1, 2018). The amendments clarify the accounting for certain types of arrangements. Three accounting areas are covered: measurement of cash-settled share-based payments; classification of share-based payments settled net of tax withholdings; and accounting for a modification of a share-based payment from cash-settled to equity-settled.

  The classification of share-based payments settled net of tax withholdings will have an impact on Outokumpu's consolidated financial statements. As Outokumpu's share-based payment plans will according to the amendment be fully accounted for as equity-settled, the fair values of the programs over the vesting period will be fully determined based on the share price at the grant date. Based on share-based payment valuation on December 31, 2017, the impact is not material.

- **Annual Improvements to IFRSs (2014–2016 Cycle)*:** The changes will not have material impact on Outokumpu's consolidated 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 is not assessed to have material impact on Outokumpu's consolidated financial statements.

- **Annual Improvements to IFRSs (2015–2017 Cycle)*:** The changes are not assessed 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 and make 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 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. The majority 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 near future is known. That is why a significant part of the future price for each product to be sold is estimated

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 33

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 in order 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. Preparation of the estimated future cash flows and determining the discount rates for the impairment testing requires 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 13.

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 derivatives and other 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.

The Group has used discounted cash flow analysis for various derivative contracts and in case of options Black-Scholes-Merton model has been applied. See note 20.

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 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, or the parent company is otherwise in control of the company at the end of the reporting period. The Group controls an entity when it is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. 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, with the exception of costs to issue debt or equity securities, are recognized as expenses in the periods in which costs are incurred and services rendered.

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 33

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. The result for the period and items recognized in other comprehensive income are allocated to the equity holders of the company and non-controlling interests and presented in the statement of income and statement of other comprehensive income. Non-controlling interests are presented separately from the equity allocated to the equity holders of the company. Comprehensive income is allocated to the equity holders of the company and to non-controlling interests even in situations where the allocation would result in the non-controlling interests' share being negative, unless non-controlling interests have an exemption not to meet obligations which exceed non-controlling interests' investment in the company.

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 has three reportable operating segments which represent the strategic business areas of the Group.

The operating segments are responsible for sales, profitability, production and supply chain management. They are managed separately and are reported separately in internal management reporting to the CEO who is Outokumpu's chief operating decision maker. Outokumpu's segment information is based on the internal management reporting which is prepared according to the IFRS accounting principles.

Pricing of intersegment transactions is based on arm's length prices. Adjusted EBITDA of the operating segments is reported to the CEO regularly in order for him to review their performance and make decisions about resources to be allocated to the segments. Adjusted EBITDA used in management reporting is defined in these accounting principles.

Other operations mainly consist of such business development and Corporate Management expenses that are not allocated to the businesses.

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 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 recognition

Revenue from the sale of goods is recognized after the significant risks and rewards of ownership have been transferred to the buyer, and the Group retains neither a continuing managerial involvement to the degree usually associated with ownership, nor effective control of those goods. Usually this means that revenue is recognized upon delivery of goods to customers in accordance with agreed terms of delivery.

Outokumpu ships stainless steel products to customers under a variety of delivery terms. The used terms are based on Incoterms collection of delivery terms, published and defined by the International Chamber of Commerce Terms of Trade.

The most common delivery terms used by Outokumpu are "C" terms, whereby the Group arranges and pays for the carriage and certain other costs. The Group ceases to be responsible for the goods and revenue is recognized once the goods have been handed over to the carrier to be delivered to the agreed destination.

Less frequently used are "D" terms, under which the Group is obliged to deliver the goods to the buyer at the agreed destination, in which case revenue is recognized when the goods are delivered to the buyer. Also "F" terms are less frequently used, under which the buyer arranges and pays for the carriage, and revenue is recognized when the goods are handed over to the carrier contracted by the buyer.

Sales-related volume discounts are accrued in the revenue accounting.

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 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

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non-controlling interest and any previously held equity interests in the acquiree, if any. Goodwill is not amortized, but tested for impairment. In respect of associated companies, goodwill is included in the carrying amount of the investment. 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 amortizations and accumulated 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 a qualifying intangible asset are capitalized in the statement of financial position as part of the carrying amount of the asset. Qualifying asset is an asset that necessarily takes a substantial period of time to get 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 a qualifying asset are capitalized in the statement of financial position as part of the carrying amount of the asset. Qualifying asset is an asset that necessarily takes a substantial period of time to get ready for its intended use or sale. Other borrowing costs are recognized as expenses in the period in which they are incurred. 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 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, thus included in EBIT.

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.

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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

Lease agreements of property plant and equipment, in which the Group has substantially all the rewards and risks of ownership, are classified as finance leases. An asset acquired through finance lease is recognized as property, plant and equipment in the statement of financial position, within a group determined by the asset's characteristics, at the commencement of the lease term at the lower of fair value and the present value of minimum lease payments. Respective lease liabilities less finance charges are included in debt. Each lease payment is allocated between the finance charge and the reduction of the outstanding liability. The finance charge is allocated to each period during the lease term to produce a constant periodic rate of interest on the remaining balance of the liability. Property, plant and equipment acquired under finance lease contracts are depreciated over the shorter of the useful life of the asset and the lease term. If a sale and leaseback transaction results in a finance lease, any excess of sales proceeds over the sold asset's carrying amount will not be immediately recognized but deferred and amortized over the lease term.

At inception of significant other arrangements, the Group determines whether these arrangements are, or contain a lease component. At inception of an arrangement that contains a lease the Group separates payments and other consideration required by the arrangement into those for the lease and those for other elements. Lease accounting principles are applied to lease payments.

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

Group as a lessor

Leases of property, plant and equipment where the Group has substantially transferred all the rewards and risks of ownership to the lessee are classified as finance leases. Assets leased out through such contracts are recognized as other receivables and measured at the lower of the fair value of the leased asset and the present value of minimum lease payments. Interest income from finance lease is recognized in the statement of income so as to achieve a constant periodic rate of return on the net investment in the finance lease.

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.

Financial instruments

Financial assets

The Group's financial assets are classified as financial assets at fair value through profit or loss, loans and receivables and available-for-sale financial assets. Outokumpu did not hold financial instruments classified as held-to-maturity investments in the current or previous reporting period. Classification is made upon initial recognition based on the purpose of use of the financial asset.

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.

At the end of the reporting period, the Group estimates whether there is objective evidence on impairment of items other than financial assets measured at fair value through profit or loss. A financial asset is assumed to be impaired if there is objective evidence on impairment and the effect on the estimated future cash flows generated by the financial assets can be reliably measured. Objective evidence on impairment may be e.g. a significant deterioration in the counterparty's results, a contract breach by the debtor and, in case of equity instruments (available-for-sale financial assets), a significant or long-term decrease in the value of an instrument below its carrying amount. In such situations, the fair value development of equity instruments is reviewed for the past three quarters of the reporting period. The Group has determined percentual limits for the review, the breach of which will result in the recognition of an impairment loss. An impairment loss is recognized immediately in profit or loss.

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 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. Changes in fair value of derivative contracts not qualifying for hedge accounting are recognized in EBIT in other operating income and expenses.

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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 changes in fair value of other financial items at fair value through profit or loss held are recognized in market price gains and losses under financial income and expenses.

Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments and are not quoted in active markets. Loans and receivables arise when the Group gives out a loan or delivers goods or services directly to a debtor.

Loans and receivables are recognized at the settlement date and measured initially at fair value. After initial recognition, loans and receivables are measured at amortized cost by using the effective interest rate method.

Outokumpu uses factoring for working capital management. Sold trade receivables have been derecognized when the related risks and rewards of ownership have been transferred in material respect.

Available-for-sale financial assets

Available-for-sale financial assets are non-derivative financial assets which are either designated in this category or not classified in any other category of financial assets. The purchases and sales of these items are recognized at the trade date. Available-for-sale financial assets are included in non-current assets, unless the Group has the intention to dispose of the investment within 12 months from the reporting date.

This category includes share investments, both in listed and unlisted companies. Investments in shares are measured at fair value, or if fair value cannot be reliably measured, at cost less any impairment losses. 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 maximize the use of observable market data where it is available and rely as little as possible on entity-specific estimates made by Outokumpu. 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, until the shares in question are disposed of or impaired, in which case, the accumulated changes in fair value are transferred from equity to be recognized in profit or loss as reclassification adjustments.

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

The Group's financial liabilities are classified as either financial liabilities at fair value through profit or loss or other financial liabilities (financial liabilities recognized at amortized cost). 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.

Financial liabilities at fair value through profit or loss

In Outokumpu Group, 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.

Other financial liabilities

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. Significant transaction costs are included in the original carrying amount.

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 expiry.

Derivative instruments and hedge accounting

Derivatives

All the Group's 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 value of currency, interest rate and metal options is determined by

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utilising commonly applied option valuation models, such as Black–Scholes–Merton model. Fair values of certain derivatives are based on valuations of external counterparties.

Hedge accounting

Hedge accounting refers to the method of accounting, which aims to assign one or several hedging instruments so that their fair value or cash flows offset completely or partly the changes in fair value or cash flows of the hedged item. Outokumpu applies hedge accounting to certain foreign exchange and commodity derivatives. Derivatives, to which hedge accounting is not applied, have been acquired to reduce the profit or loss and/or cash flow effects of operations or financing activities.

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. Hedging instruments are subject to prospective and retrospective effectiveness testing. Hedge effectiveness is the degree to which 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. The hedging relationship is considered to be highly effective if the changes in fair values or cash flows of the hedging instrument offset the cash flow changes of the hedged item by 80–125%. Hedge accounting is discontinued when the requirements of hedge accounting are no longer met.

Cash flow hedges

In cash flow hedging, the Group is hedging against changes in cash flows, which result from the realization of a risk associated with a recognized asset or liability or a highly probable forecast transaction. Fair value changes of derivatives designated to hedge forecast 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. The fair value changes related to the ineffective portion of the hedging instrument are recognized immediately in profit or loss.

Fair value hedges

Changes in the fair value of derivatives that are designated and qualify as fair value hedges are recorded in the statement of income, together with any changes in the fair value of the hedged asset or liability that are attributable to the hedged risk.

Net investment hedges

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 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 the weighted average method. 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 incentive programs are accounted for partly as equity-settled and partly as cash-settled. The equity-settled and cash-settled parts both include market and non-market based vesting conditions. The fair values of programs over vesting periods are determined at the grant date and the portion paid in cash is remeasured based on market conditions at the end of each reporting period. Market prices and applicable statistical models are used in determining the fair values. 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 fair value measurement of the benefits.

EBIT and EBITDA

In Outokumpu, 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

Outokumpu considers adjusted EBITDA as its 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.

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3. Segment information

Outokumpu's business is divided into three business areas which are Europe, Americas and Long Products. In addition to the business area structure, Business Support Functions cover Finance, 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 three operating segments:

Europe consists of both coil and plate operations as well as ferrochrome production 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 coil 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.

Operating segments

2017 € million	Europe	Americas	Long Products	Operating segments total	Reconciliation: Other operations	Reconciliation: Eliminations	Group
External sales	4,206	1,512	405	6,123	239	–	6,363
Inter-segment sales	250	33	186	469	268	–737	–
Sales	4,455	1,546	591	6,592	507	–737	6,363
Adjusted EBITDA	615	21	16	653	–15	–7	631
Adjustments to EBITDA							
Gain on the quarto plate mill divestment	–	–	–	–	15	–	15
Gain on the sale of land in Sheffield	–	–	–	–	9	–	9
Gain on the pipe plant divestment	–	–	–	–	7	–	7
EBITDA	615	21	16	653	16	–7	663
Depreciation and amortization	–151	–52	–7	–210	–6	–	–216
Impairments	–1	–	–	–1	–	–	–1
EBIT	463	–31	10	442	10	–7	445
Share of results in associated companies and joint ventures	–	–	–	–	–	–	9
Financial income	–	–	–	–	–	–	3
Financial expenses	–	–	–	–	–	–	–129
Result before taxes	–	–	–	–	–	–	327
Income taxes	–	–	–	–	–	–	64
Net result for the financial year	–	–	–	–	–	–	392
Assets in operating capital	3,571	1,382	241	5,194	253	–196	5,251
Other assets	–	–	–	–	–	–	340
Deferred tax assets	–	–	–	–	–	–	295
Total assets	–	–	–	–	–	–	5,886
Liabilities in operating capital	1,085	310	128	1,524	264	–182	1,606
Other liabilities	–	–	–	–	–	–	1,549
Deferred tax liabilities	–	–	–	–	–	–	10
Total liabilities	–	–	–	–	–	–	3,164
Operating capital	2,485	1,072	113	3,670	–11	–15	3,645
Net deferred tax asset	–	–	–	–	–	–	285
Capital employed	–	–	–	–	–	–	3,929

Other operations consist of activities outside the three 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			
2016 € million	Europe	Americas	Long Products	Operating segments total	Other operations	Eliminations	Group
External sales	3,775	1,304	333	5,412	277	–	5,690
Inter-segment sales	151	21	153	326	289	–615	–
Sales	3,927	1,325	487	5,738	567	–615	5,690
Adjusted EBITDA	374	–27	–1	346	–37	0	309
Adjustments to EBITDA							
Redundancy costs	–23	–3	–2	–27	–3	–	–30
Gain on the SKS divestment	–	–	–	–	28	–	28
Changes to the UK pension scheme	4	–	21	25	1	–	26
Net insurance compensation and costs related to technical issues in Calvert	–	24	–	24	–	–	24
Restructuring provisions, other than redundancy	–8	–	–	–8	–	–	–8
Gain on the Guangzhou divestment	–	–	–	–	6	–	6
EBITDA	348	–6	18	360	–5	0	355
Depreciation and amortization	–158	–54	–7	–219	–7	–	–226
Impairments	–26	–	–	–26	–	–	–26
EBIT	164	–60	11	115	–12	0	103
Share of results in associated companies and joint ventures	–	–	–	–	–	–	5
Financial income	–	–	–	–	–	–	10
Financial expenses	–	–	–	–	–	–	–130
Result before taxes	–	–	–	–	–	–	–13
Income taxes	–	–	–	–	–	–	156
Net result for the financial year	–	–	–	–	–	–	144
Assets in operating capital	3,569	1,458	239	5,265	279	–218	5,326
Other assets	–	–	–	–	–	–	393
Deferred tax assets	–	–	–	–	–	–	204
Assets held for sale	–	–	–	–	–	–	67
Total assets	–	–	–	–	–	–	5,990
Liabilities in operating capital	1,150	331	99	1,580	322	–210	1,692
Other liabilities	–	–	–	–	–	–	1,818
Deferred tax liabilities	–	–	–	–	–	–	22
Liabilities directly attributable to assets held for sale	–	–	–	–	–	–	43
Total liabilities	–	–	–	–	–	–	3,574
Operating capital	2,419	1,127	139	3,686	–43	–8	3,635
Net deferred tax asset	–	–	–	–	–	–	181
Capital employed	–	–	–	–	–	–	3,816

Geographical information

€ million	Finland	Germany	Sweden	The UK	Other Europe	North America	Asia and Oceania	Other countries	Inter-area	Group
2017										
Sales by destination	224	1,511	174	479	1,984	1,458	434	99	–	6,363
Sales by origin	3,133	1,425	1,363	617	424	1,659	64	55	–2,377	6,363
Non-current assets	1,539	337	260	56	112	847	15	2	–	3,168
2016										
Sales by destination	204	1,371	162	482	1,610	1,388	382	89	–	5,690
Sales by origin	2,743	1,268	1,166	493	404	1,410	56	51	–1,901	5,690
Non-current assets	1,555	345	276	59	115	1,009	17	3	–	3,379

Sales by destination is presented for external sales.

Sales by origin and 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.

4. Acquisitions and Divestments

Acquisitions in 2017

Outokumpu did not have any acquisitions in 2017.

Divestments in 2017

In January 2017, Outokumpu divested its quarto plate mill Outokumpu Stainless Plate, LLC within the Americas segment. The consideration of the transaction was EUR 27 million and the gain, recognized in other operating income, was EUR 15 million, of which EUR 7 million were cumulative translation differences reclassified to profit or loss. In the consolidated financial statements for 2016, the subsidiary was presented as a disposal group held for sale with assets held for sale amounting to EUR 67 million and liabilities directly attributable to assets held for sale amounting to EUR 43 million. Cash and cash equivalents of the divested subsidiary were EUR 0 million.

In July 2017, Outokumpu divested its pipe plant Outokumpu Stainless Pipe, Inc. within the Long Products segment. The consideration of the transaction was EUR 26 million and the gain, recognized in other operating income, was EUR 7 million, which included EUR –4 million of cumulative translation differences that were reclassified to profit or loss. The divestment did not have any material impact on the consolidated statement of financial position. Cash and cash equivalents of the divested subsidiary were EUR 0 million.

5. Assets held for sale

Year 2017

In 2017, Outokumpu did not have any disposal groups or assets held for sale.

Year 2016

In 2016, Outokumpu committed to divesting the subsidiary Outokumpu Stainless Plate, LLC within the Americas segment. Accordingly, the subsidiary was presented as a disposal group held for sale in Outokumpu's 2016 consolidated financial statements. The main items presented under assets held for sale comprised property, plant and equipment of EUR 35 million, inventories of EUR 14 million and deferred tax assets of EUR 8 million. The main item presented under liabilities associated with assets held for sale comprised defined benefit obligation of EUR 38 million. The divestment of the subsidiary took place in January 2017.

6. Income and expenses

Depreciation and amortization by function

€ million	2017	2016
Cost of sales	**–207**	–214
Selling and marketing expenses	**–0**	–1
Administrative expenses	**–8**	–11
Research and development expenses	**–1**	–0
	–216	–226

Other operating income

€ million	2017	2016
Gains from disposal of subsidiaries	**22**	34
Gains on sale of intangible assets and property, plant and equipment	**16**	4
Insurance compensation	**0**	37
Other income items	**12**	13
	51	88

Other operating expenses

€ million	2017	2016
Exchange gains and losses from foreign exchange derivatives	**–9**	–13
Market price gains and losses from commodity derivatives	**–14**	–10
Market price gains and losses from derivative financial instruments	**–23**	–22
Impairments	**–1**	–26
Losses on sale of intangible assets and property, plant and equipment	**–0**	–2
Other expense items	**–10**	4
	–35	–46

Adjustments to EBITDA and EBIT

€ million	2017	2016
Gain on the quarto plate mill divestment	**15**	–
Gain on the sale of land in Sheffield	**9**	–
Gain on the pipe plant divestment	**7**	–
Redundancy costs	**–**	–30
Gain on the SKS divestment	**–**	28
Changes to the UK pension scheme	**–**	26
Net insurance compensation and costs related to technical issues in Calvert	**–**	24
Restructuring costs, other than redundancy	**–**	–8
Gain on the Guangzhou divestment	**–**	6
	31	47

In 2017, Outokumpu divested its quarto plate mill in New Castle, Indiana, US resulting in a gain of EUR 15 million, surplus land in Sheffield, UK with a gain of EUR 9 million, and its pipe plant in Wildwood, Florida, US with a gain of EUR 7 million. See note 4.

In 2016, Outokumpu announced global streamlining measures related to sales, general and administrative functions and proceeded with other restructuring measures in accordance with the EMEA restructuring plan. Related to these measures redundancy costs of EUR 30 million were recognized.

In 2016, EUR 28 million additional gain was recognized relating to the divestment of Shanghai Krupp Stainless Co., Ltd. (SKS) which took place in 2015. Outokumpu also divested its Guangzhou service center in 2016 from which EUR 6 million gain was recognized.

In 2016, Outokumpu closed its defined benefit pension scheme in the UK. As a result, the net pension obligation decreased due to a curtailment of EUR 26 million. See note 25.

In 2016, EUR 24 million adjustment was recognized relating to earlier insurance compensation in Calvert mill in the US due to machinery breakdown incident in 2014.

Auditor fees

2017

€ million	PricewaterhouseCoopers
Audit	**–1.9**
Audit-related services	**–0.1**
Tax advisory	**–0.2**
Other services	**–0.3**
	–2.5

PricewaterhouseCoopers Oy has provided non-audit services to Outokumpu in total of EUR 0.4 million during 2017. These services comprised of auditor's written statements and certificates, tax services and consultation in business transformation projects.

2016

€ million	KPMG
Audit	–1.9
Tax advisory and other services	–0.1
	–1.9

7. Employee benefit expenses

€ million	2017	2016
Wages and salaries	**–549**	–562
Termination benefits	**–1**	–28
Social security costs	**–73**	–68
Post-employment and other long-term employee benefits		
Defined benefit plans [1]	**–7**	17
Defined contribution plans	**–43**	–49
Other long-term employee benefits [2]	**13**	–2
Expenses from share-based payments	**–16**	–9
Other personnel expenses	**–7**	–14
	–684	–713

[1] 2016 includes curtailment of EUR 26 million due to the closure of the defined benefit pension scheme in the UK. See note 25.

[2] 2017 includes EUR 14 million from reversal of long-service remuneration obligations in Germany where the terms of the arrangement were changed, and the arrangement no longer contains long-term employee benefit obligations, but the benefits are current in nature. The accruals related to the current benefits have been reported under wages and salaries. See note 25.

Profit-sharing bonuses based on the Finnish Personnel Funds Act were not recognized in 2017 nor 2016.

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

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 33

8. Financial income and expenses

€ million	2017	2016
Interest income	3	4
Gains on the sale of available-for-sale financial assets	–	5
Other financial income items	0	0
Other financial income	0	6
Interest expenses		
Debt at amortized cost	–65	–71
Factoring expenses	–8	–8
Finance lease arrangements	–12	–15
Derivatives	–2	–4
Interest expense on defined benefit obligations and other long-term employee benefits	–5	–8
Interest expenses	–92	–105
Capitalized interests	1	3
Impairment of financial assets	–1	–0
Fees related to committed credit facilities	–14	–18
Other fees	–15	–4
Other financial expenses	–30	–18
Exchange gains and losses		
Derivatives	83	–13
Cash, loans and receivables	–97	6
Other market price gains and losses		
Derivatives	2	1
Other	5	–1
Market price gains and losses	–7	–6
Total financial income and expenses	–127	–121

Other fees mainly consist of expenses related to the redemption of the notes due 2019 and two partial redemptions related to the notes due 2021.

Exchange gains and losses in the consolidated statement of income

€ million	2017	2016
In sales	–17	10
In purchases [1]	37	–15
In other income and expenses [1]	–9	–13
In financial income and expenses [1]	–15	–7
	–3	–24

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

Exchange gains and losses include EUR 74 million of net exchange gains on derivative financial instruments (2016: EUR 24 million net exchange losses) of which a loss of EUR 9 million has been recognized in other operating expenses and a gain of EUR 83 million in financial items.

9. Income taxes

Income taxes in the consolidated statement of income

€ million	2017	2016
Current taxes	–6	–12
Deferred taxes	71	168
	64	156

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

€ million	2017	2016
Result before taxes	327	–13
Hypothetical income taxes at Finnish tax rate of 20% on consolidated result before tax	–65	3
Difference between Finnish and foreign tax rates	–6	10
Tax effect of non-deductible expenses and tax exempt income [1]	–2	–3
Reassessment of the values of deferred tax assets [2]	139	152
Taxes for prior years	–1	2
Other items [1]	0	–8
Income taxes in the consolidated statement of income	64	156

[1] The tax effect of non-deductible and tax exempt items in 2016 included fully or partly tax exempted gain from disposal of subsidiary shares. Local withholding tax with respect to these particular share disposals is presented as other items.

[2] Includes EUR 125 million tax benefit due to recognition of previously non-recognized deferred tax assets (2016: EUR 189 million).

Deferred tax assets and liabilities

€ million	Jan 1, 2017 Deferred tax assets	Jan 1, 2017 Deferred tax liabilities	Movements: Recognized in profit or loss	Movements: Recognized in other comprehensive income	Movements: Translation differences	Movements: Reclassification to assets held for sale	Dec 31, 2017 Deferred tax assets	Dec 31, 2017 Deferred tax liabilities
Intangible assets	7	–3	–2	–	–	–	6	–4
Property, plant and equipment	25	–209	17	–	0	–	28	–195
Inventories	15	–8	2	–	0	–	19	–10
Net derivate financial assets	9	–10	–11	1	–	–	5	–17
Other financial assets	4	–5	–2	–	–	–	4	–7
Defined benefit and other long-term employee benefit obligations	18	–23	–13	37	–0	–	53	–33
Other financial liabilities	80	–2	2	–	–0	–	81	–3
Provisions	22	–19	2	–	–	–	27	–22
Tax losses and tax credits	282	–	74	–	–4	–	352	–
	461	–280	71	38	–4	–	**575**	**–290**
Offset	–257	257					–280	280
Deferred taxes in the statement of financial position	204	–22					**295**	**–10**

€ million	Jan 1, 2016 Deferred tax assets	Jan 1, 2016 Deferred tax liabilities	Movements: Recognized in profit or loss	Movements: Recognized in other comprehensive income	Movements: Translation differences	Movements: Reclassification to assets held for sale	Dec 31, 2016 Deferred tax assets	Dec 31, 2016 Deferred tax liabilities
Intangible assets	8	–2	–2	–	–	–	7	–3
Property, plant and equipment	31	–173	–44	–	–6	8	25	–209
Inventories	19	–8	–3	–	–	–0	15	–8
Net derivate financial assets	8	–9	–0	1	–	–	9	–10
Other financial assets	2	–3	–1	–	–	–	4	–5
Defined benefit and other long-term employee benefit obligations	44	–22	–34	20	2	–16	18	–23
Other financial liabilities	59	–3	20	–	2	–	80	–2
Provisions	21	–18	0	–	–	–	22	–19
Tax losses and tax credits	48	–	232	–	2	–	282	–
	240	–240	168	21	–1	–8	461	–280
Offset	–224	224					–257	257
Deferred taxes in the statement of financial position	16	–16					204	–22

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	2017	2016
Fair value reserves	0	–1
Net investment hedging	–4	–4
Remeasurements of the net defined benefit liability	53	23
	49	18

Tax losses carried forward

€ million	2017	2016
Expire in 5 years	230	176
Expire later than in 5 years	1,993	2,333
Never expire	1,173	1,281
	3,396	3,790

As of December 31, 2017 tax loss carry forwards amount to EUR 3,396 million (2016: EUR 3,790 million), of which EUR 630 million (2016: EUR 896 million) in Finland, EUR 347 million (2016: EUR 391 million) in Sweden, EUR 1,625 million (2016: EUR 1,646 million) in the US and EUR 498 million (2016: EUR 521 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, 2017 tax loss carry forwards of the Outokumpu Group for which no deferred tax asset has been recognized amount to EUR 1,922 million (2016: EUR 2,546 million) of which most sigficant are in the US. Majority of the US tax losses expire later than in 5 years. In 2017, due to increased probability of future tax benefits, mainly in Germany, previously non-recognized deferred tax assets of EUR 160 million in total were recognized. In 2016, corresponding recognition of previously non-recognized deferred tax assets in Finland and Sweden amounted to EUR 189 million. The recognition decision in both 2017 and 2016 has been 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

	2017	2016
Result attributable to the equity holders of the Company, € million	392	144
Weighted average number of shares, in thousands	412,363	414,411
Diluted average number of shares, in thousands [1]	450,248	414,411
Earnings per share for result attributable to the equity holders of the Company		
Earnings per share, EUR	0.95	0.35
Diluted earnings per share, EUR	0.90	0.35

[1] In 2016, 33,662 thousand potentially convertible shares and 3,859 thousand shares to be delivered based on Group's share-based incentive programs were excluded from the diluted average number of shares in 2016 because their overall effect would have been anti-dilutive.

11. Intangible assets

€ million	Goodwill	Other intangible assets [1]	Total
Historical cost on Jan 1, 2017	493	241	734
Translation differences	–2	–4	–6
Additions	–	42	42
Disposals	–	–24	–24
Reclassifications [2]	–	21	21
Historical cost on Dec 31, 2017	**491**	**276**	**767**
Accumulated amortization and impairment on Jan 1, 2017	–26	–204	–229
Translation differences	1	3	5
Amortization	–	–7	–7
Accumulated amortization and impairment on Dec 31, 2017	**–24**	**–207**	**–232**
Carrying value on Dec 31, 2017	**467**	**68**	**535**
Carrying value on Jan 1, 2017	467	37	504
Historical cost on Jan 1, 2016	475	229	704
Translation differences	–1	–2	–3
Additions	–	13	13
Acquired subsidiaries	19	0	19
Reclassifications [2]	–	1	1
Historical cost on Dec 31, 2016	493	241	734
Accumulated amortization and impairment on Jan 1, 2016	–8	–198	–206
Translation differences	1	2	3
Amortization	–	–8	–8
Impairments	–19	–	–19
Accumulated amortization and impairment on Dec 31, 2016	–26	–204	–229
Carrying value on Dec 31, 2016	467	37	504
Carrying value on Jan 1, 2016	467	30	498

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

[2] In 2016, construction work in progress related to intangible assets was presented in the corresponding item of property, plant and equipment. In 2017, these assets were reclassified to the intangible assets. These assets relate mainly to on-going IT system development in the Group.

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 33

During 2017, borrowing costs amounting to EUR 1 million were capitalized on investment projects (2016: EUR 0 million). Total interest capitalized on December 31, 2017 was EUR 1 million (Dec 31, 2016: EUR 0 million). Outokumpu determines separate capitalization rates for each quarter. The average rate used during 2017 was 3.3%.

Intangible assets mainly comprise acquired assets.

Emission allowances

Outokumpu had seven active sites operating under EU's Emissions Trading Scheme (ETS) in 2017. These include the production plants in Tornio, Finland; Avesta, Degerfors 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 0.95 million tonnes in 2017 (2016: 0.95 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 2018 is estimated to be some 1 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 frequently 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 [1]	Total
Historical cost on Jan 1, 2017	139	66	1,251	4,641	129	125	6,351
Translation differences	–3	–	–28	–154	–0	–5	–190
Additions	–	0	4	21	0	106	130
Disposals	–2	–	–4	–10	–0	–	–17
Disposed subsidiaries	–	–	–2	–33	–	–0	–35
Reclassifications	–	–	13	–24	0	–68	–80
Historical cost on Dec 31, 2017	**135**	**66**	**1,233**	**4,440**	**128**	**158**	**6,160**
Accumulated depreciation and impairment on Jan 1, 2017	–14	–21	–603	–2,763	–73	–4	–3,477
Translation differences	0	–	5	54	0	0	60
Disposals	–	–	0	9	–0	–	9
Disposed subsidiaries	–	–	2	25	–0	–	27
Reclassifications	–	–	–	62	–	1	63
Depreciation	–0	–6	–43	–155	–4	–0	–209
Impairments	–	–	–	–1	–	–	–1
Accumulated depreciation and impairment on Dec 31, 2017	**–14**	**–27**	**–639**	**–2,768**	**–77**	**–3**	**–3,527**
Carrying value on Dec 31, 2017	**121**	**40**	**594**	**1,672**	**52**	**155**	**2,633**
Carrying value on Jan 1, 2017	126	45	648	1,878	56	122	2,874

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 33

€ million	Land	Mine properties	Buildings	Machinery and equipment	Other tangible assets	Advances paid and construction work in progress [1]	Total
Historical cost on Jan 1, 2016	136	66	1,269	4,635	131	170	6,407
Translation differences	–0	–	–6	–40	–1	0	–46
Additions	4	0	18	64	1	64	151
Acquired subsidiaries	–	–	–	3	–	–	3
Disposals	–0	–	–24	–31	–0	–15	–71
Disposed subsidiaries	–	–	–1	–2	–	–	–3
Reclassifications	–	0	14	74	–1	–93	–6
Reclassification to assets held for sale	–0	–	–18	–62	–3	–0	–84
Historical cost on Dec 31, 2016	139	66	1,251	4,641	129	125	6,351
Accumulated depreciation and impairment on Jan 1, 2016	–14	–15	–575	–2,705	–71	–21	–3,402
Translation differences	0	–	8	45	0	0	54
Disposals	–	–	2	24	–0	16	42
Disposed subsidiaries	–	–	–0	1	–	–	1
Reclassifications	–	–	–0	–2	6	1	5
Depreciation	–0	–6	–45	–157	–9	–0	–217
Impairments	–	–	–1	–7	–	–	–8
Reclassification to assets held for sale	–	–	8	40	1	–	49
Accumulated depreciation and impairment on Dec 31, 2016	–14	–21	–603	–2,763	–73	–4	–3,477
Carrying value on Dec 31, 2016	126	45	648	1,878	56	122	2,874
Carrying value on Jan 1, 2016	122	51	693	1,930	60	149	3,005

[1] In 2016, advances paid and construction work in progress included also intangible assets. In 2017, these assets have been reclassified into intangible assets.

During 2017, no borrowing costs were capitalized on investment projects (2016: EUR 3 million). Total interest capitalized on December 31, 2017 was EUR 26 million (Dec 31, 2016: EUR 29 million).

Assets leased by finance lease agreements

€ million	Land	Buildings	Machinery and equipment	Total
Historical cost	28	1	106	136
Accumulated depreciation	–1	–0	–50	–51
Carrying value on Dec 31, 2017	**27**	**1**	**56**	**85**
Historical cost	28	1	234	263
Accumulated depreciation	–1	–0	–98	–99
Carrying value on Dec 31, 2016	28	1	136	164

13. 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	**2017**	2016	**2017**	2016	**2017**	2016
Europe	**458**	458	**5**	4	**1,727**	1,786
Americas	**–**	–	**1**	0	**824**	975
Long Products	**9**	9	**4**	6	**63**	74
Other operations	**–**	–	**58**	28	**18**	39
	467	467	**68**	37	**2,633**	2,874

Impairment testing

Impairment testing is carried out on operating segment level. Operating segments are the Group's cash-generating units. Europe represents 98% of the total goodwill and 66% of the total property, plant and equipment of the Group, and Americas represents 31% of the total property, plant and equipment of the Group. During the year 2017, 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 based on the plans approved by the management for 2018–2020 after which cash flows are 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 industry capital structure. The pre-tax WACC used for Europe is 8.0% (2016: 9.4%), and for Americas 9.5% (2016: 9.2%).

In the terminal value, growth rate assumptions of 0.5% (2016: 0.5%) for Europe and 1.0% (2016: 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 6,043 million. Increase of 13.4 percentage point in after-tax WACC would cause the recoverable amount to equal the carrying amount. Also, 32% decrease in annual delivery volumes or 23% decrease in base prices 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 231 million. Increase of 1.6 percentage point in after-tax WACC would cause the recoverable amount to equal the carrying amount. Also, 8% decrease in annual delivery volumes or 2% decrease in base prices 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 2017 or 2016. However, an impairment loss of EUR 1 million on property, plant and equipment was recognized in Europe in 2017 due to obsolence (2016: a goodwill impairment loss of EUR 19 million related to the acquisition of Hernandez Edelstahl GmbH and impairment losses of EUR 8 million on property, plant and equipment in Europe due to restructuring and asset obsolence).

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 33

14. 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	2017	2016
Carrying value of investments in associated companies	**53**	51
Group's share of total comprehensive income	**4**	3

Joint ventures

	Domicile	Ownership, %
Fagersta Stainless AB	Sweden	50

Summarized financial information on joint ventures

€ million	2017	2016
Carrying value of investments in joint ventures	**20**	16
Group's share of total comprehensive income	**5**	2

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

		Measured at					
2017 € million	Category in accordance with IAS 39	Amortized cost	Cost	Fair value recognized in other comprehensive income	Fair value recognized through profit or loss	Carrying amount on Dec 31, 2017	Fair value on Dec 31, 2017
Non-current financial assets							
Available-for-sale financial assets	a)	–	64	4	–	68	68
Investments at fair value through profit or loss	c)	–	–	–	0	0	0
Trade and other receivables	b)	1	–	–	–	1	1
Derivatives held for trading	d)	–	–	–	1	1	1
Current financial assets							
Investments at fair value through profit or loss	c)	–	–	–	16	16	16
Trade and other receivables	b)	597	–	–	–	597	597
Cash and cash equivalents	b), c)	112	–	–	–	112	112
Derivatives held for trading	d)	–	–	–	43	43	43
		710	64	4	61	838	838
Non-current financial liabilities							
Non-current debt	f)	698	–	–	–	698	802
Derivatives held for trading	d)	–	–	–	3	3	3
Current financial liabilities							
Current debt	f)	505	–	–	–	505	505
Trade and other payables	f)	1,310	–	–	–	1,310	1,310
Hedge accounted derivatives	e)	–	–	2	–	2	2
Derivatives held for trading	d)	–	–	–	35	35	35
		2,513	–	2	38	2,553	2,657

2016 € million	Category in accordance with IAS 39	Measured at Amortized cost	Cost	Fair value recognized in other comprehensive income	Fair value recognized through profit or loss	Carrying amount on Dec 31, 2016	Fair value on Dec 31, 2016
Non-current financial assets							
Available-for-sale financial assets	a)	–	49	4	–	53	53
Investments at fair value through profit or loss	c)	–	–	–	1	1	1
Trade and other receivables	b)	2	–	–	–	2	2
Current financial assets							
Investments at fair value through profit or loss	c)	–	–	–	16	16	16
Trade and other receivables	b)	611	–	–	–	611	611
Cash and cash equivalents	b), c)	204	–	–	–	204	204
Hedge accounted derivatives	e)	–	–	0	–	0	0
Derivatives held for trading	d)	–	–	–	34	34	34
		817	49	4	51	920	920
Non-current financial liabilities							
Non-current debt	f)	987	–	–	–	987	1,127
Derivatives held for trading	d)	–	–	–	4	4	4
Current financial liabilities							
Current debt	f)	458	–	–	–	458	458
Trade and other payables	f)	1,324	–	–	–	1,324	1,324
Derivatives held for trading	d)	–	–	–	63	63	63
		2,769	–	–	67	2,836	2,976

Categories in accordance with IAS 39:

a) Available-for-sale financial assets

b) Loans and receivables

c) Financial assets at fair value through profit or loss

d) Derivatives held for trading

e) Hedge accounted derivatives

f) Other financial liabilities

16. Fair value hierarchy of financial assets and liabilities

2017 € million	Carrying amount	Fair value Level 1	Level 2	Level 3	Total
Financial assets measured at fair value					
Available-for-sale financial assets	4	0	–	4	**4**
Investments at fair value through profit or loss	17	16	–	0	**17**
Derivatives held for trading	44	–	44	–	**44**
	65	17	44	4	**65**
Financial assets not measured at fair value					
Non-current trade and other receivables	1	–	1	–	**1**
Financial liabilities measured at fair value					
Hedge accounted derivatives	2	–	2	–	**2**
Derivatives held for trading	38	–	38	–	**38**
	40	–	40	–	**40**
Financial liabilities not measured at fair value					
Non-current debt	698	–	802	–	**802**

2016 € million	Carrying amount	Fair value Level 1	Level 2	Level 3	Total
Financial assets measured at fair value					
Available-for-sale financial assets	4	0	–	4	4
Investments at fair value through profit or loss	17	16	–	1	17
Hedge accounted derivatives	0	–	0	–	0
Derivatives held for trading	34	–	34	–	34
	55	16	34	5	55
Financial assets not measured at fair value					
Non-current trade and other receivables	2	–	2	–	2
Financial liabilities measured at fair value					
Hedge accounted derivatives	0	–	0	–	0
Derivatives held for trading	67	–	67	–	67
	67	–	67	–	67
Financial liabilities not measured at fair value					
Non-current debt	987	–	1,127	–	1,127

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 non-current trade and other receivables is determined by discounted cash flow method taking into account the credit risk of the counterparty. The carrying amounts of current financial assets and current financial liabilities not measured at fair value are reasonable estimates of their fair value.

Available-for-sale financial assets at hierarchy level 3 relate to investments in unlisted energy producing companies. Valuation model of energy producing companies is based on discounted cash flow model, which takes into account the future prices of electricity, discount rate, inflation rate, the estimated amount of electricity to be received and estimated production costs.

17. Available-for-sale financial assets

€ million	2017	2016
Carrying value on Jan 1	**53**	40
Additions	**15**	14
Fair value changes	**0**	5
Gains and losses from disposals reclassified to profit or loss	**–**	–5
Carrying value on Dec 31	**68**	53

Fair value reserve in equity

€ million	2017	2016
Fair value	**68**	53
Cost	**64**	49
Fair value reserve before tax	**4**	4
Deferred tax liability	**–1**	–1
Fair value reserve	**3**	3

Materially all equity securities are unlisted. Investments include EUR 63 million holdings in Voimaosakeyhtiö SF providing ownership to Fennovoima Oy and holdings in other energy companies in which Outokumpu does not have control, joint control or significant influence. During 2017 Outokumpu invested further EUR 15 million in Voimaosakeyhtiö SF. As the Fennovoima project is at an early stage, the fair value cannot be reliably measured, and therefore investment has been valued at cost.

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 33

18. Share-based payment plans

During the year 2017, Outokumpu's share based payment programs included Performance Share Plan 2012 (Plans 2015–2017, 2016–2018, and 2017–2019), Restricted Share Pool Program 2012 (Plans 2015–2017, 2016–2018 and 2017–2019) and Matching Share Plans for the CEO and other key management. 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 2014–2016 ended and based on the achievement of the targets the participants received 75,6% of the target number of shares of the plan as reward. After deductions for applicable taxes, altogether 293,761 shares were delivered to 84 persons. Regarding the Restricted Share Pool Program, plan 2014–2016, after deductions for applicable taxes, in total 10,557 shares were delivered to 5 participants based on the conditions of the plan. Outokumpu used its treasury shares for the reward payments.

In December 2016, the Board of Directors approved the commencement of the new plan (plan 2017–2019) of the Performance Share Plan as of the beginning of 2017. At the end of the reporting period 138 persons participated in the plan and they had been allocated in total 1,789,000 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 December 2016, the Board approved the commencement of the new plan (plan 2017–2019) of Restricted Share Pool Program as of the beginning of 2017. 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 58 persons participated in the plan and they have been allocated in total 81,500 gross shares.

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 will be delivered in four equal instalments 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 2017, the Board of Directors approved the delivery of the second 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 instalments 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 2017, the Board of Directors approved the delivery of the first reward tranches from the plan. After deduction for applicable taxes, the net number of shares delivered was 323,671. At the end of the reporting period 30 persons participated in the plan.

In December 2017, the Board of Directors approved the commencement of plan 2018–2020 of the Performance Share Plan 2012 and the Restricted Share Pool 2012 as of the beginning of 2018.

The total estimated fair value of the share-based payment plans is EUR 32 million on December 31, 2017. 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.

Share-based payments included in employee benefit expenses

€ million	2017	2016
Equity-settled share-based payment transactions	**–7**	–3
Cash-settled share-based payment transactions	**–9**	–6
	–16	–9
Total carrying amount of liabilities for cash-settled arrangements on Dec 31	**10**	6

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

	Performance Share Plan		
Grant date	Feb 11, 2015	Feb 10, 2016	Feb 10, 2017
Vesting period	Jan 1, 2015–Dec 31, 2017	Jan 1, 2016–Dec 31, 2018	Jan 1, 2017–Dec 31, 2019
Vesting conditions			
Non-market	EBIT excluding non-recurring items and a cash flow measure for the year 2015; and return on operating capital ranking among peers and debt-to-equity ratio (gearing) in 2017	Outokumpu's return on operating capital compared to a peer group, and Outokumpu's gearing in 2018	Outokumpu's return on operating capital compared to a peer group
Other relevant conditions	A salary-based limit for the maximum benefits	A salary-based limit for the maximum benefits	A salary-based limit for the maximum benefits
Exercised	In shares and cash	In shares and cash	In shares and cash

	Restricted Share Pool Program		
Grant date	April 30, 2015	Dec 9, 2016	April 26, 2017
Vesting period	Jan 1, 2015–Dec 31, 2017	Jan 1, 2016–Dec 31, 2018	Jan 1, 2017–Dec 31, 2019
Vesting conditions	Continuation of employment until the shares are delivered, a salary-based limit for the maximum benefits	Continuation of employment until the shares are delivered, a salary-based limit for the maximum benefits	Continuation of employment until the shares are delivered, a salary-based limit for the maximum benefits
Exercised	In shares and cash	In shares and cash	In shares and cash

	Matching Share Plan for the CEO	Matching Share Plan for the management
Grant date	Dec 17, 2015	April 27, 2016
Vesting period	Jan 1, 2016–Dec 31, 2019	Jan 1, 2017–Dec 31, 2020
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. If the CEO's service contract is terminated without any fault or negligence attributable to him, all the shares not yet delivered will vest at the expiry of the CEO agreement provided that the ownership requirement for the CEO is fulfilled	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
Exercised	In shares and cash	In shares and cash

The fair value of share-based incentive programs are determined using relevant mathematical modeling.

Share values used in valuations

€	Share price at the end of the reporting period	Incentive share fair value at the grant date
Performance Share Plan		
Vesting period 2015–2017	7.74	4.82
Vesting period 2016–2018	7.74	2.11
Vesting period 2017–2019	7.74	9.80
Restricted Share Pool Program		
Vesting period 2015–2017	7.74	5.41
Vesting period 2016–2018	7.74	7.81
Vesting period 2017–2019	7.74	9.80
Matching Share Plan for the CEO	7.74	2.50
Matching Share Plan for the management [1]	7.74	5.35

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

19. Financial risk management, capital management and insurances

The main objective of financial risk management is to reduce earnings volatility and to secure acceptable liquidity in order to avoid financial distress. Other objectives include reduction of cash flow volatility and maintaining gearing and leverage according to set targets. The objective of capital management is to secure the ability to continue as a going concern and to optimize the 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 caused by insurable risk.

The Board has approved the risk management policy, which defines responsibilities, process and other main principles of risk management. The Board oversees risk management on a regular basis and the Chief Financial Officer is responsible for implementation and development of financial risk management.

Financial risks consist of market, country, credit, liquidity and refinancing risks. Subsidiary companies hedge their currency and metal price risk with Outokumpu Oyj, which does most of the Group's foreign exchange and metal 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 Group's credit control. Supply Chain function is responsible for managing electricity and fuel price risks.

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

Exposure to financial risk is identified as part of 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 in income, free cash flow, net debt and equity.

Market risk

Market risk is caused by changes in foreign exchange and interest rates, interest margins as well as metal, energy and security prices. These price changes may have a significant impact on Group's earnings, cash flow and capital structure. Outokumpu uses matching strategies and derivative contracts to partially mitigate the above-mentioned impacts of market price changes. Hedge accounting is applied selectively. The derivatives, for which hedge accounting is not applied, are used to reduce impacts of market price changes on earnings and/or cash flows related to business or financing activities. The use of non-hedge-accounted derivatives may cause timing differences between derivative gains/losses and the earnings impact of the underlying exposure.

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 following 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 cost in the UK and Sweden cause foreign exchange risk for Outokumpu. Outokumpu hedges most of its fair value risk which relates to currency denominated accounts receivables, accounts payables, debt, cash, loan receivables and commodity derivatives. Cash flow risk related to firm commitments, e.g. price fixed sales and purchase orders, is hedged to a large extent, whereas forecasted and probable cash flows can be hedged selectively.

The main dollar risks are caused by captive ferrochrome production and chrome being priced in US dollars, as well as sales margins including dollar-linked stainless scrap purchase discount benefits.

Sensitivity of financial instruments to market risks

	Dec 31, 2017		Dec 31, 2016	
€ million	In profit or loss	In other comprehensive income	In profit or loss	In other comprehensive income
+/–10% change in EUR/USD exchange rate	+0/–0	–	+5/–4	–
+/–10% change in EUR/SEK exchange rate	–6/+7	–6/+7	–6/+8	–9/+11
+/–10% change in nickel price in USD	–1/+2	–	–2/+1	–
+/–1% parallel shift in interest rates	+0/–0	–	–4/+4	–

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 23–36%. With +/–30% change in dollar denominated price, the effect in profit or loss is about EUR –2/+16 million for nickel derivatives.

This risk is hedged with derivative contracts to the extent of invoices and orders. Internal US dollar and Swedish krona denominated financing causes significant exchange rate risk, which is hedged with forward contracts and, if possible, with matching debt. The Group's fair value currency position is presented in a more detailed level in the following table.

Outokumpu has net income and net investment translation risk mainly in US dollars, Swedish kronas and British pounds. Based on the policy this risk can be hedged selectively. In 2017 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 US dollars and Swedish krona denominated internal loans.

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 short-term interest rates.

US dollar, euro and Swedish krona have substantial contribution to the overall interest rate risk. Approximately 44% (2016: 34%) of the Group's debt has an interest period of less than one year and the average interest rate of non-current debt on December 31, 2017 was 6.7% (Dec 31, 2016: 7.2%). Interest rate position is presented on a more detailed level in the table below. 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 any new long-term debt.

Foreign exchange positions of EUR-based companies

	Dec 31, 2017				Dec 31, 2016			
€ million	SEK	USD	GBP	Other	SEK	USD	GBP	Other
Trade receivables and payables	23	–182	16	8	1	–178	12	6
Loans and bank accounts [1]	534	581	–33	–12	596	556	0	7
Derivatives	–479	–361	1	1	–475	–409	–28	–10
Net position	**78**	**38**	**–16**	**–3**	122	–30	–15	3

Foreign exchange positions of SEK-based companies

	Dec 31, 2017				Dec 31, 2016			
€ million	EUR	USD	GBP	Other	EUR	USD	GBP	Other
Trade receivables and payables	55	–36	–33	5	52	–13	–26	2
Loans and bank accounts [1]	20	16	5	3	20	13	2	1
Derivatives	–162	–18	21	–18	–159	–30	14	–10
Net position	**–87**	**–39**	**–8**	**–10**	–87	–31	–10	–7

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

Currency distribution and re-pricing of outstanding net debt

€ million Currency	Dec 31, 2017 Net debt [1]	Derivatives [2]	Average rate, % [1]	Duration, year [3]	Rate sensitivity [4]
EUR	1,152	–1,059	4.6	25.0	–6.3
SEK	–3	530	–1.8	0.2	5.3
USD	–20	553	1.7	0.2	5.3
Other	–38	–36	0.9	0.0	–0.7
	1,091	**–12**			**3.5**

€ million Currency	Dec 31, 2016 Net debt [1]	Derivatives [2]	Average rate, % [1]	Duration, year [3]	Rate sensitivity [4]
EUR	1,362	–1,057	5.6	9.0	–4.5
SEK	–17	582	–0.3	0.1	5.7
USD	–31	524	0.7	0.2	4.9
Other	–71	–17	0.8	0.0	–0.9
	1,242	32			5.2

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

[2] Net derivative liabilities include nominal value of interest rate and cross currency swaps 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. The euro sum of these is low, which causes the presented duration to be high. Duration of euro-denominated net debt is 2.1 years (2016: 2.5 years).

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

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 some EUR 267 million at year end and therefore increase in long-term interest rates would typically decrease the net liability of these 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 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. In addition, the volumes and discounts related to stainless scrap purchases have major impact on nickel price risk. Since there is no established financial market for chrome, this risk is not categorized as financial.

Apart from chrome, changes in nickel price is the most important metal price risk for Outokumpu. A majority of stainless steel sales contracts include 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 risk related to base stock, must be fully hedged. Nickel in base stock is hedged partially and in 2017 the hedging ratio has been between 20 and 80 percent. Nickel forwards and options have been used to manage impacts of nickel price changes on earnings, whereas effiicient working capital management helps to reduce cash flow variations caused by metal prices.

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.

Outokumpu manages energy price risk centrally. The Group has hedged propane price risk by keeping inventories and by fixing purchase prices in its supply contracts. Power 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, 2017 the biggest investments were in Voimaosakeyhtiö SF (equity investment EUR 63 million) and OSTP Holding Oy (investment in associated company EUR 25 million).

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 166 MW power once the project has been completed. The accounting value of this ownership is currently at cost, since it has not been possible to determine fair value of the investment in a reliable manner. The risk related to this shareholding has been assessed in 2017 and both impact and likelihood of risk realizing have increased from previous assessment.

The captive insurance company Visenta Försäkringsaktiebolag has investments totalling EUR 16 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 its risk prudently.

Outokumpu has a well-funded 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 a relatively large portion in equities. Changes in security prices would therefore impact the net asset reported on this plan. 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 credit insurances, which typically cover some 90 percent of the insured amount. Part of the credit risk related to trade receivables is managed with bank guarantees, letters of credit and advance payments.

On December 31, 2017 the maximum exposure to credit risk of trade receivables was EUR 493 million (2016: EUR 471 million). The portion of unsecured receivables has varied between 9–17% 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 receivables from financial institutions. Outokumpu seeks to reduce these risks by limiting the counterparties 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.

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 flows, 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 gearing and leverage levels are key targets and outcomes of the planning. In 2017 good profitability and free cash flow allowed to focus on cost of debt optimization. Finance cost reduction efforts included e.g. call of the notes due 2019 (EUR 250 million), partial calls of the notes due 2021 (EUR 47.5 million), prepayments of pensions loans, drawing of new long-term pension loans, and amendment of revolving credit facility, which led to maturity extension. The amendment to the facility was signed in December 2017.

In May and November, Outokumpu Oyj received upgrades in corporate family rating to B1 and B1-PD probability default rating from Moody's. The 2019 and 2021 secured notes were also upgraded twice by Moody's and at year-end the rating of the notes due 2021 was at Ba3. All ratings have stable outlook.

The main funding programs and credit facilities are: a committed revolving credit facility of EUR 650 maturing in May 2021; a committed revolving bilateral credit facilitiy of EUR 90 million maturing in February 2019, and an uncommitted Finnish commercial paper program totaling EUR 800 million. Revolving credit facilities, certain bilateral bank loans and the notes due in 2021 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. In connection with the amendment of the revolving credit facility part of the security and certain guarantee obligations were agreed to be released.

As at December 31, 2017, Outokumpu had a total amount of EUR 740 million committed credit facilities, of which all is long-term. More information on liquidity and refinancing risk is presented in the following table.

Contractual cash flows

2017 € million	Balance Dec 31	2018	2019	2020	2021	2022	2023–
Bonds	201	–	–	–	203	–	–
Convertible bond	229	–	–	250	–	–	–
Loans from financial institutions	35	17	6	6	4	1	–
Pension loans	171	6	16	56	50	43	–
Finance lease liabilities	90	5	3	3	51	0	29
Commercial papers	477	477	–	–	–	–	–
Trade payables	1,162	1,162	0	–	–	–	–
Interest payments and facility charges		49	44	43	25	3	120
Currency derivatives	–9						
Outflows		2,990	–	–	–	–	–
Inflows		–2,998	–	–	–	–	–
Interest derivatives	3	1	1	0	0	–	–
Metal derivatives	8	9	–1	–	–	–	–
Other derivatives	–3	–3	–	–	–	–	–
		1,714	**70**	**358**	**332**	**48**	**149**

On December 31, 2017, the Group had cash and cash equivalent amounting to EUR 112 million and committed available long-term credit facilities totaling EUR 727 million.

2016 € million	Balance Dec 31	2017	2018	2019	2020	2021	2022–
Bonds	496	–	–	250	–	250	–
Convertible bonds	219	–	–	–	250	–	–
Loans from financial institutions	89	64	7	6	6	4	1
Pension loans	165	8	33	46	43	23	13
Finance lease liabilities	155	65	5	2	3	51	28
Commercial papers	321	321	–	–	–	–	–
Trade payables	1,111	1,111	–	–	–	–	–
Interest payments and facility charges		75	69	59	34	18	122
Currency derivatives	26						
Outflow		2,660	–	–	–	–	–
Inflow		–2,634	–	–	–	–	–
Interest derivatives	5	2	1	1	0	–	–
Metal derivatives	2	2	–	–	–	–	–
Other derivatives	–	–	–	–	–	–	–
		1,674	115	364	336	346	164

On December 31, 2016, the Group had cash and cash equivalent amounting to EUR 204 million and committed available long-term credit facilities totaling EUR 757 million. In addition, there was a fully unutilized EUR 145 million committed credit facility which matured in the end of February 2017.

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 on investments. 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 structure include loan prepayments and liability management measures, such as the use of call options of issued notes. In 2017 Outokumpu called all (EUR 250 million) notes due 2019 and part (EUR 47.5 million) of the notes due 2021. The revolving credit facility includes one financial covenant, which is based on gearing. The notes maturing in 2021 include incurrence based financial covenant on gearing. The gearing covenant level in notes due 2021 is 120% until June 16, 2018 and 110% thereafter.

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. Net investment and debt in foreign subsidiaries is monitored and Outokumpu has capability to hedge net investment translation risk.

Outokumpu's captive insurance company, 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 on the basis of gearing 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. Net debt is calculated as total current and non-current debt less cash and cash equivalents. Outokumpu targets are to have gearing below 35 percent and leverage below 1.0. Outokumpu also targets to improve its current credit ratings.

On December 31, 2017, net debt was EUR 1,091 million (2016: EUR 1,242 million), total equity EUR 2,721 million (2016: EUR 2,416 million) and gearing 40.1% (2016: 51.4%) and leverage 1.7 (2016: 4.0). The decrease in gearing resulted primarily from good profitability, low net cash from investing activities and recognition of deferred tax assets. Leverage decreased significantly mainly due to improved EBITDA.

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. In connection with 2017 insurance renewal Outokumpu chose to increase deductibles of certain insurance policies.

During the reporting year there were no serious fires. Tornio site suffered from a few serious machinery breakdown incidents, including a damage occurred in ferrochrome meltshop. Claim process is ongoing in regards of the Tornio incidents. Fire safety and machinery breakdown audits were carried out mainly as planned.

Visenta Försäkringsaktiebolag, a captive insurance company owned by Outokumpu, can act as direct insurer and as reinsurer. Visenta is registered in Sweden and it has assets totaling EUR 21 million (2016: EUR 26 million). Visenta has issued a surety bond to support the Outokumpu's pension scheme in the UK.

20. Fair values and nominal amounts of derivative instruments

€ million	2017 Positive fair value	2017 Negative fair value	2017 Net fair value	2016 Net fair value	2017 Nominal amounts	2016 Nominal amounts
Currency and interest rate derivatives						
Currency forwards	29	17	**11**	–25	**2,994**	2,647
Currency options, bought	0	0	**0**	–	**12**	–
Interest rate swaps	–	3	**–3**	–5	**150**	777
					Tonnes	Tonnes
Metal derivatives						
Forward and futures nickel contracts	12	19	**–6**	–2	**18,581**	27,233
Nickel options, bought	0	1	**–1**	–	**9,800**	–
Nickel options, sold	–	–	**–**	–1	**–**	1,800
Emission allowance derivatives	3	–	**3**	–	**2,400,000**	–
Total derivatives	44	40	**4**	–33		
Less long-term derivatives						
Interest rate swaps	–	3	**–3**	–4		
Forward and futures nickel contracts	1	–	**1**	–		
Short-term derivatives	43	37	**6**	–29		

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

Fair value of bought nickel options is negative due to premium liability.

Hedge accounted cash flow hedges

Outokumpu has hedged currency spot price risk related to SEK denominated long-term electricity supply agreement for the Finnish production sites. The currency derivatives, which hedge the currency risk, mature in other periods in year 2018 than the underlying cash flows of electricity purchases. The derivatives will be prolonged later to mature at the same period as the underlying cash flows.

€ million	2017 Nominal amount	2017 Fair value of outstanding cash flow hedges	2017 Equity	2016 Nominal amount	2016 Fair value of outstanding cash flow hedges	2016 Equity
Maturity < 1 year	40	–1	–1	41	0	0
Maturity 1–5 years	39	–1	–1	81	0	–1
	78	**–2**	**–3**	122	0	–1

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 future credit events. The following table sets out the carrying amounts of recognized financial instruments that are subject to the agreements described above.

€ million	2017	2016
Derivative assets		
Gross amounts of recognized financial assets in the statement of financial position	**44**	34
Related financial instruments that are not offset	**29**	33
	15	1
Derivative liabilities		
Gross amounts of recognized financial liabilities in the statement of financial position	**40**	67
Related financial instruments that are not offset	**29**	33
	11	34

21. Inventories

€ million	2017	2016
Raw materials and consumables	**423**	376
Work in progress	**540**	508
Finished goods and merchandise	**416**	347
Advance payments	**1**	2
	1,380	1,232

The most important commodity price risk for Outokumpu is caused by fluctuation in nickel and other alloy prices. Majority 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 5 million were recognized in income statement during the financial year (2016: reversals of write-downs amounting to EUR 26 million). More details on commodity price risk are presented in note 19.

22. Trade and other receivables

€ million	2017	2016
Non-current		
Loans receivable	**–**	1
Other accruals and receivables	**1**	1
	1	2
Current		
Trade receivables	**493**	471
VAT receivable	**37**	36
Income tax receivable	**19**	25
Loans receivable	**–**	5
Prepaid insurance expenses	**7**	7
Other accruals	**37**	45
Other receivables	**67**	98
	659	687
Allowance for impairment of trade receivables		
Allowance on Jan 1	**6**	19
Additions	**0**	12
Deductions	**–0**	–22
Recovery of doubtful receivables	**–0**	–3
Allowance on Dec 31	**6**	6
Age analysis of trade receivables		
Neither impaired, nor past due	**425**	421
Past due 1–30 days	**56**	38
Past due 31–60 days	**5**	5
More than 60 days	**6**	6
	493	471

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 covers some 90% of an insured credit loss. Credit risks related to trade receivables are presented in more detail in note 19.

As of December 31, 2017 Outokumpu has derecognized trade receivables totaling EUR 377 million (2016: EUR 387 million), which represents fair value of the assets. Net proceeds received totaled EUR 357 million (2016: EUR 364 million). Underlying assets have maturity less than one year. The maximum amount of loss related to derecognized assets is estimated to be EUR 15 million (2016: EUR 17 million). This estimation 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	2017	2016
Cash at bank and in hand	**112**	203
Short-term bank deposits	**0**	0
	112	204
Bank overdrafts [1)]	**–7**	–
	105	204

[1)] Presented in current debt in the 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 2017 was 0.7% (Dec 31, 2016: 0.2%).

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 33

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, 2016	415,489	311	714	2,103	3,127
Shares delivered from the share-based payment programs [1]	371	–	–	–	–
Treasury share purchase	–2,000	–	–	–	–
On Dec 31, 2016	413,861	311	714	2,103	3,127
Shares delivered from the share-based payment programs [1]	813	–	–	–	–
Reward shares returned to the Company	–2				
Treasury share purchase	–2,000	–	–	–	–
On Dec 31, 2017	**412,672**	**311**	**714**	**2,103**	**3,127**
Treasury shares [1]	3,703				
Total number of shares on Dec 31, 2017	**416,374**				

[1] Shares granted from treasury shares without effect to share capital.

According to the Articles of Association, the Outokumpu share does not have 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 reserves

Fair value reserves include movements in the fair values of available-for-sale financial assets and derivative instruments used for cash flow hedging.

Other reserves

Other reserves includes 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

Retained earnings include remeasurements of defined benefit plans, treasury shares, cumulative translation differences and other retained earnings and losses.

Distributable funds

On December 31, 2017, the distributable funds of the parent company totaled EUR 2,413 million of which retained earnings were EUR 289 million. The Board of Directors proposes to the Annual General Meeting in 2018 that a dividend of EUR 0.25 per share is paid for 2017 (dividend of EUR 0.10 paid for 2016).

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 and in the UK.

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 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, thus the plans are materially all unfunded.

The UK

The UK scheme provides pensions in retirement and death benefits to members. In October 2016, Outokumpu closed its defined benefit pension scheme in the UK to future pension accruals and made changes to the terms of retirement. All members have joined a defined contribution scheme. As a result, the net pension obligation decreased due to a curtailment of EUR 26 million.

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.

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 UK preliminary pension fund's valuation was completed in 2015 with a deficit of GBP 27 million. In 2016, Outokumpu made contributions totaling GBP 20 million to the plan to cover the deficit, and the remaining GBP 7 million was paid in 2017. The valuation was not based on the the same assumptions as the IFRS valuation, which shows a surplus.

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

€ million	2017	2016
In EBIT	**–7**	17
In financial income and expenses	**–4**	–6
Defined benefit cost recognized in the consolidated statement of income	**–11**	11
In other comprehensive income	**18**	–63
Total defined benefit cost recognized	**8**	–53

Amounts recognized in the consolidated statement of financial position

€ million	2017	2016
Present value of funded defined benefit obligations	**441**	497
Present value of unfunded defined benefit obligations	**311**	307
Fair value of plan assets	**–503**	–527
Net defined benefit liability	**249**	276

€ million	2017	2016
Defined benefit liability	**319**	322
Other long-term employee benefit liabilities	**18**	34
Defined benefit assets	**–70**	–45
Net liability	**267**	311

Movement in net defined benefit liability

€ million	2017 Present value of obligation	2017 Fair value of plan assets	2017 Net defined benefit liability	2016 Present value of obligation	2016 Fair value of plan assets	2016 Net defined benefit liability
On Jan 1	804	–527	276	812	–516	295
Current service cost	7	–	7	10	–	10
Interest expense/(income)	17	–13	4	25	–19	6
Remeasurements arising from						
Return on plan assets	–	–12	–12	–	–74	–74
Demographic assumptions	8	–	8	1	–	1
Financial assumptions	5	–	5	140	–	140
Experience adjustment	–20	–	–20	–4	–	–4
Exchange differences	–19	18	–1	–64	70	7
Employer contributions	–	–18	–18	–	–38	–38
Contributions by plan participants	0	–0	0	1	–1	–0
Benefits paid	–40	40	0	–36	36	–
Curtailments	–0	–	–0	–27	–	–27
Reclassification to liabilities directly attributable to assets held for sale	–	–	–	–53	15	–38
Disposed subsidiaries	–12	9	–3	–	–	–
Other change	–	–	–	–2	–	–2
On Dec 31	**752**	**–503**	**249**	804	–527	276

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, 2017 was EUR 305 million (Dec 31, 2016: EUR 305 million). For the UK, the present value of obligation on December 31, 2017 was EUR 414 million (Dec 31, 2016: EUR 451 million), and the fair value of plan assets was EUR 485 million (Dec 31, 2016: EUR 496 million).

The expected contributions to be paid to the defined benefit plans in 2018 are EUR 16 million.

Allocation of plan assets

€ million	2017	2016
Equity instruments	**68**	81
Debt instruments	**271**	277
Real estate	**1**	4
Investment funds	**0**	3
Other assets	**159**	160
Total plan assets	**499**	525

Allocation of plan assets covers 99% 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, %	**2017**	**1.51**	**2.50**	**2.76**
	2016	1.75	2.75	3.82
Future salary increase, %	**2017**	**–**	**–**	**2.18**
	2016	–	–	2.24
Inflation rate, %	**2017**	**–**	**3.20**	**–**
	2016	–	3.50	–
Future benefit increase, %	**2017**	**1.51**	**2.95**	**–**
	2016	1.50	3.15	–
Medical cost trend rate, %	**2017**	**–**	**–**	**6.20–6.60**
	2016	–	–	6.60–7.00
Life expectancy	**2017**	Modified from RT 2005 G	96% SAPS All Pensioner Amounts tables	Standard mortality tables
	2016	Modified from RT 2005 G	110% SAPS All Pensioner Amounts tables	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 17.2 years. In Germany and in the UK the weighted average durations are 14.4 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
2017			
Discount rate	0.5%	Decrease by 7%	Increase by 8%
Future benefit increase	0.5%	Increase by 3%	Decrease by 3%
Life expectancy	1 year	Increase by 3%	
2016			
Discount rate	0.5%	Decrease by 7%	Increase by 8%
Future benefit increase	0.5%	Increase by 4%	Decrease by 4%
Life expectancy	1 year	Increase by 3%	

The UK	Change in assumption	Increase in assumption	Decrease in assumption
2017			
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%	
2016			
Discount rate	0.5%	Decrease by 10%	Increase by 12%
Future benefit increase	0.5%	Increase by 7%	Decrease by 7%
Life expectancy	1 year	Increase by 3%	

Other countries	Change in assumption	Increase in assumption	Decrease in assumption
2017			
Discount rate	0.5%	Decrease by 5%	Increase by 5%
Medical cost trend rate	0.5%	Increase by 2%	Decrease by 2%
Future salary increase	0.5%	Increase by 1%	Decrease by 1%
Life expectancy	1 year	Increase by 7%	
2016			
Discount rate	0.5%	Decrease by 6%	Increase by 7%
Medical cost trend rate	0.5%	Increase by 8%	Decrease by 6%
Future salary increase	0.5%	Increase by 1%	Decrease by 1%
Life expectancy	1 year	Increase by 4%	

Other long-term employee benefits

Other long-term employee benefits mainly relate to early retirement provisions in Germany and long-service remunerations in Finland. The terms of the long-service remunerations in Germany were changed in 2017, and the arrangement no longer contains long-term employee benefit obligations, but the benefits are current in nature. 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, 2017 were EUR 18 million (Dec 31, 2016: EUR 34 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.

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 33

26. Provisions

€ million	Restructuring provisions	Environmental provisions	Other provisions	Total
Provisions on Jan 1, 2017	54	64	15	133
Translation differences	–0	–1	–0	–1
Increases in provisions	3	5	4	12
Disposed subsidiaries	–	–2	–0	–2
Utilized during the financial year	–25	–6	–4	–35
Unused amounts reversed	–9	–1	–3	–13
Provisions on Dec 31, 2017	**23**	**59**	**12**	**93**

€ million	2017	2016
Non-current provisions	**79**	118
Current provisions	**14**	15
	93	133

Restructuring provisions

Restructuring provision relate mainly to global streamlining measures of sales, general and administrative functions in 2016 and restructuring measures in accordance with the EMEA restructuring plan in 2013–2015. The remaining restructuring provisions on December 31, 2017 related mainly to measures in Germany, where such activities are typically carried out over a period of several years. Consequently, the cash outflows are expected take place between the years 2018–2024.

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, in the UK, and in 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. The increase is mainly due to product claims and a provision related to earlier site closures.

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

27. Debt

€ million	2017	2016
Non-current		
Bonds	**201**	496
Convertible bonds	**229**	219
Loans from financial institutions	**18**	24
Pension loans	**165**	158
Finance lease liabilities	**85**	90
	698	987
Current		
Loans from financial institutions	**16**	64
Pension loans	**6**	8
Finance lease liabilities	**5**	65
Commercial papers	**477**	321
	505	458
Net debt		
Non-current and current debt	**1,203**	1,445
Cash and cash equivalents	**–112**	–204
Net debt	**1,091**	1,242

The bond maturing 2021 as well as most of the bank loans include financial covenants, which are described in note 19.

Changes in non-current and current debt

2017 € 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	897	67	90	65	326	1,445
Financing cash flows [1]	–283	–67	–	–65	161	–254
Transfer to current debt	–13	13	–5	5	–	–
Other non-cash movements	13	–	–	–	–	13
On Dec 31	**613**	**13**	**85**	**5**	**487**	**1,203**

2016 € 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	1,070	179	179	28	339	1,796
Translation differences	–7	0	–	–	–	–7
Financing cash flows [1]	–108	–179	–	–28	–13	–328
Transfer to current debt	–67	67	–65	65	–	–
Other non-cash movements	10	0	–24	0	–	–14
On Dec 31	897	67	90	65	326	1,445

[1] Additionally, net cash flow from financing activities in 2017 included a repayment of a guarantee received relating to the divestment of SKS of EUR 37 million (2016: receipt of this guarantee payment and EUR 6 million of proceeds from disposal of available for sale financial assets). In consolidated statement of cash flows, these items are reported as other financing cash flow.

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

Bonds

€ million	Interest rate, %	Outstanding amount 2017	2016
2014 fixed rate bond maturing on Sept 30, 2019	6.625	**–**	250
2016 fixed rate bond maturing on June 16, 2021	7.250	**203**	250
		203	500

Convertible bonds

€ million	Interest rate, %	Outstanding amount 2017	2016
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 7.35. The conversion price will be 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 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. Subject to a certain triggering event, there can be a coupon step-up by 0.75 percentage points.

Finance lease liabilities

Minimum lease payments

€ million	2017	2016
Not later than 1 year	**14**	77
Between 1 and 5 years	**83**	96
Later than 5 years	**149**	151
Future finance charges	**–157**	–169
Present value of minimum lease payments	**90**	155

Present value of minimum lease payments

€ million	2017	2016
Not later than 1 year	**5**	65
Between 1 and 5 years	**56**	61
Later than 5 years	**29**	29
Present value of minimum lease payments	**90**	155

28. Trade and other payables

€ million	2017	2016
Non-current		
Accruals	**34**	37
Current		
Trade payables	**1,162**	1,111
Accrued employee-related expenses	**77**	77
Accrued interest expenses	**6**	11
VAT payable	**26**	33
Advances received	**8**	7
Withholding tax and social security liabilities	**19**	20
Payables related to factoring programs	**50**	48
Guarantee payment received related to SKS divestment	**–**	39
Other accruals	**46**	51
Other payables	**48**	63
	1,441	1,459

29. Commitments and contingent liabilities

€ million	2017	2016
Mortgages and pledges on Dec 31		
Mortgages	**2,984**	3,447
Other pledges	**13**	13
Guarantees on Dec 31		
On behalf of subsidiaries for commercial and other commitments	**27**	27
On behalf of other companies for commercial and other commitments	**–**	2
Other commitments on Dec 31	**21**	16

Mortgages relate mainly to securing 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.

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 2017 amounted to EUR 31 million (2016: EUR 22 million), and the part exceeding the share pledge is presented under other commitments.

Outokumpu Oyj is, in relation to its shareholding in Kymppivoima Tuotanto Oy and Etelä-Pohjanmaan Voima Oy, liable for the costs, commitments and liabilities relating to electricity provided by Rapid Power Oy. In year-end 2017, Rapid Power had no net debt. In the year-end 2016 Outokumpu's liability for the net debt of Rapid Power Oy amounted to EUR 4 million. 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 2017 amounted to EUR 2 million (2016: EUR 3 million). These liabilities are reported under other commitments.

One remaining guarantee issued by ThyssenKrupp on behalf of Inoxum companies has not yet been transferred to Outokumpu Oyj as of December 31, 2017. However, Outokumpu Oyj has given ThyssenKrupp a counter-guarantee for this commitment amounting to EUR 3 million.

Present value of minimum lease payments on operating leases

€ million	2017	2016
Not later than 1 year	**11**	10
Between 1 and 5 years	**30**	27
Later than 5 years	**47**	50
	88	87

Operating leases include lease agreements on Group companies' premises.

Outokumpu's share of the Fennovoima investment is about EUR 250 million of which EUR 63 million has been paid by the end of the reporting period. Annual capital expenditure related to the project is expected to be 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 28 million on December 31, 2017 (Dec 31, 2016: EUR 19 million).

30. Disputes and litigations

Dispute over invention rights, Outotec vs. Outokumpu

Outokumpu and Outotec Oyj had since 2013 a dispute relating to innovations on ferroalloy technology. On January 9, 2017, the companies reached an agreement whereby both parties withdrew their claims. Outotec was granted an exclusive right to sell and license the relevant innovations and technology against an agreed license fee payable to Outokumpu. Outokumpu retains the right to use the innovations in its own business.

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 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 Bilbao court of first instance in Spain has accepted the claim of EUR 20 million brought against Outokumpu and the two other companies. Outokumpu and the two other companies have appealed the court's decision.

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 claims payment of approximately EUR 23 million resulting from the former tax consolidation of the Italian tax group managed by ThyssenKrupp. Outokumpu Holding Italia was the former ThyssenKrupp holding company and was transferred to Inoxum as part of the carve-out in 2011. The EUR 23 million claim resulted from former tax installments paid by ThyssenKrupp Italia in 2006 which have not been properly settled towards AST in the following years. The matter is currently pending in court.

Antitrust investigation in Germany

On September 22, 2016, Outokumpu's subsidiary in Germany (Outokumpu Nirosta GmbH) received a letter from the German Federal Cartel Office stating that the company has been included in an ongoing investigation of possible infringements of antitrust laws in the past. Following an internal investigation, Outokumpu's view is that the official investigation on it is without merit.

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 14. and subsidiaries are presented in note 32.

Solidium Oy, a limited company fully owned by the State of Finland, owns 22.8% of Outokumpu on December 31, 2017. 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	2017	2016
Sales	**104**	142
Purchases	**–5**	–6
Dividend income	**2**	–
Trade and other receivables	**25**	29
Trade and other payables	**0**	1

Employee benefits for the key management

€ thousand	2017	2016
Short-term employee benefits	**7,848**	7,956
Post-employment benefits [1]	**1,792**	1,243
Share-based payments	**6,449**	4,485
Remuneration to the Board of Directors	**617**	763
	16,706	14,447

[1] Includes only supplementary pensions.

In 2016, key management received EUR 978,000 related to financing arrangements of the matching share plans. In 2017 the item had been settled.

Employee benefits for CEO and Deputy CEO

€ thousand	Salaries and other short-term benefits	Bonuses	Post-employment benefits	Share-based payments	Total
2017					
CEO	**1,073**	**701**	**612**	**1,787**	**4,173**
Deputy to the CEO	**440**	**249**	**196**	**700**	**1,584**
2016					
CEO	1,137	948	675	3,001	5,762
Deputy to the CEO [1]	530	168	336	64	1,099

[1] Christoph de la Camp as of July 1, 2016; Reinhard Florey until June 30, 2016.

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. The deputy to the CEO resides in Germany and is entitled to the pension benefits in accordance with the German Essener Verband. The pension of the deputy to the CEO until June 30, 2016 was also under German Essener Verband.

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

Remuneration to Board of Directors

€ thousand	2017	2016
Chairman Jorma Ollila	**148**	151
Vice Chairman Olli Vaartimo	**89**	91
Member Markus Akermann	**74**	82
Member Roberto Gualdoni	**78**	82
Member Kati ter Horst, as of April 6, 2016	**69**	65
Member Heikki Malinen	**68**	70
Member Eeva Sipilä, as of March 21, 2017	**67**	–
Member Saila Miettinen-Lähde, as of April 6, 2016 and until June 9, 2017	**18**	71
Member Stig Gustavson, until March 21, 2017	**2**	70
Member Elisabeth Nilsson, until March 21, 2017	**5**	82
	617	763

32. Subsidiaries on December 31, 2017

		Country	Group holding, %
Europe			
Hernandez Edelstahl GmbH		Germany	100
Outokumpu AS		Norway	100
Outokumpu Asia Pacific Ltd		China	100
Outokumpu B.V.		The Netherlands	100
Outokumpu Chrome Oy	*)	Finland	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	1)	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 Nordic AB		Sweden	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		Australia	100
Outokumpu (Pty) Ltd		South Africa	100
Outokumpu S.A.		Spain	100
Outokumpu (S.E.A.) Pte. Ltd.		Singapore	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 Steel (China) Co. Ltd.		China	100
Outokumpu Stainless Oy		Finland	100
Outokumpu Tornio Infrastructure Oy		Finland	100
Sogepar UK Limited		The UK	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 Coil, Inc.		The US	100
Outokumpu Stainless USA, LLC		The US	100
ThyssenKrupp Mexinox CreateIT, S.A. de C.V.		Mexico	100
Long Products			
Outokumpu Stainless Bar, LLC		The US	100
Outokumpu Stainless Ltd		The UK	100
Other operations			
2843617 Canada Inc.		Canada	100
Orijärvi Oy	*)	Finland	100
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 Holding UK Limited		The UK	100
Outokumpu Mining Australia Pty. Ltd.		Australia	100
Outokumpu Mining Oy		Finland	100
Outokumpu Stainless Holding GmbH		Germany	100
Outokumpu Stainless Holdings Ltd		The UK	100
Outokumpu Stainless UAB		Lithuania	100
Outokumpu Treasury Belgium N.V./SA	*)	Belgium	100
Viscaria AB	*)	Sweden	100
Visenta Försäkrings AB		Sweden	100

In addition Outokumpu has agents and branch offices in Argentina, Bulgaria, Chile, Colombia, Egypt, Estonia, Greece, Israel, South Korea, Lebanon, Peru, Slovenia, Switzerland, Taiwan, Thailand, Venezuela 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

33. Events after the reporting period

Outokumpu changed its segment reporting by separating Ferrochrome from business area Europe as an operating segment as of January 1, 2018. In the new structure, Outokumpu has four operating segments – Europe, the Americas, Long Products and Ferrochrome. Ferrochrome operations consist of a chromium mine in Kemi, Finland and ferrochrome production in Tornio, Finland.

2017 comparison data for operating segments as of Jan 1, 2018

						Reconciliation		
€ million	Europe	Americas	Long Products	Ferrochrome	Operating segments total	Other operations	Eliminations	Group
External sales	4,079	1,512	405	127	6,123	239	–	6,363
Inter-segment sales	85	33	186	483	788	268	–1,056	–
Sales	4,164	1,546	591	610	6,911	507	–1,056	6,363
Adjusted EBITDA	404	21	16	217	658	–15	–12	631
Adjustments to EBITDA								
Gain on the quarto plate mill divestment	–	–	–	–	–	15	–	15
Gain on the sale of land in Sheffield	–	–	–	–	–	9	–	9
Gain on the pipe plant divestment	–	–	–	–	–	7	–	7
EBITDA	404	21	16	217	658	16	–12	663
Depreciation and amortization	–123	–52	–7	–29	–210	–6	–	–216
Impairments	–	–	–	–1	–1	–	–	–1
EBIT	281	–31	10	187	447	10	–12	445
Share of results in associated companies and joint ventures	–	–	–	–	–	–	–	9
Financial income	–	–	–	–	–	–	–	3
Financial expenses	–	–	–	–	–	–	–	–129
Result before taxes	–	–	–	–	–	–	–	327
Income taxes	–	–	–	–	–	–	–	64
Net result for the financial year	–	–	–	–	–	–	–	392
Assets in operating capital	2,883	1,382	241	752	5,258	253	–260	5,251
Other assets	–	–	–	–	–	–	–	340
Deferred tax assets	–	–	–	–	–	–	–	295
Total assets	–	–	–	–	–	–	–	5,886
Liabilities in operating capital	1,035	310	128	104	1,577	264	–235	1,606
Other liabilities	–	–	–	–	–	–	–	1,549
Deferred tax liabilities	–	–	–	–	–	–	–	10
Total liabilities	–	–	–	–	–	–	–	3,164
Operating capital	1,848	1,072	113	648	3,681	–11	–25	3,645
Net deferred tax asset	–	–	–	–	–	–	–	285
Capital employed	–	–	–	–	–	–	–	3,929

Parent company financial statements

Income statement of the parent company

€ million	2017	2016
Sales	**505**	561
Cost of sales	**–384**	–451
Gross margin	**121**	109
Other operating income	**135**	9
Selling and marketing expenses	**–18**	–27
Administrative expenses	**–115**	–123
Other operating expenses	**–1**	–20
EBIT	**123**	–52
Financial income and expenses	**9**	157
Result before appropriations and taxes	**132**	105
Appropriations		
Group contribution	**97**	0
Change in depreciation difference	**–2**	0
Income taxes	**–0**	–1
Result for the financial year	**227**	105

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.

Balance sheet of the parent company

€ million	2017	2016
ASSETS		
Non-current assets		
Intangible assets	**40**	28
Property, plant and equipment	**20**	21
Financial assets		
Shares in Group companies	**4,002**	4,037
Loan receivables from Group companies	**924**	428
Shares in associated companies	**31**	31
Other shares and holdings	**64**	49
Other financial assets	**1**	–
	5,021	4,545
Total non-current assets	**5,080**	4,594
Current assets		
Current receivables		
Interest-bearing	**1,223**	1,774
Non interest-bearing	**247**	163
	1,471	1,937
Cash and cash equivalents	**61**	124
Total current assets	**1,532**	2,062
TOTAL ASSETS	**6,612**	6,655

€ million	2017	2016
EQUITY AND LIABILITIES		
Shareholders' equity		
Share capital	**311**	311
Premium fund	**720**	720
Invested unrestricted equity reserve	**2,123**	2,123
Retained earnings	**63**	19
Result for the financial year	**227**	105
	3,444	3,278
Untaxed reserves		
Accumulated depreciation difference	**2**	0
Liabilities		
Non-current liabilities		
Interest-bearing	**625**	915
	625	915
Current liabilities		
Interest-bearing	**2,315**	2,190
Non interest-bearing	**227**	272
	2,542	2,462
Total liabilities	**3,166**	3,377
TOTAL EQUITY AND LIABILITIES	**6,612**	6,655

Cash flow statement of the parent company

€ million	2017	2016
Cash flow from operating activities		
Result for the financial year	**227**	105
Adjustments for		
Taxes	**–0**	1
Depreciation and amortization	**6**	6
Impairments	**–135**	8
Gain/loss on sale of intangible assets, and property, plant and equipment	**0**	–2
Interest income	**–93**	–124
Dividend income	**–0**	–119
Interest expense	**54**	64
Change in provisions	**1**	–1
Exchange gains and losses	**5**	–2
Gain on disposal of other financial assets	**–**	–5
Group contributions	**–99**	–0
Other non-cash adjustments	**0**	2
	–261	–173
Change in working capital		
Change in trade and other receivables	**8**	47
Change in trade and other payables	**26**	23
	35	71
Dividends received	**0**	119
Interest received	**96**	124
Interest paid	**–59**	–69
Income taxes paid	**–0**	–1
	37	174
Net cash from operating activities	**38**	176

€ million	2017	2016
Cash flow from investing activities		
Investments in subsidiaries and other shares and holdings	**–15**	–267
Purchases of property, plant and equipment	**–0**	–1
Purchases of intangible assets	**–38**	–28
Proceeds from disposal of subsidiaries and other disposals	**170**	4
Proceeds from sale of property, plant and equipment	**–0**	0
Proceeds from sale of intangible assets	**24**	8
Proceeds from sale of other financial assets	**0**	0
Change in other long-term receivables	**–418**	11
Net cash from investing activities	**–277**	–272
Cash flow before financing activities	**–240**	–95
Cash flow from financing activities		
Dividends paid	**–41**	–
Treasury shares purchase	**–20**	–7
Proceeds from disposal of other financial assets	**–**	6
Borrowings of non-current debt	**190**	369
Repayments of non-current debt	**–538**	–637
Change in current debt	**130**	–400
Cash flow from group contribution	**0**	–
Other financing cash flow	**454**	751
Net cash from financing activities	**177**	81
Net change in cash and cash equivalents	**–63**	–14
Net change in cash and cash equivalents in the balance sheet	**–63**	–14

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, 2016	311	720	2,123	26	3,180
Result for the financial year	–	–	–	105	105
Treasury shares repurchase	–	–	–	–7	–7
Equity on Dec 31, 2016	311	720	2,123	123	3,278
Result for the financial year	–	–	–	227	227
Dividends paid	–	–	–	–41	–41
Treasury shares repurchase	–	–	–	–20	–20
Equity on Dec 31, 2017	**311**	**720**	**2,123**	**290**	**3,444**

Distributable funds on Dec 31

€ million	2017	2016
Retained earnings	**63**	19
Result for the financial year	**227**	105
Invested unrestricted equity reserve	**2,123**	2,123
Distributable funds on Dec 31	**2,413**	2,247

Commitments and contingent liabilities of the parent company

€ million	2017	2016
Pledges on Dec 31	**13**	13
Guarantees on Dec 31		
On behalf of subsidiaries		
For financing	**295**	304
For commercial guarantees	**0**	1
For other commitments	**27**	26
Other commitments on Dec 31	**21**	16

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

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 2017 amounts to EUR 31 million (2016: EUR 22 million), and the part exceeding the share pledge is presented under other commitments.

Outokumpu Oyj is, in relation to its shareholding in Kymppivoima Tuotanto Oy and Etelä-Pohjanmaan Voima Oy, liable for the costs, commitments and liabilities relating to electricity provided by Rapid Power Oy. At the year-end 2017 Rapid Power had no net debt. At the year-end 2016 Outokumpu's liability for the net debt of Rapid Power Oy amounted to EUR 4 million. 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 at the year-end 2017 amounted to EUR 2 million (2016: EUR 3 million). These liabilities are reported under other commitments.

One remaining guarantee issued by ThyssenKrupp on behalf of Inoxum companies has not yet been transferred to Outokumpu Oyj as of December 31, 2017. However, Outokumpu Oyj has given ThyssenKrupp a counter-guarantee for this commitment amounting to EUR 3 million.

Outokumpu Oyj guaranteed until January 2017 certain subsidiaries' ability to satisfy their financial liabilities when due.

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 2017. The financial statements comprise:

- the consolidated balance sheet, income statement, statement of comprehensive income, statement of changes in equity, statement of cash flows and notes, including a summary of significant accounting policies
- the parent company's balance sheet, income statement, statement of cash flows and notes.

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.

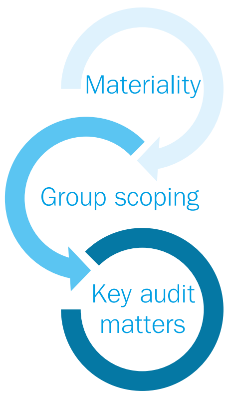
Independence

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: € 20 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 deferred tax assets
- 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	€ 20 million
How we determined it	0.3% of net sales 2017
Rationale for the materiality benchmark applied	We chose net sales as the benchmark because, in our view, it is the most stable and most 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 0,3% which is within the range of acceptable quantitative materiality thresholds in auditing standards.

How we tailored our group audit scope

The scope of our audit was tailored for the Outokumpu Group, taking into account the structure of the group, the industry in which the group operates, and the accounting processes and controls. The group audit scope was focused on the manufacturing companies in Finland, Sweden, Germany, USA, Mexico and the UK and the sales company in 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 1, 11 and 13 in the consolidated financial statements. As at 31 December 2017 the Group's goodwill balance amounted to € 467 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 13 in the Group financial statements.

Valuation of Property, Plant and Equipment

Refer to notes 1 and 12 in the consolidated financial statements.

As at 31 December 2017 the Group's Property, Plant and Equipment (PPE) amounted to € 2,633 million, which is 45% of the total assets and 97% of the total equity.

The company's business is very capital intensive and there are a lot of historical operative losses. Therefore 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.

Valuation of Inventories

Refer to notes 1 and 21 in the consolidated financial statements.

Net inventories amount to EUR 1,380 million as at 31 December 2017.

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. The majority 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.

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.

- Our response to the risks related to the fragmented system environment included both the testing of IT controls and tests of details.
- We tested the company's controls around access and change management related to key IT systems. We also tested the company's controls around system inter-faces, 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.

Valuation of deferred tax assets

Refer to notes 1 and 9 in the consolidated financial statements.

Deferred tax assets are recognised 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. In determining the realisability of deferred tax assets, all positive and negative factors, including past and prospective results, are taken into consideration in determining whether sufficient taxable income will be generated to realize deferred tax assets. These estimates can change depending on the future course of events.

The group has recognized deferred tax assets of EUR 352 million on tax loss carry-forwards.

We determined this to be a key audit matter because the recognition of deferred tax assets involves significant application of judgement by management in respect of assessing the probability and sufficiency of future taxable profits in the relevant jurisdictions.

- We assessed the amount and availability of tax losses and temporary differences under tax law in the relevant jurisdictions, focusing on the most material balances.
- We also assessed whether the historical profitability and management's forecast of future profits in the relevant tax jurisdictions support the recognition of the deferred tax asset.

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 2017, the value of Outokumpu Oyj's subsidiary shares amounted to EUR 4,037 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.

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 31 January 2018

PricewaterhouseCoopers Oy
Authorised Public Accountants

Janne Rajalahti
Authorised Public Accountant (KHT)

Governance 2017

NOTHING TO HIDE ■ We make the strictest possible demands of ourselves as an organization, and expect the same from our suppliers. This means that our customers' supply chains – and, in turn, those of their customers – benefit from our rigorous standards and high transparency. We track our products at every step, and provide continually updated product statements and comprehensive product declarations.

Download the Corporate Governance as PDF

outokumpu
working towards a world that lasts forever

Corporate Governance statement 2017

Regulatory and structural framework

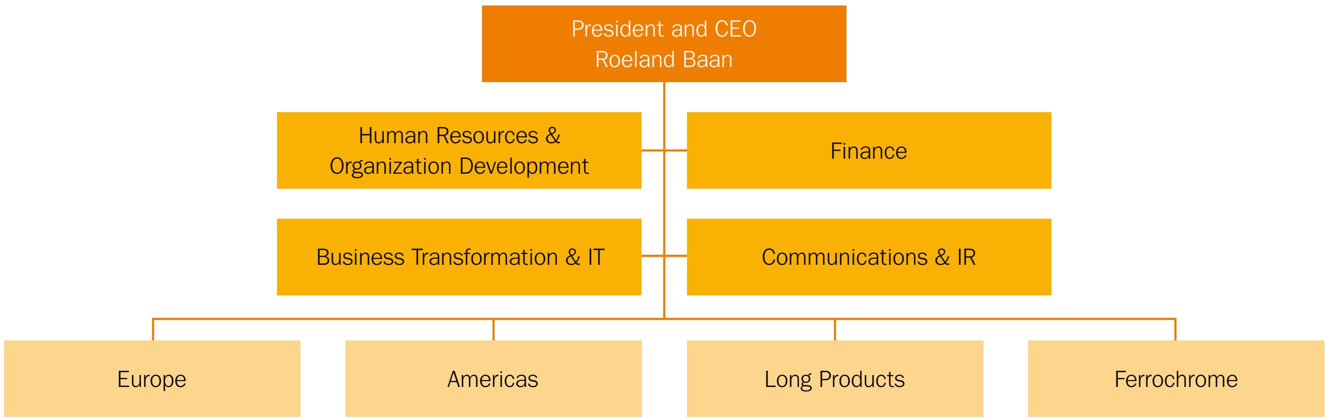
Outokumpu Oyj, the Group's parent company, is a public limited liability company, listed on the Helsinki Stock Exchange (Nasdaq) and incorporated and domiciled in Finland. In its corporate governance and management, Outokumpu Oyj complies with the laws and regulations applicable to Finnish public companies, 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, 2016. The Finnish Corporate Governance Code is issued by the Securities Market Association and adopted by Nasdaq Helsinki Ltd.

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 organization of the Group's management and operations. The Outokumpu Leadership Team supports and assists the CEO in the efficient management of the Group's operations. Outokumpu's primary corporate governance information source is the Group's Corporate Governance website. Please visit the website for the latest Corporate Governance Statement and the latest corporate governance information.

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

Organization structure as of Jan 1, 2018



Composition and Operations of the Board of Directors on December 31, 2017

Chairman of the Board of Directors

Jorma Ollila

b. 1950, Finnish citizen
M.Sc. (Pol.) (University of Helsinki 1976)
M.Sc. (Econ.) (London School of Economics 1978)
M.Sc. (Eng.) (Helsinki University of Technology 1981)
Outokumpu Board member 2013–
Chairman of the Board 2013–
Chairman of the Remuneration Committee

Work experience
Chairman of the Board: Nokia Corporation 2006–2012
Chairman and Chief Executive Officer:
Nokia Corporation 1999–2006
President and Chief Executive Officer:
Nokia Corporation 1992–1999

Positions of trust
Chairman of the Board; Xinova Management Company LLC 2016–
Chairman of the Board: Miltton Oy 2015–
Chairman of the Boards of Directors and the Supervisory Boards:
The Research Institute of the Finnish Economy ETLA and Finnish Business and Policy Forum EVA 2005–2017
Vice Chairman of the Board: Otava Ltd 1996–
Board member: TBG AG 2016–
Board member: Tetra Laval Group 2013–
Board member: University of Helsinki 2009–2017
Advisory Partner: Perella Weinberg Partners 2014–

Independent of the company and its significant shareholders.

Vice Chairman of the Board of Directors

Olli Vaartimo

b. 1950, Finnish citizen
M.Sc. (Econ.)
Outokumpu Board member 2010–
Vice Chairman of the Board 2011–
Chairman of the Audit Committee

Work experience
CFO: Metso Oyj 2003–2010
Executive Vice President, Deputy to the President and CEO:
Metso Oyj 2003–2010
Member of the Executive Team 1999–2010 and Vice Chairman of the Executive Team 2004–2010: Metso Oyj

Positions of trust
Chairman of the Board: BMH Technology Oy 2017–
Chairman of the Board: Kuusakoski Group Oy 2016–
Vice Chairman of the Board: Kuusakoski Oy 2016–
Board member: Sampo-Rosenlew Oy 2016–
Board member: Black Bruin Oy 2016–
(earlier Sampo-Hydraulics Oy)
Board member: Valmet Automotive Oy 2014–

Independent of the company and its significant shareholders.

Members of the Board of Directors

Markus Akermann

b. 1947, Swiss citizen
M.Econ. (University of St.Gallen, Switzerland)
Outokumpu Board member 2013–
Member of the Remuneration Committee

Work experience
Chief Executive Officer: Holcim Group 2002–2012
Chairman of the Board: Holcim Group Support Ltd 2002–2012
Member of the Board: Holcim Ltd 2002–2013

Positions of trust
Member of the Board: Votorantim Cimentos S.A. 2013–
Member of the Board: ACC Mumbai, India 2005–2012

Independent of the company and its significant shareholders.

Roberto Gualdoni

b. 1956, German citizen
MBA, M.Sc. (Eng.)
Outokumpu Board member 2014–
Member of the Audit Committee

Work experience
Chief Executive Officer: Styrolution Group 2011–2014
President, Styrenics: BASF SE 2010–2011
Senior Vice President, Global Procurement Raw Materials: BASF SE 2007–2010

Positions of trust
Chairman of the Advisory Board: CABB GmbH 2017–
Board member: Saudi Basic Industries Corp. 2017–
Board member: Carmeuse SA 2017–
Board member: American Aerogel Corp. 2016–

Independent of the company and its significant shareholders.

Kati ter Horst

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 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: EURO-GRAPH asbl 2017–
Board member: Finnish Forest Industries Federation 2015–

Independent of the company and its significant shareholders.

Heikki Malinen

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

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

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

Independent of the company and its significant shareholders.

Eeva Sipilä

b. 1973, Finnish citizen
M.Sc. (Econ.), CEFA
Outokumpu Board member 2017–
Member 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
SVP, Investor Relations and Communications: Cargotec Corporation 2005–2008

Independent of the company and its significant shareholders.

Full details of work experience and positions of trust

The Board assesses the independence of the Board members and records the outcome in the Board minutes. All of the members of the Board of Directors on December 31, 2017 were independent of the company and its significant shareholders.

Outokumpu shares and share-based rights (parent or subsidiaries) owned by each director and his/her controlled corporations on December 31, 2017

Jorma Ollila	60,505
Olli Vaartimo	32,777
Markus Akermann	40,929
Roberto Gualdoni	50,617
Kati ter Horst	9,169
Heikki Malinen	28,617
Eeva Sipilä	7,981
Total	230,595

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 long-term targets and monitor their implementation;
- Decide on annual business plans;
- 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;
- Decide on any major and strategically important business acquisitions and divestments;
- 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 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 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 8 members was elected at the 2017 Annual General Meeting. Saila Miettinen-Lähde stepped down from the Board on June 9, 2017 after which the Board of Directors comprised 7 members. The Board of Directors meets at least five times each year. In 2017, the Board of Directors had 9 meetings, and the average attendance rate was 98.5%.

Breakdown of individual attendance at Board meetings

9 meetings in 2017	Attendance
Jorma Ollila	9/9
Olli Vaartimo	9/9
Markus Akermann	9/9
Roberto Gualdoni	8/9
Stig Gustavson (until March 21, 2017)	1/1
Kati ter Horst	9/9
Heikki Malinen	9/9
Saila Miettinen-Lähde (until June 9, 2017)	4/4
Elisabeth Nilsson (until March 21, 2017)	1/1
Eeva Sipilä (from March 21, 2017)	8/8

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, including but not limited to age, educational and international background, professional expertise and experience from relevant industrial sectors as well as a representation of both genders. The company strives for a Board structure where both genders are represented in a well-balanced manner. The Shareholders' Nomination Board shall take the Diversity Principles into account when preparing its proposals to the Annual General Meeting and an account of 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 2017.

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. 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 six times during 2017, and the average attendance rate was 96%.

Breakdown of individual attendance at Audit Committee meetings

6 meetings in 2017	Attendance
Olli Vaartimo	6/6
Markus Akermann (until March 21, 2017)	1/1
Roberto Gualdoni	5/6
Kati ter Horst	6/6
Saila Miettinen-Lähde (until March 21, 2017)	1/1
Eeva Sipilä (from March 21, 2017)	5/5

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 met four times during 2017, and the average attendance rate was 100%.

Breakdown of individual attendance at Remuneration Committee meetings

4 meetings in 2017	Attendance
Jorma Ollila	4/4
Markus Akermann (from March 21, 2017)	3/3
Stig Gustavson (until March 21, 2017)	1/1
Heikki Malinen	4/4
Saila Miettinen-Lähde (March 21, 2017 – June 9, 2017)	0/0
Elisabeth Nilsson (until March 21, 2017)	1/1

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 2017.

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.

In addition, the Annual General Meeting adopted a Charter of the Shareholders' Nomination Board, which regulates the nomination and composition, and defines the tasks and duties of the Nomination Board.

According to the Charter, the Nomination Board consists of the representatives of Outokumpu's four largest shareholders, registered in the Finnish book-entry securities system on October 1, who accept the assignment and the Chairman of the Board should act as an expert member of the Nomination Board. Accordingly, to be eligible for membership in the Nomination Board, any nominee-registered shareholder needs to register the holding directly in the Finnish book-entry system for at least the said date.

Holdings by a shareholder who, under the Finnish Securities Markets Act has an obligation to disclose changes in shareholdings (flagging obligation) that are divided into several funds or registers will be added together when calculating the share of all the voting rights, provided that the shareholder presents a written request to that effect to the Chairman of the Company's Board of Directors no later than September 30 preceding the Annual General Meeting. If a shareholder does not wish to use their nomination right, the right transfers to the next largest shareholder who would otherwise not have a nomination right.

Shareholders with the right to appoint representatives to the Nomination Board in 2017 were Solidium Oy, Varma Mutual Pension Insurance Company, the Social Insurance Institution of Finland and Ilmarinen Mutual Pension Insurance Company. These shareholders chose 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; Tuula Korhonen, Investment Director of the Finnish Social Insurance Institution and Timo Ritakallio, President and CEO of Ilmarinen Mutual Pension Insurance Company. Antti Mäkinen was elected Chairman of the Nomination Board, and Jorma Ollila, Chairman of the Outokumpu Board of Directors, served as an expert member. The Nomination Board convened four times in total, 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 2018 Annual General Meeting of Shareholders.

Executive Management

Biographical details of the CEO and the Leadership Team on January 1, 2018

Roeland Baan

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

Work experience
President – Europe business area: 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

Current positions of trust
Vice Chairman: International Stainless Steel Forum 2017–
Board member: World Steel Association 2016–
Board member: Eurofer 2015–
Board member: Borusan Mannesmann Boru Sanayi ve Ticaret A.Ş. 2012–, member of Audit Committee 2012–, Chairman of Corporate Governance Committee 2013–2017 and Chairman of Risk Committee 2017– (member 2013–)

Christoph de la Camp

b. 1963, German citizen
MBA, B.Sc. (Eng.)
Chief Financial Officer 2016–
Member of the Outokumpu Leadership Team 2016–
Responsibility: Financial and business controlling and analysis, taxation, treasury, metal and risk management, global business services
Employed by the Outokumpu Group since 2016

Work experience
Chief Financial Officer: INEOS Styrolution Holding GmbH 2011–2016
Chief Financial Officer: INEOS Nova LLC (INEOS Styrenics LLC) 2007–2011
Finance Director: NOVA Innovene International SA 2005–2007

Maciej Gwozdz

b.1975, Polish citizen
Executive MBA, M.Sc. (Econ.)
President – Europe 2018–
Member of the Outokumpu Leadership Team 2016–
Responsibility: The Europe business area
Employed by the Outokumpu Group since 2016

Work experience
Executive Vice President – Operations, Europe: Outokumpu Oyj 2016–2017
Senior Vice President, Steering Europe: ZF Friedrichshafen AG SVP 2016
Vice President, Steering Europe: TRW Automotive/ZF Group 2013–2016
Operations Director Steering Europe: TRW Automotive 2011–2013

Kari Tuutti

b. 1970, Finnish citizen
M.Sc. (Econ.)
President – Long Products 2014–
Member of the Outokumpu Leadership Team 2012–
Responsibility: The Long Products business area
Employed by the 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: Fagersta Stainless AB 2015–2016, 2017–

Michael S. Williams

b. 1960, US citizen
B.Sc. (Information science)
President – Americas 2015–
Member of the Outokumpu Leadership Team 2015–
Responsibility: The Americas business area
Employed by the Outokumpu Group since 2015

Work experience
Senior Vice President, Strategic Planning & Business Development: United States Steel Corporation 2013–2015
Senior Vice President, North American Flat-Roll Operations: United States Steel Corporation 2009–2013
Vice President, Midwest Flat-Roll Operations: United States Steel Corporation 2008–2009

Positions of trust
Board Member: Specialty Steel Industry of North America 2015–
Board Member: Mobile Chamber of Commerce 2017

Liam Bates

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

Olli-Matti Saksi

b. 1967, Finnish citizen
M.Sc. (Eng.)
Executive Vice President – Sales, Europe 2016–
Member of the Outokumpu Leadership Team 2014–
Responsibility: Sales in the Europe business area
Employed by Outokumpu Group since 2013

Work experience
President – EMEA: Outokumpu 2014–2016
Senior Vice President – Head of Sales EMEA: Outokumpu 2013–2014
SVP and General Manager, Division Rolled Products: Aleris 2011–2013

Jan Hofmann

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 the 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

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 the 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

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 the 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

Full details of work experience and positions of trust

Outokumpu shares and share-based rights (parent or subsidiaries) owned by CEO and Leadership Team members and his/her controlled corporations on December 31, 2017

Roeland Baan	774,869
Christoph de la Camp	171,720
Liam Bates	70,752
Maciej Gwozdz	101,324
Jan Hofmann	74,657
Reeta Kaukiainen	0
Olli-Matti Saksi	148,256
Johann Steiner	84,079
Kari Tuutti	98,946
Michael S. Williams	160,637
Total	1,685,240

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. Since 2011, the Group's Chief Financial Officer has acted as deputy to the CEO.

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 beginning of 2018, the members of the Outokumpu Leadership Team held the following positions:

- President and Chief Executive Officer (Group management, the Ferrochrome business area, legal, corporate affairs and compliance, safety, health and environment, 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 (the Europe business area)
- President – Americas (the Americas business area)
- President – Long Products (Long Products business area)
- Executive Vice President – Sales, Europe (sales in the Europe business area)
- Executive Vice President – Supply Chain Management, Europe (supply chain in the Europe business area)
- 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

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 properly 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. Outokumpu's compliance program is described on our website.

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 monthly management reporting routines and in performance review meetings.

Outokumpu operates in accordance with the risk management policy approved by the Group's Board of Directors, and the Audit Committee regularly monitors the Group's risk map. The policy defines the objectives of risk management activities, the approaches to be taken, and areas of responsibility. In addition to supporting the Outokumpu strategy, risk management activities help in defining a balanced risk profile from the perspective of shareholders and other stakeholders, such as customers, suppliers, personnel, and lenders. More information on risk management within Outokumpu can be found in the Risk management section on p. 16 in the Corporate Governance section.

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.

Financial reporting is prepared in accordance with International Financial Reporting Standards (IFRS). The Outokumpu Accounting Principles (OAP) are Outokumpu's application guidance as regards IFRS. The aim of the OAP and other financial reporting policies and instructions included in the Outokumpu Controller's Manual 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. During the 2017 financial year, Outokumpu has evaluated the implications of the new and revised IFRS standards to enter into force in the near future, and specifically prepared for the implementation of the new IFRS 15 and IFRS 9 standards as of the beginning of 2018. In 2016, Outokumpu implemented the changes required in the ESMA (European Securities and Markets Authority) guidelines on Alternative Performance Measures. In 2018, Outokumpu will prepare for the implementation of the new IFRS 16 standard as of the beginning of 2019 and continue to follow other changes in IFRS standards closely. No major impact on the financial reporting due to the implementation of new standards is expected in 2018.

Financial statements by 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 (FINFSA) Nasdaq Helsinki and ESMA.

Identification and assessment of risks related to financial reporting

Risks related to the Group's financial reporting are classified as operational risks and can arise as a consequence of inadequate or failed internal processes, employee actions, systems, or other events such as misconduct or crime. The aim of the Outokumpu risk management process is to identify, evaluate, control, and mitigate such risks.

Major risks are reported to and evaluated by the Audit Committee on a regular basis. Outokumpu's risk management process includes arranging workshops on the identification of key risks, including operational risks, for business areas and Group functions. Deliverables include risk maps, risk identification plans, and a financial assessment of the Group's ability to bear risk.

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 at all 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 do 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. 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 guaranteeing that the Group's internal controls have a solid foundation. The Group's consolidation system was renewed in 2015 to ensure 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 major 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) that will be common to the whole Group. Outokumpu is also in the transition phase to centralize accounting and financial reporting to its global business service centers. As part of this development, internal controls based on systems and processes are being further developed and improvements to the control environment are in the process of being implemented. First rollouts of the ERP will take place during 2018.

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 and other easily accessible databases. Face-to-face controller meetings are also organized. Senior controller meetings are organized on a quarterly basis or more frequently when this is considered necessary to share information and discuss issues of topical interest to the Group.

Outokumpu has established different networks and communities in which financial reporting and internal control issues and related instructions are discussed and reviewed. These networks usually consist of personnel from the business areas and Group functions. The aim of these networks, communities and common instructions is to ensure that unified financial processes and reporting practices are used throughout the Group. The networks and communities play an important role in establishing the effectiveness of internal controls relating to financial reporting and in developing Outokumpu policies, instructions, and processes.

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 as well as ensures a proper control environment across the Group. Risk management and external auditors are also engaged in 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.

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 correct, reliable information, and independent advice. Internal Audit also monitors adherence to Group principles, policies, and procedures, 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 2017, Internal Audit performed 18 scheduled operational audits including audits of various entities in Sweden, focused reviews of coil service centers in Eastern Europe and Italy, and audits of the Outokumpu subsidiaries in India and the Far East. 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, the previously identified potential risk in the context of sales intermediary agreements is deemed to be resolved and controlled adequately. The key risk areas to be focused on in 2018 are the newly established Ferrochrome business area, the procedural control environment at interfaces with global business services in Europe and in the Americas, and the procurement of raw materials and IT soft-/hardware.

The confidential whistleblowing hotline ("Helpline") available on the company intranet and via the Internet is set up to anonymously inform Internal Audit and the Audit Committee of suspicions of financial misconduct or unethical behavior. Two cases were reported via the Helpline in 2017.

Seven unscheduled investigations of potential misconduct were recognized through other channels. Internal Audit observed cases of unfair behavior, forged company documents and incurred or alleged theft, among them stealing material out of a closed-down melt shop; however, none of these cases were financially material. Various noted attempts of misconduct via faked emails 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 Committee, consisting of the CEO, CFO, Head of HR, Corporate General Counsel and Group Compliance Officer. The Compliance Committee met four times in 2017.

Insider management

The company's Insider Rules and the insider laws and regulations, including the Finnish Securities Act, the Guidelines for Insiders issued by Nasdaq Helsinki Ltd and the Market Abuse Regulation (EU), constitute the primary legal framework for the insider issues relevant to the Group and its employees.

Furthermore, the Regulation on Energy Market Integrity and Transparency (EU) 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 its 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 is responsible for the coordination and supervision of insider topics.

Auditors

Under its Articles of Association, the company shall have a minimum of one and a maximum of two auditors who are qualified auditors or firms of public accountants authorized by the Central Chamber of Commerce of Finland and independent of the company.

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. In addition, 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 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 21, 2017 after an audit tender process held in 2016. 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. For the fiscal years 2006–2016, Outokumpu was audited by KPMG Oy Ab.

Outokumpu's Board Audit Committee continuously monitored non-audit services purchased by the Group from

PricewaterhouseCoopers Oy at a global level. In 2017, auditors were paid fees totaling EUR 2.5 million, of which non-auditing services accounted for EUR 0.6 million.

Risk management

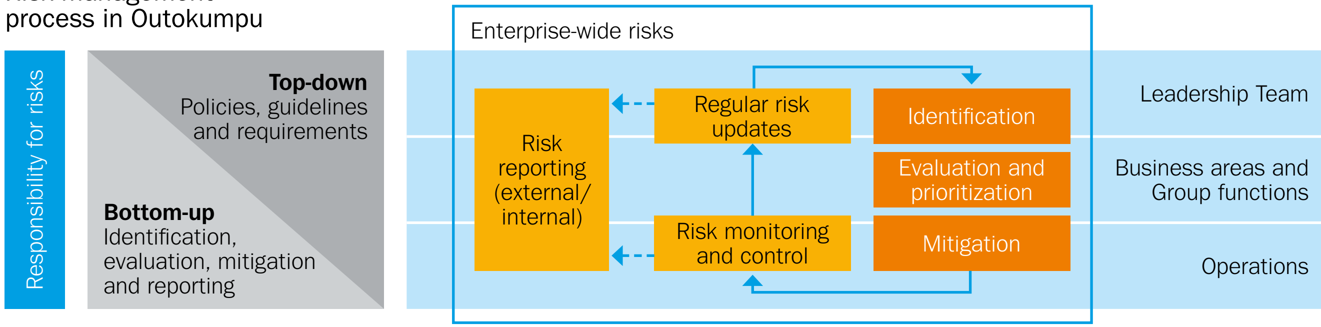
Outokumpu operates in accordance with the risk management policy approved by the company's Board of Directors. The policy has been reviewed and updated in 2017 and it defines the objectives, approaches, and areas of responsibility in the Group's risk management activities. In addition to supporting Outokumpu's 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. Business areas and Group functions are responsible for managing risks connected with their own operations. Internal Audit monitors risk management processes, and the Risk Management Steering Group, the Board Audit Committee and the Board of Directors review both key risks and actions taken to manage these risks on a regular basis. Treasury and Risk Management function supports 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 in Outokumpu



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 in relation to earnings, cash flows and capital structure. The risk management process is an integral part of the overall management processes and it is divided into four stages: risk identification, evaluation/prioritization, mitigation and reporting. Risk management process in Outokumpu is twofold, including 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 in a systematic manner. Regular risk updates are carried out to capture relevant information and to ensure that the process is operating in an uninterrupted manner. The monitoring and analysis 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 parties such as shareholders and other stakeholders.

Focus areas

The focus in risk management in 2017 was in securing the steps to improve Outokumpu's cost competitiveness as well as continuous improvement of risk management, including actions in safety, securing liquidity, managing project risks and improving the efficiency and controls of Outokumpu's operations as part of large business transformation program aiming to renew fragmented IT systems going forward. Outokumpu continued its systematic fire safety and loss prevention audit programs, which also included machinery breakdown loss prevention. In total, some twenty fire safety and machinery breakdown loss prevention audits were carried out in 2017 using in-house expertise in cooperation with external advisors. The main realized risks in last year were a fatal accident to a contractor at Degerfors, Sweden in May, risks related to production stability, especially in ferrochrome, and inadequate profitability in the business area Americas.

Key risks

Strategic and business risks

Risks related to Outokumpu's business priorities and targets

Outokumpu is making solid progress to become the best value creator in stainless steel by 2020 through customer orientation and efficiency. The company has made significant improvements since the launch of the vision and is solidly on track to achieve its financial targets for 2020, which are:

- Adjusted EBITDA of EUR 750 million
- ROCE of 12%
- Gearing below 35%.

Outokumpu's current expectations regarding the impact and timing of the abovementioned targets are based on a number of assumptions and expectations that are subject to various risks and uncertainties.

Stainless steel industry and markets

Huge stainless steel capacity build-up in Asia, namely China, in the past decade has resulted in a reversal of the trade flows between East and West. Whereas China earlier was a net importer of stainless steel, it has now been a net exporter since 2010. This resulted in rapidly increasing market shares of Chinese material and deflated price levels in the Outokumpu main markets of Europe and the US. Europe has responded by imposing anti-dumping measures on cold rolled stainless products from China and Taiwan in 2015, while the US has imposed preliminary anti-dumping and countervailing duties on stainless steel flat products from China in 2016. However, these measures are inadequate to fully mitigate the risk, as there seem to be possibilities (circumvention, absorption, semi-finished products etc.) for exporters to undermine or avoid the effects of the defense measures. More recently, imports of hot rolled material (no duties being applied) from Asia to Europe have continued to increase, adding concerns to European mills of lost volumes and deflated price levels. In 2017, the concerns increased for the possible impacts if China is potentially granted Market Economy Status (MES), which would make it more difficult for other countries to impose trade defense measures against it.

In addition, due to global supply-chains and export-driven Asian economies, the overall situation of Asian overcapacity is also likely to expose other regions, namely Europe and the Americas in Outokumpu's case, to the threat of low-cost imports from Asia, namely China and especially Indonesia with the recently added low-cost capacity. There is a risk that this can result in severe global production costs deflation and, subsequently, undermining prices as well as profit levels, which may impair or eliminate Outokumpu's ability to compete with such producers. This and other practices may have an adverse effect on Outokumpu's profitability to the extent that low-cost stainless steel products are exported to Outokumpu's key markets, the EU and the United States. In addition, Outokumpu has significant exposure to the effects of trade actions and barriers due to the global nature of its operations. Such trade actions and barriers could limit Outokumpu's further growth and market access.

Outokumpu believes that the overall long-term prospects for stainless steel demand remain positive. Key global megatrends, such as urbanization, climate change and increased mobility, are expected to support future growth of stainless steel demand. There are, however, risks that such megatrends will be realized slower 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 and reduce growth prospects also in Outokumpu's core markets.

Since global demand for stainless steel is forecasted to increase in the coming years, Outokumpu expects that global demand for ferrochrome, a key ingredient in stainless steel production, will increase correspondingly. Outokumpu produces ferrochrome at its Tornio ferrochrome production facility using chrome extracted from its Kemi chrome mine in Finland. Outokumpu aims to maintain both a high utilization rate at its ferrochrome production facility and the Group's competitive position in the ferrochrome market by consuming a significant amount of ferrochrome internally and also by selling certain volumes on the global market. Outokumpu's ferrochrome production capability is subject to the typical operational risks and uncertainties that may cause significant financial impacts due to production downtimes and business interruptions. Outokumpu's competitive position in the ferrochrome business is affected by foreign exchange rates, particularly the US dollar and the prices of power and coke.

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. This typically leads to reduced demand when metal prices decline, which may also lead to an increase in inventories causing an even higher adverse impact on earnings. Another 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 are likely to 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. In 2017, the tightening supply of graphite electrodes led to limited global availability of electrodes and sharp increases in their prices. This has, in turn, led to an increase in stainless steel production costs. In late September, Outokumpu introduced a graphite electrode surcharge of EUR 30/tonne for all new contracts and spot-orders in Europe, Middle East, Africa, Australia, and Asia.

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 and, on a case-by-case basis, molybdenum 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. Therefore, Outokumpu may not be able to pass on all of its raw materials costs to customers, which 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 and ferrochrome requires significant amounts of energy, particularly electricity and, to a lesser extent, propane, natural gas and light 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. For example, the European Climate and Energy Package (the CEP) has a significant impact on the electricity markets in Europe and, therefore, affects Outokumpu's business.

Legal risks

Outokumpu and its subsidiaries are subject to several litigation cases. Litigation risk mainly relates to Outokumpu being litigated against by business partners and/or in connection with its business activities in the future. Outokumpu is also exposed to typical litigation risks in connection with mergers and acquisitions. For the specific risks relating to existing litigation, please see note 30. to the consolidated financial statements.

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

Environmental business risks

The main environmental business risks for Outokumpu are related to emission trading schemes and new environmental and consumer protection demands. 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.

Outokumpu has secured part of its future electricity supply – and the associated prices – through long-term contracts. Furthermore, Outokumpu is participating in nuclear power projects in Finland.

Outokumpu operates in accordance with the prevailing laws and regulations, including environmental, chemical, and product safety legislation. EU regulatory activity in this area has developed rapidly. 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 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 substances harmful 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 audits. Insurance covers a large proportion of the associated risks. In 2017, Outokumpu also continued its machinery breakdowns loss prevention work by conducting separate surveys at the main sites.

Environmental accidents

The main environmental accident risks at production sites relate to use of acids, hazardous waste, and toxic gases from production, landfill activities, gradually developing pollution and long-term contamination of soil and 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 the construction license is expected in 2019. Infrastructure work at the site began in 2015 and according to the plans, is expected to last approximately two to three years. The construction of the plant will begin after the construction license has been obtained and the infrastructure work has sufficiently progressed, original schedule for construction period being 2018–2024. The project involves a number of potential risks for Outokumpu, including project completion risks such as delays, cancellation, 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 is investing approximately EUR 30 million in using liquefied natural gas (LNG) instead of propane at the Tornio mill. The main part of the investment, phased over 2015–2018, is being used to make the required equipment modifications at the Tornio mill. This investment includes a number of risks inherent to investment projects, including project completion risks, financial risks such as market price risks, and risks relating to contractual arrangements between the different business partners. Replacing the use of propane with LNG sourced directly from the global market is expected to reduce production costs through lower and more stable energy prices, and thereby increase the competitiveness of and provide a more sustainable source of energy for the Tornio mill.

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 complicated, 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 and solutions are reliable, and also aims to ensure secure information management at all company locations to avoid data loss or situations in which business-critical information becomes unavailable. Moreover, Outokumpu is improving 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 has also taken actions to mitigate its earlier dependence on certain people in application support and has improved IT incident management with a special focus on major incidents. 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 in 2016–2020.

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 six must-win battles to reach its short-term targets, safety being one of them, aiming at 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. In 2017, Outokumpu focused on implementing new safety leadership developments, establishing behavioral based safety training for all employees and setting up a new Safety Governance Group. Outokumpu has systematic and continuous monitoring and reporting practices in place, including reactive and proactive measures of safety performance on a monthly level. A number of plants maintained zero lost time injuries during 2017 and have maintained this for multiple years, providing evidence of best practice and sharing opportunities.

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. However, 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. In 2017, new Performance Management processes were implemented through the organization to ensure alignment to the company vision and targets.

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, 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 management 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 US dollar, the euro, and the Swedish krona;
- Changes in levels of credit margins;
- 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;
- Risk related to prices of equities and fixed-income securities.

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. These are mainly identified through dialog with stakeholders (customers, suppliers, investors, employees, non-governental organizations, authorities, communities, associations) in connection with the materiality analysis related to Outokumpu's sustainability program, but also through Outokumpu's risk management process. In the materiality analysis, the most important sustainability topics for business were a safe and healthy workplace, energy and material (resource) efficiency, and accountable and transparent governance and reporting. For our stakeholders, in addition to these, the management of toxics and chemicals and mitigation of environmental impacts were also important. Additional information on the materiality analysis is available in Outokumpu's website in the Sustainability section. These main topics from the materiality analysis are also partially considered as Outokumpu's key risks, which are explained above within several risk scenarios, including: environmental business risks; environmental accident risks; raw materials, supplies and electricity; compliance; and reputational harm.

For instance, the management of workplace safety, toxics, and chemicals are core parts of Outokumpu's health and safety management activities, as described in the Sustainability report in the chapter Safe working environment. In addition, Outokumpu takes all labor practice violations and related threats as well as its full transparency and compliance in human rights topics seriously. Additional information on human rights and about Outokumpu's stakeholder relations is available in the Sustainability report under the sections Our people and Outokumpu and society. In order to also improve the identification of sustainability risks, the new Global Reporting Initiative G4 standard has been taken into use for the responsibility reporting. ■

Remuneration

Board of Directors

As confirmed by the Annual General Meeting 2017, the annual remuneration for the members of the Board is EUR 140,000 for the Chairman of the Board of Directors, EUR 80,000 for the Vice Chairman and EUR 60,000 for the other members of the Board. 40% of the annual remuneration is paid as Outokumpu shares purchased from the market and 60% in cash.

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 of the members of the Board of Directors are paid a meeting fee of EUR 600. For those members who reside outside of Finland, the meeting fee is EUR 1,200. The meeting fee is also paid for the meetings of the Board committees.

CEO

Compensation and benefits

The President and CEO's compensation in 2017 consisted of a basic salary, taxable benefits (housing benefit, car benefit, phone benefit, medical and life insurance and compensation for the schooling costs of his children in Finland), matching share plan and a yearly short-term incentive as determined by the Board based on the company's key targets.

The performance-based short-term incentive payable based on the targets set for 2017 could not exceed 95% of the CEO's annual basic salary, and it was based on the achievement of EBITDA, occupational safety, a savings target and individual objectives.

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, and 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 depending on the targets set for 2017 was based on the achievement of EBITDA, occupational safety, a savings target and individual objectives. The maximum payment varied between 50% and 100% 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

The service contract of CFO de la Camp, who is also deputy to the CEO, can be terminated by both parties with six months' notice. To the extent that the service contract would be terminated by the company, other than for a cause without notice or with an ordinary notice due to misconduct, the CFO would receive additional compensation equivalent to 12 months' salary. For the other 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, as well as to direct management attention toward 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.

Performance Share Plan 2012

In 2012, the Board of Directors established a share-based incentive plan, the Performance Share Plan 2012 as part of the remuneration and commitment program for Outokumpu's key management. The Performance Share Plan consists of annually commencing performance share plans, each of which includes a three-year earnings period, after which any share rewards earned will be delivered to the participants.

The third plan of the Performance Share Plan, covering years 2014–2016, ended on December 31, 2016. The criteria set for the plan consisted of profitability and cash flow improvement as well as the improvement of the return on the capital employed for 2016. Based on the achievement of the targets, the participants received 75.6% of the target number of shares as a reward. After deductions for applicable taxes, altogether 293,761 shares were delivered to 84 persons in March 2017. Of those 293,761 shares, 69,393 shares were delivered to the Leadership Team members. Outokumpu used its treasury shares for the reward payment, which meant that the total number of shares of the company did not change.

Restricted Share Pool 2012

The Board of Directors established in 2012 a Restricted Share Pool program, which is part of the remuneration and commitment program for selected key resources of Outokumpu. It consists of annually commencing plans with a three-year vesting period, after which the allocated share rewards will be delivered to the participants provided that their employment with Outokumpu continues uninterrupted throughout the duration of the plan and until the shares are delivered. Restricted share grants are approved annually by the CEO, with the exception of any allocations to Leadership Team members, which will be approved by the Board of Directors.

The third plan of the Restricted Share Pool 2012, covering years 2014–2016, ended on December 31, 2016. After deductions for applicable taxes, in total 10,557 shares were delivered to two participants of the plan in March 2017. No shares were delivered to Leadership Team members based on the 2014–2016 plan. Outokumpu used its treasury shares for the reward payment, which meant that the total number of shares of the company did not change.

Matching Share Plan for the CEO

The CEO is part of a Matching Share Plan according to which he is 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 will be delivered in four equal instalments at the end of 2016, 2017, 2018 and 2019, respectively.

The second vesting portion, in total 185,077 shares after deduction of the applicable taxes, was delivered to the CEO at the end of December 2017. Under the Matching Share Plan, the CEO is required to keep at least all the shares he has acquired and the first vesting portion paid at the end of December 2016 throughout his service with Outokumpu. If the CEO's service contract is terminated without any fault or negligence attributable to him, all the unvested matching shares (i.e. shares not yet delivered) will vest at the expiry of the CEO agreement, provided that the ownership requirement for the CEO is fulfilled.

Matching Share Plan for management

The Board of Directors of Outokumpu established in 2016 a Matching Share Plan program for key management for the years 2016–2020 in order to emphasize shareholder value creation, enforce an ownership culture and to incentivize the achievement of the 2020 vision.

According to the plan, the participants have invested an amount corresponding to 30–120% of their annual gross base salary into Outokumpu shares. Outokumpu will match each share acquired by the participant with two gross shares from which the applicable taxes will be deducted and the remaining net number of shares will be delivered to the participant. The matching 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 of the shares they have acquired until the vesting of each matching share tranche. In 2017, Outokumpu delivered 35,099 shares after deduction of the applicable taxes in August 2017 and 288,572 shares at the end of December 2017 to the plan participants. Of these 323,671 shares, 181,346 shares were delivered to the Leadership Team members.

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. 50% of the net shares received from the Performance Share Plan, Restricted Share Pool and Matching Share Plan programs described above must be used to fulfill the above ownership requirement.

Management shareholding

On December 31, 2017, members of the Outokumpu Board of Directors and the Leadership Team held a total of 1,915,835 Outokumpu shares, corresponding to 0.5% of the company's shares and voting rights. If the members of the Leadership Team were to receive the maximum number of gross shares for the Matching Share Plan and the 2015–2017, 2016–2018 and 2017–2019 periods of the performance and restricted share plans (a total of 5,115,458 gross shares including taxes), their shareholding obtained via the programs would amount to 1.2% of the company's shares and voting rights. More information on the management shareholding is on the p. 12 in the Governance section.

Guarantees and business relationships

Outokumpu did not provide any guarantees or other similar commitments on behalf of members of its Board of Directors in 2017.

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

2017	Salaries and fees with employee benefits [1]	Performance/ project-related incentives	Annual remuneration	Share-based incentives [2]	Total
Board of Directors					
Chairman of the Board, Ollila	7,800	–	140,000	–	147,800
Vice Chairman of the Board, Vaartimo	9,000	–	80,000	–	89,000
Board member, Akermann	14,400	–	60,000	–	74,400
Board member, Gualdoni	18,000	–	60,000	–	78,000
Board member, ter Horst	9,000	–	60,000	–	69,000
Board member, Malinen	7,800	–	60,000	–	67,800
Board member, Sipilä	6,600	–	60,000	–	66,600
Board member, Miettinen-Lähde	4,200	–	13,315	–	17,515
Board member, Gustafsson	2,400	–	–	–	2,400
Board member, Nilsson	4,800	–	–	–	4,800
CEO, Baan	1,073,219	947,629	–	2,083,469	4,104,317
Deputy to the CEO	440,000	168,000	–	491,835	1,099,835
Other Leadership Team Members [3]	2,724,872	2,988,248	–	2,759,509	8,472,629

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

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

[3] Erkkilä Jan 1–31, 2017, Tahvanainen Jan 1–Feb 28, 2017, Kaukiainen March 1–Dec 31, 2017.

2016	Salaries and fees with employee benefits [1]	Performance/ project-related incentives	Annual remuneration	Share-based incentives [2]	Total
Board of Directors					
Chairman of the Board, Ollila	11,400	–	140,000	–	151,400
Vice Chairman of the Board, Vaartimo	10,800	–	80,000	–	90,800
Board member, Akermann	21,600	–	60,000	–	81,600
Board member, Gualdoni	21,600	–	60,000	–	81,600
Board member, Gustafsson	9,600	–	60,000	–	69,600
Board member, ter Horst	5,400	–	60,000	–	65,400
Board member, Malinen	10,200	–	60,000	–	70,200
Board member, Miettinen-Lähde	10,800	–	60,000	–	70,800
Board member, Nilsson	21,600	–	60,000	–	81,600
CEO, Baan	1,137,213	–	–	2,441,252	3,578,465
Deputy to the CEO [3]	530,000	–	–	–	530,000
Other Leadership Team Members [4]	3,310,719	200,000	–	264,764	3,775,483

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

[2] Gross, including the value of the shares on the date of delivery and taxes. For CEO includes the taxable value of the shares delivered in the end of December and the whole cash portion of which a small portion was paid in January 2017.

[3] Florey Jan 1–June 30, 2016, de la Camp July 1–Dec 31, 2016.

[4] Gwozdz Oct 1–Dec 31, 2016.

December 31, 2017 status of the ongoing Performance Share Plans

Performance Share Plans	PSP 2015–2017	PSP 2016–2018	PSP 2017–2019
Number of participants	102	109	138
Maximum number of gross shares to be paid [1]			
CEO Baan	–	220,000	92,000
Other Leadership Team members	313,500	1,583,250	482,000
Other participants	901,200	1,692,150	1,215,000
Total maximum number of gross shares to be paid [1]	1,214,700	2,418,250	1,789,000
Earning criteria	EBIT excluding non-recurring items and a cash flow measure for the year 2015; and return on operating capital ranking among peers and debt-to-equity ratio (gearing) in 2017	Outokumpu's return on operating capital compared to a peer group, and Outokumpu's gearing in 2018.	Outokumpu's return on operating capital compared to a peer group
Share delivery year	2018	2019	2020

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

December 31, 2017 status of the ongoing Restricted Share Plans

Restricted Share Pool	RSP 2015–2017	RSP 2016–2018	RSP 2017–2019
Number of participants	4	17	58
Maximum number of gross shares to be paid [1]			
CEO Baan	–	–	–
Other Leadership Team members	5,400	–	–
Other participants	17,900	35,000	81,500
Total maximum number of gross shares to be paid [1]	23,300	35,000	81,500
Share delivery year	2018	2019	2020

[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, 2017 status of the ongoing Matching Share Plans

Matching Share Plans	CEO Plan	Management Plan
Number of participants	1	30
Number of gross shares [1]		
CEO Baan	1,157,156	–
Other Leadership Team members	–	1,262,152
Other participants	–	768,058
Total number of gross shares [1]	1,157,156	2,030,210
Shares delivered (net of taxes) [2]	185,077	323,671
Gross shares to be paid [3]	578,578	1,522,649
Share delivery years	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 both in 2017 and 2016.
[3] The gross number of shares (taxes included) still payable.

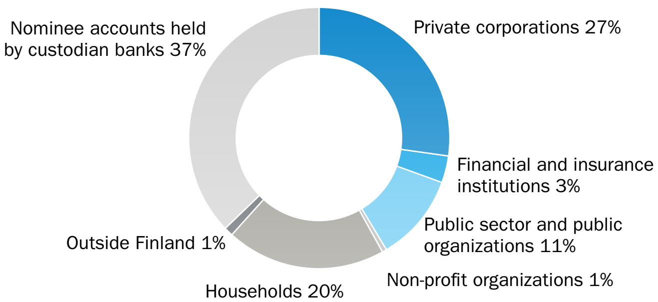
Shares and shareholders

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.

As of December 31, 2017, the total number of Outokumpu shares was 416,374,448. Between February 6, 2017, and February 17, 2017, Outokumpu repurchased 2,000,000 of its own shares through public trading at Nasdaq Helsinki intending to use them for the reward shares from the share-based incentive programs. As of December 31, 2017, Outokumpu held 3,702,899 of its own shares, i.e. treasury shares (Dec 31, 2016: 2,513,848).

Shareholders by group on December 31, 2017



Outokumpu in the capital markets

Outokumpu continued its regular and active dialogue with investors and analysts in 2017.

Key topics discussed with investors were Outokumpu's progress in reaching its vision and financial targets for 2020, the improving performance of the Americas business area, the Ferrochrome operations, the balance sheet as well as market-related topics. Outokumpu held its Annual General Meeting in Helsinki, Finland, in March. The Capital Markets Day was held in London, the UK, in November. Outokumpu arranged 18 roadshows in Europe and in the US during the year. The company also met investors at five industry seminars in New York, Barcelona, London and Stockholm. In total, over 260 one-on-one meetings and conference calls were held with investors during the year.

International shareholders held 38.2% of the total shares at the end of December 2017 compared to 39.6% at the end of the previous year. JP Morgan Asset Management U.K. Limited remained the largest non-Finnish shareholder with holding of over 5%. The largest Finnish shareholder Solidium Oy reduced its ownership in Outokumpu from 26.2% to 22.8%. The share of Finnish households and private persons increased from 17.7% in 2016 to 19.7% at the end of 2017.

Principal shareholders on December 31, 2017

	Shares	%
Solidium Oy	95,044,385	22.83
Varma Mutual Pension Insurance Company	13,000,112	3.12
The Social Insurance Institution of Finland	9,298,652	2.23
Ilmarinen Mutual Pension Insurance Company	8,721,271	2.09
State Pension Fund	4,300,000	1.03
Elo Mutual Pension Insurance Company	3,500,000	0.84
OP-Finland Fund	2,744,685	0.66
Keva	2,365,000	0.57
Skagen vekst verdipapierfond	2,295,354	0.55
OP-Finland Small Firms Fund	1,771,433	0.43
Etera Mutual Pension Insurance Company	1,211,295	0.29
Evli Finland Small Firms Fund	1,055,460	0.25
SR Danske Invest Finnish Institutional Equity Fund	931,184	0.22
Säästöpankki Small Firms Fund	920,000	0.22
OP Life Assurance Company Ltd	828,397	0.20
	147,987,228	**35.53**
Nominee accounts held by custodian banks	154,384,942	37.08
Treasury Shares	3,702,899	0.89
Other Shareholders	110,299,379	26.50
Total	**416,374,448**	**100.00**

Share price development and market capitalization

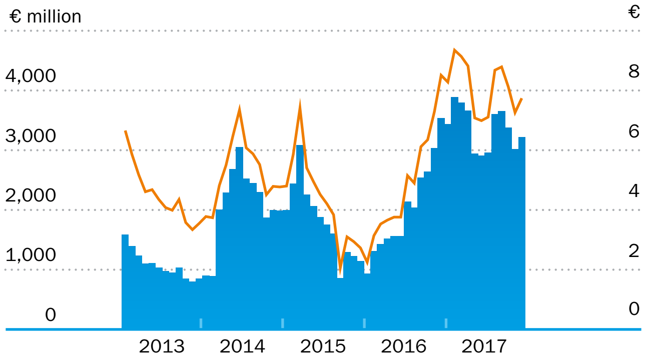
During 2017, Outokumpu's share price peaked at EUR 10.05 and was EUR 6.61 at its lowest (2016 high/low: EUR 8.51/ EUR 2.08). The share price closed at the end of the year at EUR 7.74, marking a decrease of 9% from the closing price of EUR 8.51 at the end of 2016. At the end of 2017, the company's market capitalization was EUR 3,223 million, compared to EUR 3,541 million at the previous year's end.

In 2017, the average daily trading volume in Outokumpu shares on Nasdaq Helsinki was 4.1 million shares. In total, 1,022 million Outokumpu shares were traded on Nasdaq Helsinki during 2017, representing a value of EUR 8,295 million (2016: 956 million shares, which corresponded to EUR 4,302 million).

In addition to Nasdaq Helsinki, Outokumpu's shares are traded also on various alternative trading platforms. The volume of Outokumpu's shares traded on Nasdaq Helsinki represented approximately 40% of the total volume of Outokumpu's shares traded in 2017 (source: Fidessa Fragmentation Index).

More information about the shares is available at our website.

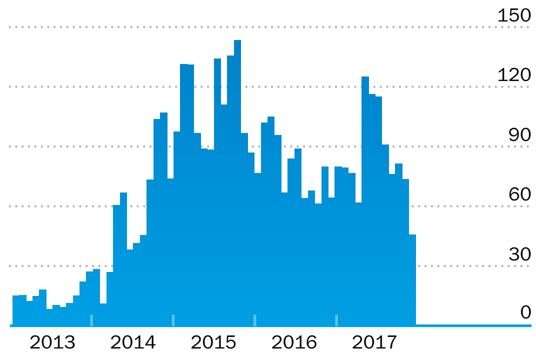
Market capitalization and share price development



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

Source: Nasdaq

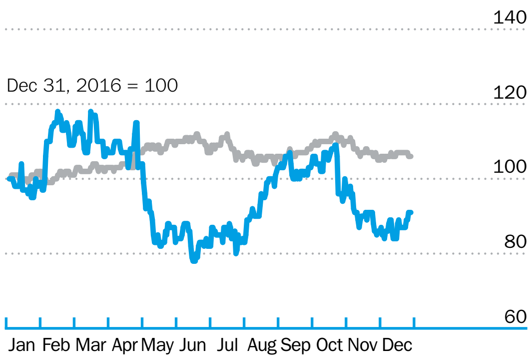
Monthly trading volume, million shares



Includes trading on Nasdaq Helsinki. The graph does not include trading on 28 February, 2014 because of an extraordinary peak as a result of ThyssenKrupp selling its shares in Outokumpu.

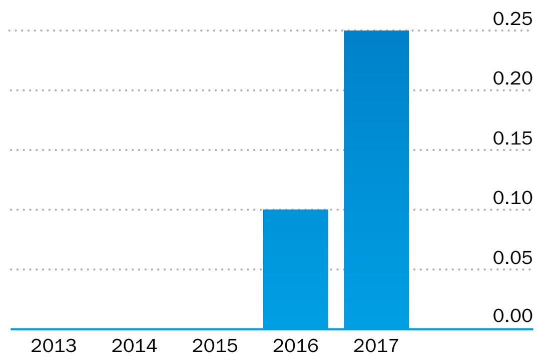
Source: Nasdaq

Outokumpu share price development in 2017, %



Outokumpu
Nasdaq Helsinki

Dividend/share, €



In 2013–2015 no dividend was paid.

The dividend for 2017 is a proposal by the Board of Directors.

Information for shareholders

Annual General Meeting 2018

Notice is given to the shareholders of Outokumpu Oyj to the Annual General Meeting to be held on Thursday, March 22, 2018 at 12.00 at Finlandia Hall, Congress Wing, address: Mannerheimintie 13 e, 00100 Helsinki, Finland, entrances M1 and K1. The reception of persons who have registered for the meeting and the distribution of voting tickets will commence at 11.00 am EET.

Each shareholder, who is registered on March 12, 2018 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 March 12, 2018 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 19, 2018 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 16, 2018 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 January 31, 2018 at www.outokumpu.com/agm2018, 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 www.outokumpu.com/agm2018.

Payment of the dividend

The Board proposes a dividend of EUR 0.25 per share based on the balance sheet adopted for the account period ending December 31, 2017. The dividend will be paid to shareholders registered in the shareholders' register held by Euroclear Finland Oy on the dividend record date of March 26, 2018. The Board proposes that the dividend be paid on April 4, 2018.

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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outokumpu
working towards a world that lasts forever