Enabling modern life

FINANCIAL REVIEW 2019

metso

Metso's Annual Report 2019

Metso enables modern life. Business opportunities arise when we collaborate closely with our customers in developing sustainable solutions for their business challenges. By growing and improving profitability we create value for all our stakeholders. By demanding sustainability from ourselves and our partners alike, we build trust.

Metso's Annual Report 2019 consists of four sections: Business Overview, Financial Review, Corporate Governance and GRI Supplement. All Annual Report sections are available in English and in Finnish. They are downloadable on our Annual Report website at www.metso.com/2019. In this Annual Report we apply integrated reporting elements.

More information

The following symbol guides you to more information on our website or in this report:

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Disclaimer

A plan to combine Metso's Minerals Business and Outotec is currently expected to be registered on June 30, 2020. The combined future Metso Outotec will be leading company in process technology, equipment and services serving the minerals, metals and aggregates industries.

As a result, Metso's Flow Control business will become the continuing business of the currently listed Metso, which will be subsequently renamed Neles, an independent listed company supplying flow control products and services.

Figures in this Annual Report are calculated based on the 2019 Metso Group structure unless otherwise stated. They present Metso's operations before the partial demerger and planned combination with Outotec. In the Financial Statements, figures for continuing operations are also presented. They have been calculated presenting the future Neles as a single economic entity, using the same accounting principles and carrying amounts as in the Metso Group in accordance with the International Financial Reporting Standards ("IFRS") accounting and valuation principles as adopted by the EU. The future Neles figures presented here include some carve-out impacts that are not included in the reported figures of Metso's Flow Control segment.

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Financial review 2019 comprises the Board of Directors' Report and Financial Statements for 2019 as well as Investor information. Corporate Governance statement has been published separately and is available on our website www.metso.com.

Board of Directors' Report

Financial year 2019

Operating environment

The activity in the valves market remained healthy, reflected in good demand related to customers' oil & gas and pulp and paper investment projects. There was also good demand in the distribution network that serves several process industries.

The strong demand for mining services throughout 2019 was supported by high utilization rates at the customers' mines and their focus on productivity improvements. The demand for mining equipment was healthy, although customers' decision-making related to new capital investments turned cautious mid-year and remained so until the end of the year. Healthy demand for aggregates equipment and services in North America and Europe saw typically lower seasonal activity in the fourth quarter. In China, the demand for aggregates equipment was good throughout the year, while the Indian market remained softer than in 2018. Demand in waste recycling was healthy whereas demand in metal recycling continued to be affected by low scrap prices.

Sales and result, IFRS

Sales of the continuing operations increased to EUR 660 million in 2019 (593 million), which resulted from growth of both equipment and services sales. Operating profit for the continuing operations improved 12% and totaled EUR 93 million, or 14.0% of sales. (EUR 83 million or 14.1%). The improvement was thanks to both sales growth and good operational performance. Profit for the period for the continuing operations was EUR 69 million (EUR 65 million) and earnings per share EUR 0.46 (0.43).

Profit for the period for the discontinued operations improved significantly and totaled EUR 230 million (EUR 164 million). The stronger profit resulted from higher sales and improved operational efficiency. Earnings per share for the discontinued operations improved to EUR 1.54 (EUR 1.10).

Metso Group's profit for the period was EUR 299 million (EUR 229 million) and earnings per share was EUR 2.00 (EUR 1.53).

Key figures, IFRS

Based on the decision taken by Metso's Extraordinary General Meeting on October 29, 2019, to approve the partial demerger of the company, Metso has applied IFRS 5 and classified and disclosed its businesses of Minerals segment as discontinued operations from the beginning of November 2019. Thus, depreciations and amortizations of discontinued operations have been calculated only for the period January-October 2019. Accordingly, Flow Control businesses form the continuing operations of Metso Group.

EUR million	2019	2018	Change %
Continuing operations			
Orders received	681	628	8
Orders received by services business	154	136	13
% of orders received	23	22	
Order backlog at the end of period	280	276	1
Sales	660	593	11
Sales by services business	152	128	19
% of sales	23	22	
Adjusted EBITA [1)]	96	86	13
% of sales	14.6	14.5	
Operating profit	93	83	12
% of sales	14.0	14.1	
Earnings per share, EUR	0.46	0.43	7
Discontinued operations			
Orders received	3,009	2,872	5
Orders received by services business	1,907	1,777	7
% of orders received	63	62	
Order backlog at the end of period	1,408	1,411	0
Profit for the year, discontinued operations	230	164	40
Earnings per share, EUR	1.54	1.10	40
Metso total			
Profit for the year	299	229	31
Earnings per share, EUR	2.00	1.53	31

1) Continuing operations do not include any adjustment items in years 2019 and 2018. Reconciliation of EBITA and operating profit is presented in Note 1.1 Segment information.

IFRS 16 is adopted in the 2019 figures. Comparison figures for 2018 are not restated.

Key figures, comparable

In order to improve comparability, Metso has prepared, in addition to IFRS, financial information for the Group so that the amortization of the Minerals business has been recorded for the full year 2019. This is consistent with segment reporting and is comparable with the 2018 Metso Group figures.

The following information in this Board of Director's report relate to Metso's comparable financial information for 2019, unless otherwise stated.

EUR million	2019	2018	Change %
Orders received	3,690	3,499	5
Orders received by services business	2,061	1,913	8
% of orders received	56	55	
Order backlog at the end of period	1,688	1,686	0
Sales	3,635	3,173	15
Sales by services business	1,967	1,773	11
% of sales	54	56	
Adjusted EBITA [1]	474	369	28
% of sales	13.0	11.6	
Operating profit	418	351	19
% of sales	11.5	11.1	
Earnings per share, EUR	1.94	1.53	27
Free cash flow	39	146	–68
Return on capital employed (ROCE) before taxes, %	18.7	16.9	
Equity to assets ratio, %	42.1	47.7	
Net gearing, %	52.7	11.7	
Personnel at end of period	15,821	13,150	20

[1] Adjustment items for Metso amounted to EUR 36 million in 2019, while comparative period for 2018 does not include any adjustment items.

IFRS 16 is adopted in the 2019 figures. Comparison figures for 2018 are not restated.

Orders and sales

Orders received in 2019 totaled EUR 3,690 million, which is 5% higher than in 2018. Orders increased organically 4%. The McCloskey acquisition and other structural changes had 1% positive impact on orders. Flow Control orders increased 8%, and growth was driven by both equipment and services orders. Minerals orders increased 5%, largely driven by the services business.

The order backlog at the end of December totaled EUR 1,688 million (EUR 1,686 million at the end of 2018).

Sales totaled EUR 3,635 million, which is 15% higher than in 2018. Most of this resulted from organic growth. Flow Control's 11% sales growth year-on-year was also driven by both the equipment and services business. Minerals' sales increased 15% and both equipment and services business orders grew at a double-digit rate.

Impacts from currency and structural changes on orders received

EUR million, %	Flow Control	Minerals	Metso total
2018	628	2,872	3,499
Organic growth in constant currencies, %	3%	4%	4%
Impact of changes in exchange rates, %	2%	0%	1%
Structural changes, %	3%	1%	1%
Total change, %	8%	5%	5%
2019	681	3,009	3,690

Impacts from currency and structural changes on sales

EUR million, %	Flow Control	Minerals	Metso total
2018	593	2,581	3,173
Organic growth in constant currencies, %	5%	14%	12%
Impact of changes in exchange rates, %	3%	0%	1%
Structural changes, %	3%	1%	2%
Total change, %	11%	15%	15%
2019	660	2,976	3,635

Financial performance

Adjusted EBITA improved in 2019 to EUR 474 million, or 13.0% of sales (EUR 369 million, or 11.6%). The higher profitability resulted from the sales growth and improved operational efficiency in both segments. Flow Control's adjusted EBITA totaled EUR 104 million, or 15.8% of sales (EUR 90 million, or 15.2%). Minerals' adjusted EBITA increased to EUR 381 million, or 12.8% of sales (EUR 291 million, or 11.3%). Operating profit improved to EUR 418 million, or 11.5% of sales (EUR 351 million, or 11.1%) in 2019. Adjustment items of EUR 36 million had a negative impact on the operating profit as there were no adjustments in 2018. The adjustments were attributable to costs related to changes in the manufacturing footprint as well as to the Metso Outotec transaction costs and other acquisition costs. Flow Control's operating profit totaled EUR 100 million, or 15.2% of sales (EUR 88 million, or 14.8%). Minerals' operating profit totaled EUR 350 million, or 11.8% of sales (EUR 283 million, or 11.0%). The impact of the Group Head Office and other items on the operating profit was EUR 32 million negative largely due to the adjustment items (EUR 20 million negative).

Profit before taxes improved to EUR 380 million (EUR 321 million). Annual net financial expenses were EUR 38 million (EUR 30 million).

During the second quarter Metso announced that related to an earlier announced reassessment decision by the Finnish tax authority, the Assessment Adjustment Board had largely accepted Metso's appeal and ruled that Metso receive a refund of about EUR 14 million of the EUR 21 million tax paid in the first quarter of 2018. The effective tax rate was 24% in 2019 or 28% excluding the refund impact.

Earnings per share increased to EUR 1.94 (EUR 1.53) and the return on capital employed (ROCE) rose to 18.7% (16.9% at the end of 2018), thanks to improved earnings and despite higher working capital and the negative effect from the adoption of IFRS 16. See Note 5.5 for more information.

Net cash generated by operating activities totaled EUR 91 million (EUR 177 million) and free cash flow was EUR 39 million (EUR 146 million). An increase in net working capital had a EUR 254 million negative (EUR 129 million negative) impact on cash flow, arising mainly from growth in receivables and inventories. The growth in receivables was related to the strong sales growth. Higher inventory was attributable to investments to assuring availability and some inefficiencies caused by long supply and internal logistics chains. In addition, the consolidation of McCloskey increased inventory. Actions to improve inventory efficiency are continuing and started to show results in the second half of 2019.

Financial position

Metso's balance sheet and liquidity position remain good. Total liquid funds at the end of December 2019 were EUR 213 million (EUR 426 million at the end of 2018). There were no investments in financial instruments with an initial maturity exceeding three months (EUR 94 million at the end of 2018), and EUR 213 million (EUR 332 million at the end of 2018) is accounted for as cash and cash equivalents. The total dividend of EUR 180 million was paid in two installments in May and in November.

Metso has an undrawn, committed syndicated revolving credit facility of EUR 600 million. In addition, Metso drew a bilateral EUR 300 million term loan from the Nordea Bank on September 30, 2019, to finance the McCloskey acquisition. The loan has a maturity of two years and includes an option to extend the maturity by one year. Metso drew a bilateral EUR 150 million term loan from the Nordea Bank on November 4, 2019, for general corporate purposes. The loan has a maturity of three years, and it will be part of the funding structure of future Neles. Metso also has an undrawn, committed loan of EUR 40 million from the European Investment Bank.

Net interest-bearing liabilities were EUR 798 million at the end of December (EUR 165 million at the end of 2018) and net gearing was 52.7% (11.7% at the end of 2018), due to decrease of liquid funds, and the EUR 300 million loan to finance the McCloskey acquisition. The equity-to-assets ratio was 42.1% (47.7% at the end of 2018).

On July 9, 2019, Standard & Poor's Ratings Services placed their BBB rating on Metso on Credit Watch negative due to planned carve-out and the combining of the Metso Minerals Business with Outotec. As a result of this, Metso's continuing business will consist of only the Neles (Flow Control) business.

Combination of Metso Minerals and Outotec and the creation of Neles

On October 29, 2019, the Extraordinary General Meetings (EGMs) of both Metso Corporation and Outotec Oyj approved the proposed partial demerger of Metso and the plan to combine Metso's Minerals Business and the Outotec Group to create Metso Outotec Group. As a result, Metso's Flow Control business became the continuing business of the currently listed Metso, and, after the registration of the demerger, it will be renamed Neles (later referred to as "the future Neles"), an independent listed company supplying flow control products and services. In the partial demerger of Metso, all assets and liabilities of Metso that relate to, or primarily serve, Metso's Minerals Business will transfer without liquidation to Outotec. Metso and Outotec have previously communicated that the completion of the combination of Metso's Minerals Business and Outotec is expected to take place in the second quarter of 2020, subject to the receipt of all required regulatory and other approvals, including competition clearances. Considering the progress of the regulatory approval process, Metso and Outotec currently expect the completion of the combination of Metso's Minerals Business and Outotec to take place on June 30, 2020, subject to the receipt of all required regulatory and other approvals, including competition clearances. Metso's Board of Directors published the plan relating to the transaction on July 4, 2019.

In addition, the EGM decided on an amendment of Metso's Articles of Association and on a decrease in Metso's share capital as a result of the demerger. More information including all meeting documents is available at www.metso.com/egm–2019.

As part of the preparations for both Metso Outotec and the future Neles, two new credit facilities were signed on September 30, 2019. A new EUR 600 million multi-currency revolving credit facility agreement will transfer to Metso Outotec on completion of the transaction. In addition, it refinanced Metso's existing EUR 500 million revolving credit facility. A new EUR 200 million multi-currency revolving credit facility agreement to be used for general corporate purposes of the future Neles Group will become available on completion of the transaction.

On October 7, 2019, the Finnish Financial Supervisory Authority approved the Finnish language demerger prospectus (also referred to as the "Offering Circular"). It includes unaudited pro forma financial information presented for illustrative purposes only to give effect to the demerger and the acquisition of McCloskey International Ltd by the Metso Minerals Business to Outotec's historical financial information as if they had occurred at an earlier point in time.

On October 7, 2019, Metso published illustrative financial information for future Neles for the financial years 2016–2018 and for the periods January–June 2019 and 2018.

On October 8, 2019, Moody's Investor Service assigned a 'Baa2' long-term issuer rating and S&P Global Ratings a 'BBB-' preliminary long-term issuer credit rating to the future Metso Outotec. The outlook on both ratings is stable.

On October 30, 2019, Metso announced the positive results of its consent solicitation process where it solicited consents and waivers from the holders of the outstanding notes of certain series of notes issued under its EMTN Program in order to substitute Outotec in place of Metso as the issuer of these notes.

Simo Sääskilahti was appointed Senior Vice President, Finance of Metso's Valves business area on October 2, 2019. During the creation of the future Neles, he will be nominated the Chief Financial Officer. He started in the new position on October 15, 2019, and reports to Olli Isotalo, President of the Valves business area and the CEO of the future Neles.

On November 29, 2019, clearance was received from the United States Department of Justice relating to the combination of Metso's Minerals business and Outotec.

Adjustment items related to the Metso Outotec transaction costs totaled EUR 14 million in 2019.

All related documents and stock exchange releases are available on our website at www.metso.com/news-metso-outotec-neles.

Reporting segments: Flow Control

Key figures

EUR million	2019	2018	Change %
Orders received	681	628	8
Orders received by services business	154	136	13
% of orders received	23	22	
Order backlog	280	276	1
Sales	660	593	11
Sales by services business	152	128	19
% of sales	23	22	
Adjusted EBITA [1]	104	90	16
% of sales	15.8	15.2	
Operating profit	100	88	14
% of sales	15.2	14.8	
Return on operative capital employed (Segment ROCE), %	28.8	37.1	
Personnel at end of year	2,866	2,723	5

[1] There were no adjustment items in the Flow Control segment in the reporting periods presented.

The Pumps business area was moved from the Flow Control segment to the Minerals segment as of January 1, 2019. Figures for 2018 have been restated. Restated figures for 2018 based on the new reporting structure were published on March 26, 2019.

Flow Control's full-year orders increased 8% from the previous year and totaled EUR 681 million (EUR 628 million). The increase was driven by both organic and acquired growth. Equipment orders grew 7% and services orders 13%. Sales totaled EUR 660 million, representing growth of 11% compared to 2018. Equipment sales increased 9% and services sales 19% year-on-year.

Adjusted EBITA was EUR 104 million, or 15.8% of sales (EUR 90 million, or 15.2% in 2018). Operating profit totaled EUR 100 million, or 15.2% of sales (EUR 88 million, or 14.8%). The higher profitability was driven by sales growth and overall solid operational performance.

Reporting segments: Minerals

Key figures

EUR million	2019	2018	Change %
Orders received	3,009	2,872	5
Orders received by services business	1,907	1,777	7
% of orders received	63	62	
Order backlog	1,408	1,411	0
Sales	2,976	2,581	15
Sales by services business	1,815	1,644	10
% of sales	61	64	
Adjusted EBITA [1]	381	291	31
% of sales	12.8	11.3	
Operating profit	350	283	24
% of sales	11.8	11.0	
Return on operative capital employed (Segment ROCE), %	22.6	23.7	
Personnel at end of year	12,451	9,942	25

[1] Adjustment items amounted to EUR 36 million in 2019, while comparative periods for year 2018 do not include any adjustment items. Reconciliation of EBITA and operating profit is presented in Note 1.1 Segment information.

The Pumps business area was moved from the Flow Control segment to the Minerals segment as of January 1, 2019. Figures for 2018 have been restated. Restated figures for 2018 based on the new reporting structure were published on March 26, 2019.

Orders received increased 5% compared to 2018 and totaled EUR 3,009 million (EUR 2,872 million). Equipment orders were at the previous year's level and saw both organic and acquired growth in aggregates, while the mining equipment orders came in lower year-on-year, due to customers' cautious decision-making during the second half of the year. Minerals services orders increased 7% compared to 2018. The full-year sales grew 15% to EUR 2,976 million (EUR 2,581 million) and was largely organic. Both equipment and services sales increased at a double-digit rate. Adjusted EBITA improved to EUR 381 million, or 12.8% of sales (EUR 291 million, or 11.3%). Higher profitability was thanks to volume growth and improved internal efficiency. Operating profit was EUR 350 million, or 11.8% of sales (EUR 283 million, or 11.0%).

During the second half of the year, Metso continued to streamline and optimize its supply chain and manufacturing footprint. As part of this initiative, Metso decided to discontinue its foundry operations in Isithebe in South Africa and rubber and poly-met manufacturing operations in Ersmark in Sweden. Both relate to developing the global supply footprint of the Minerals Consumables business area. Going forward, Metso will utilize synergies of the most efficient manufacturing and sourcing opportunities regionally and globally to ensure the best value, availability and quality for its customers. These closures incurred total costs of EUR 15 million, which are reported as adjustment items and had a negative impact on Minerals' operating profit in 2019.

The grinding media business, with sales of EUR 60 million in 2018, was divested at the beginning of 2019. It is included in the comparison figures for 2018.

Capital expenditure and investments

Gross capital expenditure excluding business acquisitions in 2019 was EUR 110 million (EUR 67 million), of which maintenance investments accounted for 54%, or EUR 59 million (54%, or EUR 36 million).

Metso's expansion investment of approximately EUR 25 million to increase the aggregates equipment manufacturing capacity in India advanced to the inauguration phase during the first quarter. The first product deliveries were started during the second half of 2019.

The groundbreaking ceremony for a new greenfield valve plant in Jiaxing, China, took place on January 9, 2019. The plant will strengthen Metso's production capabilities for valves and related products and increase production capacity for customers across various process industries, both in China and globally. The size of investment is approximately EUR 10 million.

In addition, the investment into expanding the foundry capacity in Vadodara, India, is progressing as planned and full-scale production is expected to begin in 2020. The total investment is approximately EUR 25 million.

Acquisitions and divestments

The acquisition of McCloskey International, a Canadian mobile crushing and screening equipment manufacturer, was successfully completed on October 1, 2019. With this acquisition, Metso expanded its offering in the aggregates industry globally and strengthened its customer reach especially in the general contractor segment. With the acquisition about 900 employees in Canada, the United States and the United Kingdom transferred to Metso. The acquisition was funded by a EUR 300 million term loan, which was drawn on September 30, 2019. McCloskey has been included in the Minerals segment from the fourth quarter of 2019 onwards.

On September 17, 2019, Metso announced that it had signed an agreement to acquire the remaining 25% of shares of Shaorui Heavy Industries Ltd, a Chinese manufacturer of crushing and screening equipment targeted for the mid-markets to support its growth plans in China. The transaction was completed during the fourth quarter 2019. As a result, Metso became the sole owner of the company with 100% of its shares, completing the original 75% shareholding acquired in September 2013.

The acquisition of a Chilean mining services business was successfully completed in May 2019. Its sales in 2018 were EUR 57 million and the May-December 2019 sales are recognized in the published figures for Minerals' services business. With the acquisition, 869 services employees in Chile, Argentina and Brazil transferred to Metso.

On January 4, 2019, Metso completed the divestment of its grinding media business. The divested business consisted of two locations in Spain and 80 employees. Its sales in 2018 were EUR 60 million. The proceeds from the divestment had no material impact on Metso's financial results.

Research and development

Continuous renewal and innovation are fundamental for Metso's competitiveness. The objective for innovation is to secure sustaining differentiation with targeted investments that are based on business- or product-specific roadmaps. During 2019, Metso continued to increase its Research and development (R&D) activities. R&D expenses in 2019 were EUR 62 million, or 1.7% of sales (EUR 51 million, or 1.6%).

R&D and IP-related expenses

EUR million	2019	2018
R&D expenses	62	51
of sales, %	1.7	1.6

Inventions and patents

Pieces	2019	2018
Invention disclosures	160	123
Priority patent applications	15	23
Inventions protected by patents, as of December 31	350	310

Metso had several major product launches in 2019.

The latest addition to the versatile MX™ Multi-Action cone crusher series was introduced at the Bauma 2019 fair. The MX3 enables improved crusher productivity and lower operating costs with a design optimized especially for mid-sized quarrying for both hard and soft rock applications. The Metso MX3 is suitable for secondary, tertiary and quaternary crushing stages.

The Lokotrack ST2.3, a completely new mobile screen unit, brings the proven quality and operational reliability of Lokotrack track-mounted solutions to a completely new lighter-weight screening solution. Thanks to its compact and safety-driven design, the easy-to-use ST2.3 is an ideal solution for entrepreneurs looking to enter the screening business.

The Metso Lokotrack® Urban™ range is designed for crushing in densely populated environments, such as city centers. It enables up to 60% better noise protection and cuts dust emissions. This can make the environmental permit process easier and opens new opportunities for the crushing business. The latest addition to the series, the Urban LT96 is ideal for small to mid-sized contractors crushing and recycling demolished concrete on site.

Metso's Shaorui business in China introduced its first range of mobile crushing and screening equipment especially designed for the price and quality conscious mid-market segment. Utilizing Metso's proven technologies and long experience in track-mounted equipment, the new range offers various solutions ideal for quarry contracting and demolition applications.

The new Metso Nordtrack™ mobile crushing and screening range introduced 19 products designed to meet the requirements of general contractors in the aggregates industry.

Metso expanded its crusher wear part offering by launching a new range of OEM crusher liners. Available for selected markets since September 2019, the new Metso O-Series offers the right balance between performance, affordability and reliability.

Metso introduced a new approach for tailings management in mining with the launch of the VPX™ filter. Water conservation, efficient tailings management and responsible mine reclamation are becoming increasingly important for mines to ensure their license to operate.

Metso launched a hybrid truck body with unmatched payload and wear life. The Metso Truck Body is a groundbreaking innovation that combines the benefits of rubber and high structural strength steel, enabling mines and quarries to haul more with less. The Metso Truck Body is a lightweight, rubber-lined tray designed for off-highway trucks. The elastic rubber absorbs the energy of every impact, preventing it from reaching the frame and thus allowing for a lighter-than-usual, high structural strength steel frame beneath the rubber. As a result, the body can absorb maximum shock at the lowest possible weight. It can have up to six times the wear life with 20–30% less weight.

Metso expanded its waste recycling product range with the launch of the new Metso M&J K-series pre-shredders. The first two models are M&J K160 and M&J K210. The new competitive models provide a low cost-per-ton with high reliability, ease of operation and great flexibility for various waste types and with a design optimized especially for sites with a 5–45 tons per hour production requirement.

During the third quarter, Metso announced that it is expanding its remote monitoring services for the mining industry by opening its first Metso performance center in Santiago, Chile, and by building up capabilities for a second center in Changsha, China. Additional centers will be opened in major mining regions during 2020–2021.

Metso introduced an extended size range Neles® M series trunnion ball valves. Series M size range extension provides considerable advantages including modularity, better availability, and easier servicing.

Safety and sustainability

Metso wants to be a responsible and trusted partner bringing sustainable productivity to customers. This means that Metso operates efficiently and responsibly in terms of the environment, safety and the wellbeing of people and the economy.

Safety

Metso's aim is to reinforce its commitment to the continuous improvement of safety and the goal of zero harm. In 2019, Metso succeeded in improving its safety performance significantly, ending the year with an LTIF (lost time incident frequency) of 1.7 (2.9 in 2018). The focus on safety was also reflected in the increased number of risk observations and safety conversations in 2019.

To sharpen the focus of safety work, Metso has developed a training program for supervisors to support them in leading safety. Additionally, a site support program was launched in 2019 for selected Metso sites to bring the injury rate closer to the goal of zero harm.

Metso continues setting individual safety targets and conducting safety audits with follow-up plans for corrective actions. To ensure that all sites apply Metso's minimum safety standards, employees were trained on the upgraded standards in 2019 as part of Metso's annual Safety pledge campaign.

Environment

By auditing its own operations and following the implementation of corrective actions, Metso works to prevent environmental hazards. In 2019, Metso's environmental audits focused on, for example, chemical safety and the handling of hazardous waste.

In 2019, Metso improved energy efficiency at production sites by, for example, investing in new welding machines and melting furnaces. Water consumption was also decreased by reusing and recycling process water.

Climate program

In 2019, Metso launched its new Climate program that includes new climate targets for the most significant sources of emissions. These climate targets were also approved by the Science Based Targets initiative.

Metso has committed to a 25% reduction in carbon emissions in production by 2030. Metso demands sustainability not only of its own production, but also 30% of its suppliers in terms of spend are required to set science-based emission targets by 2024. By streamlining transportation routes and optimizing warehouse locations, Metso aims for a 20% reduction in transportation emissions by 2025.

Additionally, Metso aims for a 10% reduction in GHG emissions in the most energy-intensive customer processes using its products by 2025. This is further reinforced by the demanding energy-efficiency targets in all Metso R&D projects. As supportive actions, Metso will also offset flight emissions by 100% by 2021 and continue to find new ways to decrease emissions, for example, in offices.

Responsible procurement

Metso has developed a Supplier Code of Conduct that sets the standards for Metso's suppliers and forms the basis for supplier cooperation. Metso has over 7,000 suppliers in more than 70 countries. The direct procurement spend in 2019 totaled EUR 1,399 million.

In 2019, Metso conducted 123 supplier sustainability audits. 82 percent of the corrective actions were implemented. In 2019, Metso also organized a supplier sustainability day in India to improve collaboration and competences, to share good practices and to help suppliers understand Metso's expectations for sustainability.

Metso Code of Conduct

Metso's Code of Conduct sets the standard for the conduct of all Metso employees as well as Metso's suppliers, business partners and other stakeholders. In 2019, Metso organized Code of Conduct training to all employees and achieved a participation rate of 99.2%.

Compliance management

Regarding data privacy, Metso's Privacy Office has throughout the year developed practices and processes related to personal data processing, by actively monitoring the development of privacy legislation globally to ensure compliance everywhere we operate.

In 2019, Metso received 11 reports of suspected financial misconduct and 35 reports of suspected non-financial misconduct via its Whistleblower channel. In addition to the Whistleblower reports, 10 reports were investigated after they had been submitted directly to Internal Audit. All cases were investigated, and none had significant financial implications on Metso.

Metso has an audit framework in place to support risk management by ensuring compliance and continuous business development. In total 27 internal audits were performed in 2019.

Corporate Governance and remuneration

Decisions of the 2019 Annual General Meeting

Metso Corporation's Annual General Meeting (AGM) was held on April 25, 2019, in Helsinki, Finland. The AGM approved the financial statements and discharged the members of the Board of Directors and the President & CEOs from liability for the financial year 2018.

The AGM approved the Board of Directors' proposal to pay a dividend of EUR 1.20 per share in two installments. The first dividend installment of EUR 0.60 per share was paid on May 7, 2019. The second installment of EUR 0.60 was paid on November 5, 2019.

The AGM confirmed the number of Board members as eight and re-elected Mikael Lilius as Chair of the Board and Christer Gardell as Vice Chair of the Board. Peter Carlsson, Lars Josefsson, Nina Kopola, Antti Mäkinen and Arja Talma were re-elected as members for a new term. Kari Stadigh was elected as a new member.

The Authorized Public Accountant firm Ernst & Young was elected as Metso's Auditor with Mikko Järventausta as principal responsible auditor. In addition, the AGM approved the proposals of the Board of Directors to authorize the Board to decide on both the repurchase of Metso shares as well as the issuance of shares and special rights entitling to shares. The Nomination Board's proposal concerning the composition and remuneration of the Board of Directors was also approved.

Metso's Board of Directors held its organizing meeting after the AGM. In the meeting the Board elected members of the Audit Committee and the Remuneration and HR Committee from among its members as follows:

- Audit Committee: Arja Talma (Chair), Nina Kopola and Antti Mäkinen
- Remuneration and HR Committee: Mikael Lilius (Chair), Christer Gardell and Lars Josefsson

The minutes of the meeting are available at www.metso.com/agm.

Nina Kopola resigned from the Board of Directors as of August 1, 2019, due to her appointment as Director General of Business Finland. As a result, Metso's Board continued with the seven members and the Audit Committee with two members.

Changes in the Metso Executive Team

Merja Kamppari, SVP, Human Resources, left her position on January 31, 2019. Hannele Järvistö has acted as interim SVP, Human Resources, as of February 1, 2019.

On June 18, Metso's Board of Directors appointed Olli Isotalo as President, Valves business area. Olli Isotalo started in his position on July 15, and at the same time, became a member of the Metso Executive Team. Olli Isotalo previously served as the CEO of Patria Oyj and has held various executive positions at Cargotec Corporation.

On July 26, Metso announced that Stephan W. Kirsch has been appointed President, Mining Equipment business area and a member of the Metso Executive Team, effective August 1. He joined Metso in 2018, and previously served as Senior Vice President, Business and Product Management in the Mining Equipment business area.

New earning periods for senior management's long-term incentive plans

On February 6, 2019, the Board of Directors decided on new earning periods for the company's three senior management long-term incentive plans: Performance Share Plan, Restricted Share Plan and Deferred Share Unit Plan. Competitive long-term incentive plans are designed to align the interest of Metso's management with those of its shareholders to increase the value of Metso and to commit the management to the company.

A new plan period for the Performance Share Plan

The Board approved the commencement of a new plan period for the senior management Performance Share Plan (PSP). PSP 2019–2021 commenced at the beginning of 2019 and potential share rewards will be delivered in the first half of 2022, if the performance targets set by the Board are achieved. The potential share reward payable under PSP 2019–2021 is based on the total shareholder return of Metso's share during calendar years 2019–2021. The plan includes 11 executives belonging to Metso's senior management and a maximum number of share rewards that may be allocated and delivered totals to 190,000 shares, gross before the deduction of applicable payroll tax.

A new plan period for the Restricted Share Plan

The Board approved the commencement of a new plan period for the complementary Restricted Share Plan (RSP). RSP 2019–2021 commenced at the beginning of 2019, and potential share rewards will be delivered in spring 2022, if the performance targets are achieved. The maximum number of share rewards that may be allocated and delivered within the RSP 2019–2021 totals to 60,000 shares, gross before the deduction of applicable payroll tax.

A new plan period for the Deferred Share Unit Plan

The Board approved the commencement of a new plan period for the Deferred Share Unit Plan (DSUP). DSUP 2019–2021 commenced at the beginning of 2019, and potential rewards will be delivered in the first half of 2022, if the performance targets are achieved. The plan includes around 140 people.

The Deferred Share Unit Plan consists of annually commencing three-year plans. The final value of the plans depends both on the achievement of the performance targets set by the Board of Directors and the development of Metso's share price. The maximum amount of rewards payable for the years 2019–2021, based on the average price of the Metso share on February 4, 2019, is approximately EUR 9 million, gross before the deduction of applicable payroll tax.

Personnel

Metso had 15,821 employees at the end of December 2019, which is 2,671 more than at the end of December 2018. During 2019, personnel increased by 143 to 2,866 in Flow Control and by 2,509 to 12,451 in Minerals. Acquisitions increased personnel by 2,182 in Minerals in 2019. Personnel in the Group Head Office and support functions totaled 504 at the end of 2019 (485 at the end of 2018).

Personnel by area

Metso total	Dec 31, 2019	Share, %	Dec 31, 2018	Share, %	Change %
Europe	4,874	31	4,412	34	10
North America	2,229	14	1,674	13	33
South and Central America	4,493	28	2,906	22	55
Asia Pacific	3,556	23	3,318	25	7
Africa and Middle East	669	4	840	6	–20
Metso total	15,821	100	13,150	100	20

In 2019, Metso conducted its PeoplePulse employee engagement survey to help teams identify areas for development. With a response rate of 89% (87% in 2018), it provided teams with the opportunity to discuss results and take practical, positive development actions. Our employee net promoter score (eNPS) of 49.1 is also strong.

Metso employees represent 97 nationalities, operating in over 50 countries and in 185 locations. The combination of different backgrounds and a wide range of service years and ages ensures diverse capabilities.

Shares and share trading

Metso's share capital on December 31, 2019, was EUR 140,982,843.80 and the number of shares 150,348,256. This included 272,088 treasury shares held by the Parent Company, which represented 0.2% of all Metso shares and votes. A total of 113,638,358 Metso shares were traded on Nasdaq Helsinki in January-December 2019, and the value of shares traded was EUR 3,673 million. Metso's market capitalization at the end of December 2019, excluding shares held by the Parent Company, was EUR 5,280 million (EUR 3,435 million at the end of 2018).

Metso share performance on Nasdaq Helsinki January 1–December 31, 2019

EUR	
Closing price	35.18
Highest share price	39.79
Lowest share price	22.36
Volume-weighted average trading price	32.49

In addition to Nasdaq Helsinki, Metso's ADRs (American Depositary Receipts) are traded on the International OTCQX market in the United States under the ticker symbol 'MXCYY', with four ADRs representing one Metso share. The closing price of the Metso ADR on December 31, 2019, was USD 9.78.

Conveyance of own shares based on the long-term incentive plan

On March 28, 2019, a total of 79,040 of Metso Corporation's treasury shares were conveyed without consideration to the 80 key individuals participating in the Performance Share Plan 2016–2018 under the terms and conditions of the plan decreasing the number of treasury shares to 272,088. The directed share issue was based on an authorization given by the Annual General Meeting 2018.

Flagging notifications

In January-December 2019, Metso has received the following flagging notifications of changes in direct shareholding, shareholding through financial instruments or their total amount. Metso is not aware of any shareholders' agreements regarding the ownership of Metso shares and voting rights. Metso has 150,348,256 issued shares.

Events after the reporting period

Changes in the Metso Executive Team
Giuseppe Campanelli was appointed President, Minerals Services business area, and Kalle Sipilä President, Pumps business area as of January 2, 2020. Both also became members of Metso's Executive Team. The former President of both Minerals Services and Pumps business areas, Mikko Keto, resigned on January 1, 2020.

Shareholders' Nomination Board's proposals regarding the composition and remuneration of the Board of Directors of Metso and the future Neles
The Shareholders' Nomination Board published its proposals regarding the composition and remuneration of the Board of Directors of both Metso and the future Neles Corporation on January 16, 2020. The Nomination Board will provide these proposals to Metso's Board of Directors, which will submit them to Metso's next Annual General Meeting, to be held on March 20, 2020.

Metso's Board composition and remuneration
The Nomination Board will propose that Metso's Board of Directors should have seven members. Mikael Lilius is proposed to be re-elected as the Chair, Christer Gardell as the Vice Chair, and Lars Josefsson, Antti Mäkinen, Kari Stadigh and Arja Talma re-elected as members of the Board. Emanuela Speranza will be proposed as a new Board member. Peter Carlsson, a current Board member, has notified the Nomination Board that he will not be available for re-election.

The Board's term of office will commence at the end of the Annual General Meeting and will expire at the registration of the completion of the partial demerger of Metso Corporation.

All the Board member candidates have given their consent to their election and have been assessed to be independent of the company and its significant shareholders, except for Christer Gardell and Antti Mäkinen, who have each been assessed to be independent of the company but not independent of a significant shareholder.

Metso and Outotec have, on February 5, 2020, signed an agreement to amend the combination agreement in respect of the combination of Metso's Minerals Business and Outotec. In the amendment agreement, Metso and Outotec have agreed that Nina Kopola would be replaced with Emanuela Speranza on the Board of Directors of Metso Outotec due to the resignation of Ms. Kopola from the Board of Directors of Metso. Ms. Speranza will be proposed to be elected to the Board of Directors of Metso at the Annual General Meeting of Metso to be held on March 20, 2020.

The Nomination Board will propose the same fixed annual remuneration to the Board members as in the previous term. The remuneration to be paid will be calculated pro rata to the length of the term of office based on the following annual remuneration:

- Chair – EUR 120,000
- Vice Chair – EUR 66,000
- Other members – EUR 53,000 each

Additional remuneration to be paid pro rata to the length of the term of office:

- Chair of the Audit Committee – EUR 20,000
- Members of the Audit Committee – EUR 10,000
- Chair of the Remuneration and HR Committee – EUR 10,000
- Member of the Remuneration and HR Committee – EUR 5,000

The Nomination Board will propose that the fixed annual remuneration be paid to the members of the Board of Directors in cash within two weeks after the expiry of their term of office.

Future Neles' Board composition and remuneration
The Nomination Board will propose that the Board of Directors of the future Neles Corporation should have seven members. Jukka Moisio is proposed to be elected as Chair, Mark Vernon as Vice Chair, and Britta Giesen, Anu Hämäläinen, Niko Pakalén, Teija Sarajärvi and Petter Söderström as members of the Board.

All member candidates have given their consent to their election and have been assessed to be independent of the company and its significant shareholders, except for Petter Söderström and Niko Pakalén, who have each been assessed to be independent of the company but not independent of a significant shareholder.

The term of office of the Neles Board will commence at the registration of the completion of the partial demerger of Metso and will expire at the end of the next Annual General Meeting of Neles.

The Nomination Board will propose the following fixed annual remuneration. The remuneration to be paid will be calculated pro rata to the length of the term of office based on the following annual remuneration:

- Chair – EUR 115,000
- Vice Chair – EUR 65,000
- Other members – EUR 50,000 each

Additional remuneration to be paid pro rata to the length of the term of office:

- Chair of the Audit Committee – EUR 15,000
- Members of the Audit Committee – EUR 7,500
- Chair of the Remuneration and HR Committee – EUR 7,500
- Member of the Remuneration and HR Committee – EUR 3,750

The Nomination Board will propose that, as a condition for the annual remuneration, the members of the Board of Directors of the future Neles Corporation be obliged, directly based on the Annual General Meeting's decision, to use 40% of the fixed total annual remuneration for purchasing Neles Corporation shares from the market at a price formed in public trading and that the purchase will be carried out within two weeks from the publication of the interim review for the period following the registration of the completion of the partial demerger of Metso.

Meeting fees

Meeting fees are proposed to be paid as follows: for each meeting of the Board of Directors of Metso Corporation and the future Neles Corporation and their Committees, a fee of EUR 800 be paid to the members of the Board that reside in the Nordic countries, a fee of EUR 1,600 be paid to the members of the Board that reside in other European countries and a fee of EUR 3,200 be paid to the members of the Board that reside outside Europe.

Personnel representative

The Nomination Board notes that, also during the commencing term of office of the Board of Directors, a personnel representative will participate as an external expert in the meetings of the Board of Metso, within the limitations imposed by Finnish law. The Board of Metso will invite the personnel representative in its organizing meeting after the AGM 2020.

Composition of the Nomination Board

Metso's Shareholders' Nomination Board comprises Petter Söderström (Investment Director, Solidium Oy) as the Chair and Niko Pakalén (Partner, Cevian Capital Partners Ltd.), Mikko Mursula (Deputy CEO, Ilmarinen Mutual Pension Insurance Company), Risto Murto (President and CEO, Varma Mutual Pension Insurance Company), and, as an expert member, Mikael Lilius (Chair of Metso's Board of Directors). The Shareholders' Nomination Board consists of the representatives of the four largest registered shareholders of the company based on the ownership situation as of September 1 annually.

Mikael Lilius has not participated in the decision-making of the Nomination Board's proposal concerning the remuneration of the Chair of the Board and the election of the Chair of the Board of Metso, due to his current position as Metso's Chair.

Petter Söderström and Niko Pakalén have not participated in the decision-making of the Nomination Board's proposal concerning the remuneration of the members of the Board of Directors and the election of the Board members of the future Neles Corporation, due to them being proposed as Board members of the future Neles.

Short-term business risks and market uncertainties

Uncertainties in economic growth and political developments globally could affect our customer industries, reduce the investment appetite and spending among our customers, weaken the demand for Metso's products and services as well as affect our business operations. There are also other market- and customer-related risks that could cause on-going projects to be postponed, delayed or discontinued. Concern about the possible effects of the ongoing trade disputes on economic growth has had an impact on metal prices. This could further impact our customers' behavior.

Continued market growth and inflation as well as the impact of tariffs or other trade barriers could pose challenges to our supply chain and price management, impacting our growth capability and margins.

Exchange rate fluctuations and changes in commodity prices could affect our orders received, sales and financial position. Metso hedges currency exposure linked to firm delivery and purchase agreements.

Uncertain market conditions could adversely affect our customers' payment behavior and increase the risk of lawsuits, claims and disputes taken against Metso in various countries related to, among other things, Metso's products, projects and other operations.

The outbreak of the coronavirus will likely have an impact on the manufacturing and supply chain-related operations in China during the first quarter of 2020.

Information security and cyber threats could disturb or disrupt Metso's businesses and operations.

Market outlook

Market activity in both segments, Flow Control and Minerals, is expected to remain at the current level in both the equipment and services business.

Metso's market outlook describes the expected sequential development of market activity during the following six-month period using three categories: improve, remain at the current level, or decline.

Corporate Governance Statement

Metso published a separate Corporate Governance Statement for 2019 that complies with the recommendations of the Finnish Corporate Governance Code for listed companies and covers other central areas of corporate governance. The statement is available on our website, separately from the Board of Directors' Report.

Non-financial information

Metso's business model

Metso drives profitable growth and sustainable productivity across its customer industries to create value for its shareholders and other stakeholders by offering a diverse and competitive portfolio for mining, aggregates, recycling and other process industries through a market-specific sales and supply chain.

Non-financial value creation

Metso takes a systematic approach to managing non-financial matters, including appropriate policies, processes, governance and organization. The Board of Directors has evaluated the following non-financial matters: environmental, social and employee matters, respect for human rights, as well as anti-corruption and bribery matters, as required by the Finnish Accounting Act and set forth in EU Directive 2014/95/EU (rules on disclosure of non-financial and diversity information by large companies). The evaluation criteria took into consideration value chain impacts, risk management measures, applicable performance indicators and future opportunities. The Board has concluded that the most material non-financial areas in terms of value creation for shareholders and other stakeholders are:

1. Customer relationships
2. Sustainable innovations
3. Code of Conduct
4. Supply chain
5. People and leadership
6. Actions and programs related to climate issues

Metso's sustainability agenda comprises of two focus areas: responsible and trusted partner, and sustainable productivity for customers. These focus areas include the most material non-financial value creating areas listed above. A commitment to follow certain global initiatives forms the basis for Metso's value creation and business operations regarding non-financial value creation. Metso's operations are also managed through policies, processes, guidelines and instructions.

Key performance indicators for non-financial areas

Key performance indicators (KPIs) that Metso has chosen for the non-financial areas are:

1. % of personnel trained on Code of Conduct
2. Number of internal and external audits (including supplier audits)
3. % of R&D projects that have defined sustainability targets
4. Lost-time incident frequency
5. Employee engagement

Policies, processes and KPIs for non-financial value creation

Non-financial matters	**Environmental**			**Human rights, anti-bribery and corruption**		**Social, employee and diversity**
Sustainability agenda categories	**Sustainable productivity for customers**			**Responsible and trusted partner**		
Most material non-financial value creating factors	**Customer relationships**	**Sustainable innovations**	**Environmental emissions**	**Code of Conduct**	**Supply chain**	**People and leadership**
Processes and projects	Customer engagement survey Customer Relationship Management process; Opt-in and personalized marketing	Metso Risk assessment evaluations Internal and external audits (incl. HSE and supplier sustainability audits)				
		Metso Innovation Process	Climate program	Risk engineering audits Logistics audits		Performance management Competence development Employee engagement survey Recruitment process Health and Safety management
					Responsible procurement Program	
				Due diligence process in anti-bribery and corruption		
Key corporate standard: Code of Conduct						
Policies	Data Privacy Policy					
	Brand Policy	Health, Safety and Environment Policy				
	Intellectual Property Policy	Supplier Code of Conduct Procurement Policy		Anti-Corruption Policy Enterprise Risk Management Policy Misconduct Policy Policy for Competition Law Compliance Policy on Compliance with Sanctions, Export Controls and Country Risks	Supplier sustainability criteria Procurement Policy	Equal Opportunity and Diversity Policy Performance and Reward Policy
Global initiatives	UN Global Compact UN Sustainable Development Goals OECD Guidelines for Multinational Enterprises ILO Declaration of Fundamental Principles and Rights at Work			IInternational Chamber of Commerce Business Charter for Sustainable Development UN Declaration of Human Rights UN Guiding Principles on Business and Human Rights		
KPIs	% of personnel trained on Code of Conduct					
		Number of internal and external audits, including supplier audits				
	% of R&D projects that have defined sustainability targets					LTIF (Lost-time incident frequency)
						Employee engagement

Non-financial risks

Risks related to Metso's non-financial areas are mainly associated with compliance, brand and reputation, health, safety and environment (HSE), and climate change, as well as human and labor rights, especially in the supply chain.

Operating throughout the value chain in a sustainable way is a high priority for Metso, as environmental, social or governance misconduct can affect the company's reputation and have long-term financial and other consequences. Non-financial risks can also create business interruption risks, lost working hours and other financial implications.

Metso's Code of Conduct is the key corporate standard to be followed by all employees; in addition, we have other relevant policies, guidelines and processes in place to support risk management. As Metso's operations are largely outsourced, there are risks related to the environment, human and labor rights, and corruption in the supply chain. To mitigate supply chain risks, supplier audits are conducted annually by an external Metso partner and by internal procurement and quality assurance.

Health issues, discrimination and harassment are the most significant human and labor rights-related risks. Sick-leave absences can have cost impacts and compromise customer deliveries. Low employee engagement may lead to losing talent and competences. Metso mitigates these risks by, for example, having compulsory Code of Conduct training, which includes harassment and discrimination topics, every second year for all employees. In addition, these risks are mitigated by providing managers with tools in daily management activities and through the active development of leadership. For example, in Finland the 'Metso early support model' is in place to help ensure that employees can maintain their health.

Metso's main health and safety risks occur both in its own operations as well as at customer sites. The most common risks in our own operations are related to lifting, working at heights, machinery, hot work and road travel. These risks are mitigated with the help of work instructions, training, risk observations, audits and the corrective actions that these generate. Metso uses lost-time incident frequency (LTIF) as the key indicator for safety both at its own premises and for the subcontractors working at Metso's and customers' sites. Another important safety focus is on making sure that products and services are safe to use and maintain; thus, the safety of services is considered in the early phase of product and service development.

The biggest threats and opportunities related to the environment and climate change are present at customer sites. Flow Control's key focus areas are improved reliability, safety and minimizing emissions. In Minerals, Metso works to improve efficiency through reduced energy consumption, reduced water consumption, improved utilization of raw materials, reduced emissions, and reduced noise and dust. Safety is an overall priority. Metso's aim is to develop its offering for both brownfield and greenfield operations.

The Board oversees the appropriate governance of overall enterprise risk management. Internal control practices are aligned with Metso's risk management process approved by the Board. Risk management and major risks are described in detail in the Corporate Governance on pages. An audit frame is in place to support risk management by ensuring compliance and continuous business development. In 2019, a total of 190 compliance-related audits were conducted at Metso premises and for Metso suppliers.

Customer relationships

A few years ago, a single Customer Relationship Management system was implemented across the businesses to more effectively collate and manage customer data. Currently, work is ongoing to further improve the information and its usage to make customer relationship management more effective and deliver a better service experience. Furthermore, the development of our sales capabilities by providing training and by strengthening the sales teams in driving customer success has continued.

Metso gathers customer feedback systematically and measures the customer experience in all businesses. This enables Metso to validate its strengths and identify the operational development areas. The results from the annual engagement survey indicate that customers value the quality of Metso's products and the technical expertise and support they get from their key contacts. Areas to be improved are responsiveness, problem resolution and availability of products. Metso has developed improvement initiatives and metrics to address the identified areas, and their impact on the customer experience is monitored with the annual measurement as well as with regular touchpoint surveys, for example after product or service delivery. The annual customer engagement survey was conducted in autumn 2019 and the results showed good improvement.

Metso continues to invest in marketing automation, which will help keep customers better informed throughout their customer journey, from solution research to replacement. This improves the customer experience and increases sales potential.

Sustainable innovations

Metso's product and service design is focused on helping customers to operate safely with higher productivity and profitability while reducing their resource intensity. The biggest environmental impacts of Metso's solutions are generated when they are in use in the customer processes. The mining industry faces increasing energy costs, declining water resources, stringent environmental legislation, and lower grade ore bodies. Innovating for solutions that are more energy efficient is one of the key drivers in the mining industry because the comminution process, including crushing and grinding, is the most energy-intensive and energy-inefficient stage of mineral production. Improvements in comminution efficiency can result in significant energy savings and have a large impact on the operating cost of a plant as well as conserve resources and reduce greenhouse gas emissions.

Product safety is also one of the key drivers in Metso's research and development work. The product safety principles consider all aspects relevant to:

- Safe installation and operation
- Servicing and maintaining products in all conditions
- Training customers on the safe use of the equipment

Metso has a target to define sustainability targets for each new R&D project; 91% of the new R&D projects in 2019 had set environmental efficiency and/or product safety innovation targets. The R&D expenditure in 2019 was EUR 62 million (EUR 51 million in 2018).

Metso's services portfolio, which ranges from wear and spare parts to life cycle services, is an important part of the offering. Service and distribution centers close to the customer ensure efficient and timely service. Well-maintained equipment typically has a smaller environmental footprint.

Climate program

In 2019, Metso launched a new climate program that includes CO2 emissions reduction targets for all the relevant emission sources: research & development, procurement, production, inbound and outbound transportation and flights. The program also includes local supportive actions, such as environmental efficiency of offices and commuting.

Code of Conduct

Metso's Code of Conduct is the key corporate standard to be followed. Metso's commitment to integrity as outlined in our Code of Conduct reflects our respect for all applicable laws and regulations, our aim to share regulatory best practices, and our effort to act as a good corporate citizen. We respect and support human rights. All employees are entitled to be treated with respect, and we have zero tolerance for discrimination, harassment, or illegal threats. Any form of compulsory, forced or child labor is unacceptable. We respect applicable national laws and regulations regarding working hours and employee compensation. Our Anti-Corruption Policy supports zero-tolerance for bribery and corruption, including facilitation payments. Metso requires in its third-party agreements that suppliers, business partners and other stakeholders also follow similar standards.

All Metso people have a responsibility for compliance. A range of internal controls are in place, and people are strongly encouraged to report any suspected wrongdoing or misconduct to their supervisors, to other management or, if necessary, directly to Internal Audit, e.g. using a whistleblower channel. All reports are treated as confidential and anonymous, and Metso commits to no negative repercussions for the reporting person.

In 2019 we implemented a renewed Code of Conduct training as part of our biennial process. The training is mandatory for all employees; 99.2% of Metso employees completed the training during the required time frame either through e-learning or in a classroom setting. The training is part of the induction program for new employees.

Supply chain

Due to the cyclical nature of Metso's customer industries, a business model of outsourcing the manufacturing plays an important role. 70 percent of the cost of goods sold derives from our suppliers, and close relationships with them are critical. Metso expects its suppliers to follow the Supplier Code of Conduct, which is based on Metso's Code of Conduct, and the international principles Metso follows.

Processes are in place to continuously develop a shared understanding with suppliers in the areas of innovation, cost efficiency, quality and sustainability in order to manage the risks related to outsourcing. Human and labor rights, environmental and safety practices, compliance with laws and regulations, and anti-bribery are covered by third-party supplier audits, supplier self-assessments and Metso's internal supplier sustainability audits. Key supplier requirements are also incorporated into contract obligations, and a contract breach can lead to consequences that include the termination of a supplier relationship. Supplier sustainability audits are conducted in higher risk countries, and suppliers are required to implement corrective actions within a given timeframe. Corrective actions are followed up.

People and leadership

The performance and engagement of our people is a key contributor to value creation. Engagement is supported and achieved by the safety and wellbeing of employees and responsible employment.

Valuing diversity and providing equal opportunities is important. In order to advance work-related human rights principles, Metso has had an Equal Opportunity and Diversity Policy since 2011. The policy provides concrete content to the general principles of Metso's Code of Conduct. The underlying principle of the policy is Metso's commitment to promoting equal opportunities for all employees, regardless of gender, age, race, religion, caste or religious beliefs, ethnic or national origins, marital/civil partnership status, union membership, political affiliation, sexuality or disability. Employees are selected based on merit and experience.

Continuous development and learning in everyone's daily work is emphasized in Metso's learning approach, which is supported by our global people processes and tools. Additionally, Metso aims for fair remuneration systems that take into consideration the individual, team, business area and the Group's performance, as well as the varying market practices globally. From an employee engagement point of view, excelling in leadership makes all the difference. Metso's approach is based on its values and Leadership Principles. Employee engagement is measured via the Metso global employee survey, PeoplePulse, which was conducted in 2019 and showed improved results from 2018.

Human rights are part of our Code of Conduct. We respect human rights and support the execution of related global initiatives and policies. We also review human rights-related topics, including safety and labor rights, regularly in our own operations and within the operations of our suppliers. In 2019, we assessed two of our units in China and India. Based on the results, follow-up plans will be prepared; the assessments will be expanded to other sites in 2020. Employee safety, risk observations, safety discussions and safety training hours are continuously measured. The lost-time incident frequency (LTIF) in 2019 was 1.7 (2.8 in 2018). Annually, an external partner conducts site visits as part of sustainability reporting assurance. In 2019, three sites were visited as part of the assurance process: in Canada, Finland, and India.

Further information

In addition, as required by the Finnish Accounting Act and set forth in EU Directive 2014/95/EU (rules on disclosure of non-financial and diversity information by large companies), information related to non-financial matters is also available at:

- Business Overview 2019, Metso's strategy and business model
- Business Overview 2019, Metso's value creation model
- Corporate Governance 2019, Risk management at Metso
- Corporate Governance 2019, Metso's risk map

Shares and shareholders

Metso has one share series, and each share entitles its holder to one vote at a General Meeting and to an equal amount of dividend. Metso's shares are registered in the Finnish book-entry system maintained by Euroclear.

Basic share information

Listed on	Nasdaq Helsinki
Trading code	METSO
ISIN code	FI0009007835
Industry	Industrials
Number of shares on December 31, 2019	150,348,256
Share capital on December 31, 2019	EUR 140,982,843.80
Market value on December 31, 2019	EUR 5,280 million
Listing date	July 1, 1999

Metso shares are also traded on alternative marketplaces like BOAT, BATS Chi-X and Turquoise. In addition, Metso's ADS (American Depositary Shares) are traded in the United States on the International OTCQX market under the ticker symbol MXCYY. Four Metso ADS represent one ordinary share. The Bank of New York Mellon serves as the depository bank for Metso's ADS.

Metso's share and shareholders in 2019

On December 31, 2019, Metso's share capital was EUR 140,982,843.80 and the total number of shares was 150,348,256. There were no changes in the number of shares and share capital in 2019. More information on the past share capital changes is available at www.metso.com/shares.

At the end of 2019, Metso had approximately 45,000 shareholders in the book-entry system. The largest shareholder was Solidium with 22,374,869 shares and 14.9 percent of the share capital. A total of 113,638,358 Metso shares were traded on the Nasdaq Helsinki during 2019, equivalent to a turnover of EUR 3,673 million.

At the year-end, the members of Metso's Board of Directors and President and CEO Pekka Vauramo held a total of 77,931 Metso shares, corresponding to 0.05 percent of the total number of shares and votes. More information about management holdings is available in note 1.5.

Share key figures 2015–2019

	2019	2018	2017	2016	2015
Share capital, at the end of year, EUR million	141	141	141	141	141
Number of shares, at the end of year					
Number of outstanding shares	150,076,168	149,997,128	149,997,128	149,984,538	149,984,538
Own shares held by the Parent Company	272,088	351,128	351,128	363,718	363,718
Total number of shares	150,348,256	150,348,256	150,348,256	150,348,256	150,348,256
Average number of outstanding shares	150,057,328	149,997,128	149,995,127	149,984,538	149,964,701
Average number of diluted shares	150,200,101	150,186,841	150,151,338	150,113,107	149,989,417
Earnings/share, basic, EUR	2.00	1.53	0.68	0.87	2.95
Earnings/share, diluted, EUR	2.00	1.53	0.68	0.87	2.95
Free cash flow/share, EUR	0.26	0.97	1.05	2.26	2.27
Dividend/share[1)], EUR	1.47	1.20	1.05	1.05	1.05
Dividend[1)], EUR million	221	180	157	157	157
Dividend/earnings[1)], %	73.5	78.4	154.0	121.0	36.0
Effective dividend yield[1)], %	4.2	5.2	3.7	3.9	5.1
P/E ratio	17.6	15.0	41.9	31.2	7.0
Equity/share, EUR	10.15	9.37	8.96	9.54	9.58

[1)] Board proposal to the AGM

Share performance and trading on Nasdaq Helsinki in 2019

	2019
Closing price, December 31, EUR	35.18
Market capitalization, December 31 [1], EUR million	5,280
Trading volume, NASDAQ OMX Helsinki Ltd, pieces	113,638,358
% of shares [2]	76%
Trading volume, NASDAQ OMX Helsinki Ltd, EUR million	3,673
Average daily trading volume, pieces	454,553
compared to 2018, %	–4%
Relative turnover, %	76%
relative turnover 2018	79%
Share performance, %	1.54
Highest share price, EUR	39.79
Lowest share price, EUR	22.36
Average share price, EUR	32.32

[1] Excluding own shares held by the parent company
[2] Of the total amount of shares for public trading

Metso ADR share performance in 2019

	2019
Closing price, December 31, USD	9.78
Highest share price, USD	10.48
Lowest share price, USD	6.40

Largest shareholders December 31, 2019

		Shares and votes	% of share capital and voting rights
1	Solidium Oy	22,374,869	14.88
2	Ilmarinen Mutual Pension Insurance Company	4,051,253	2.69
3	Varma Mutual Pension Insurance Company	2,848,465	1.89
4	The Local Government Pensions Institution	1,575,166	1.05
5	Elo Mutual Pension Insurance Company	1,476,000	0.98
6	Nordea Funds	1,294,361	0.86
	Nordea Pro Finland Fund	598,753	0.40
	Nordea Finnish Passive Fund	285,495	0.19
	Nordea Premium Varainhoito Tasapaino Fund	82,869	0.06
	Nordea Premium Varainhoito Maltti Fund	75,446	0.05
	Nordea Säästö 50	65,418	0.04
	Nordea Finland Fund	49,873	0.03
	Nordea Säästö 25 Fund	44,904	0.03
	Nordea Säästö 75	38,337	0.03
	Nordea Premium Varainhoito Kasvu Fund	28,450	0.02
	Nordea Bank Abp	24,816	0.02
7	Society of Swedish Literature in Finland	1,095,176	0.73
8	The State Pension Fund	1,000,000	0.67
9	Danske Invest Funds	784,645	0.52
	Danske Invest Finnish Equity Fund	635,402	0.42
	Danske Invest Arvo Finland Value Fund	149,243	0.10
10	OP Funds	736,940	0.49
	OP-Finland	570,000	0.38
	OP-Finland Index Fund	101,743	0.07
	OP-Pohjoismaat Indeksi-Sijoitusrahasto	65,197	0.04
11	Mandatum Life Insurance Company Ltd.	667,986	0.44
12	Sigrid Jusélius Foundation	662,465	0.44
13	Aktia Funds	525,000	0.35
	Aktia Capital Mutual Fund	400,000	0.27
	Aktia Secura Mutual Fund	70,000	0.05
	Aktia Nordic Mutual Fund	55,000	0.04
14	Schweizerische Nationalbank	480,962	0.32
15	Finnish Cultural Foundation	400,123	0.27
16	Oy Etra Invest Ab	400,000	0.27
17	The Finnish Social Insurance Institution	396,316	0.26
18	Veritas Pension Insurance Company Ltd.	365,000	0.24
19	Samfundet Folkhälsan i Svenska Finland	320,985	0.21
20	SEB Finlandia Optimized Low Carbon	272,992	0.18
	20 largest owner groups in total	41,728,704	27.75
	Nominee-registered holders	82,498,397	54.87
	Other shareholders	25,841,047	17.17
	Own shares held by the Parent Company	272,088	0.20
	In the issuer account	8,020	0.00
	Total	150,348,256	100.00

Breakdown of share ownership on December 31, 2019

Number of shares	Shareholders	% of shareholders	Total number of shares and votes	% of share capital and voting rights
1 – 100	20,859	46.5	1,008,335	0.7
101 – 1,000	20,304	45.3	7,170,290	4.8
1,001 – 10,000	3,378	7.5	8,613,321	5.7
10,001 – 50,000	223	0.5	4,409,336	2.9
50,001 – 100,000	38	0.1	2,653,276	1.8
over 100,000	44	0.1	43,715,193	29.0
Total	44,846	100	67,569,751	44.9
Nominee-registered shares	11		82,498,397	54.9
Own shares held by the Parent Company	1		272,088	0.2
In the issuer account			8,020	0.0
Number of shares issued			150,348,256	100.0

Breakdown by shareholder category on December 31, 2019

%	2019
Nominee-registered and non-Finnish holders	56%
Solidium Oy	15%
Private investors	11%
Financial and insurance corporations	12%
Non-profit institutions	4%
Others	2%
Total	100%

Flaggings

Under the provisions of the Finnish Securities Markets Act, shareholders of listed companies have an obligation to notify both the Finnish Financial Supervision Authority and the company of changes when their holdings reach, exceed or fall below a certain threshold. Metso is not aware of any shareholders' agreements regarding Metso shares or voting rights. All flagging notifications have been released as a stock exchange release are available at www.metso.com/news.

Board authorizations

The Annual General Meeting has granted the following authorizations to the Board that are effective at the signing of the Financial Statements. The Board has not exercised these authorizations. Valid board authorizations and their details are available at www.metso.com/board.

Authorization	Maximum number	Validity	Purpose of use
Repurchase and conveyance of the company's own shares	10 million shares (6.7% of shares)	Until June 30, 2020	1. Development of the company's capital structure 2. Financing or carrying out acquisitions, investments or other business transactions 3. Management's incentive plans
Issuance of shares and issuance of special rights entitling to shares[1]	15 million shares (10% of shares)	Until June 30, 2020	Same as above. A directed share issue may be executed without consideration only if there is an especially weighty financial reason to do so, taking the interests of all shareholders into account.

[1] Repurchased shares can be held by the company, cancelled or conveyed. The Board of Directors shall decide on other matters related to the repurchase and/or acceptance as a pledge of the company's own shares.

Incentive plans

Metso's share ownership plans are part of the management remuneration program. For further information, see www.metso.com/remuneration and the Financial Statements, note 1.5 and 1.6. Any shares to be potentially rewarded are acquired through public trading, and therefore the incentive plans have no diluting effect on the share value.

Key figures

Continuing operations

EUR million	2019[1]	2018[1]	2017	2016	2015
Sales	660	593	2,699	2,586	2,977
Operating profit	93	83	218	227	555
% of sales	14.0	14.1	8.1	8.8	18.6
Profit before taxes	91	85	184	188	516
% of sales	13.8	14.3	6.8	7.3	17.3
Profit for the year	69	65	102	130	442
% of sales	10.4	10.9	3.8	5.0	14.8
Profit for the year, discontinued operations	230	164	–	–	–
Profit attributable to shareholders of the company	301	230	102	130	442
Exports from Finland and international operations	629	560	2,628	2,501	2,881
% of sales	95.3	94.6	97.4	96.7	96.8
Amortization of intangible assets	4	2	17	17	18
Depreciation of tangible assets	10	10	42	44	51
Depreciation of right-of-use assets	11	–	–	–	–
Depreciation and amortization, total	25	12	59	61	69
% of sales	3.8	2.0	2.2	2.4	2.3
EBITA	96	86	236	244	573
% of sales	14.6	14.5	8.7	9.4	19.3
EBITDA	117	95	277	288	624
% of sales	17.8	16.1	10.3	11.1	21.0
Orders received	681	628	2,982	2,724	3,027
Order backlog, December 31	280	276	1,439	1,320	1,268

Metso total

EUR million	2019[2]	2018	2017	2016	2015
Financial expenses, net	38	30	35	39	39
% of sales[3]	1.1	0.9	1.3	1.5	1.3
Interest expenses	34	25	23	29	28
% of sales[3]	0.9	0.8	0.9	1.1	0.9
Interest cover (EBITDA)	15.0x	13.7x	7.9x	7.4x	16.0x
Gross capital expenditure	110	67	38	31	46
% of sales[3]	3.0	2.1	1.4	1.2	1.5
Business acquisitions, net of cash acquired	214	78	30	–	–
Net capital expenditure	102	61	35	19	31
% of sales[3]	2.8	1.9	1.3	0.7	1.0
Net cash flow from operating activities	91	177	185	346	360
Free cash flow	39	146	158	339	341
Cash conversion, %[4]	13	64	155	261	180
Research and development	62	51	27	34	41
% of sales[3]	1.7	1.6	1.0	1.3	1.4
Balance sheet total	3,887	3,279	3,287	3,236	3,209
Equity attributable to shareholders	1,523	1,406	1,344	1,431	1,436
Total equity	1,526	1,416	1,351	1,439	1,444
Interest bearing liabilities	1,017	598	853	794	822
Net interest bearing liabilities	798	165	24	–26	153
Net working capital (NWC)	939	633	502	487	598
% of sales[3]	25.8	20.0	18.6	18.8	20.1
Capital employed	2,543	2,015	2,204	2,233	2,267
Return on equity (ROE), %	20.4	16.5	7.3	9.0	33.1
Return on capital employed (ROCE) before taxes, %	19.2	16.9	10.3	10.4	25.7
Return on capital employed (ROCE) after taxes, %	15.1	12.5	6.6	7.8	22.4
Equity to assets ratio, %	42.3	47.7	44.5	48.0	48.3
Net gearing, %	52.3	11.7	1.8	–1.8	10.6
Debt to capital, %	40.0	29.7	38.7	35.6	36.3
Average number of personnel	14,331	12,605	11,703	12,059	13,754
Personnel, December 31	15,821	13,150	12,037	11,542	12,619

1) Key figures for years 2019 and 2018 are presenting continuing operations.
2) Key figures for year 2019 include discontinued operations.
3) In 2019, Metso comparable revenue totaled EUR 3,635 million (EUR 3,173 million in 2018).
4) In 2015, cash conversion is calculated on profit excluding the gain on the sale of Process Automation (PAS) business disposal.

The Income statement and Balance sheet of discontinued operations are presented in more detail in the appendix Analysis of discontinued operations.

Formulas for the key figures

Earnings before financial expenses, net, taxes and amortization (EBITA), adjusted
Operating profit + adjustment items + amortization

Earnings per share, basic

$$\frac{\text{Profit attributable to shareholders}}{\text{Average number of outstanding shares during the period}}$$

Earnings per share, diluted

$$\frac{\text{Profit attributable to shareholders}}{\text{Average number of diluted shares during the period}}$$

Equity/share

$$\frac{\text{Equity attributable to shareholders}}{\text{Number of outstanding shares at the end of the period}}$$

Return on equity (ROE), %

$$\frac{\text{Profit for the period}}{\text{Total equity (average for the period)}} \times 100$$

Return on capital employed (ROCE) before taxes, %

$$\frac{\text{Profit before tax + financial expenses}}{\text{Capital employed (average for the period)}} \times 100$$

Return on capital employed (ROCE) after taxes, %

$$\frac{\text{Profit for the period + financial expenses}}{\text{Capital employed (average for the period)}} \times 100$$

Net gearing, %

$$\frac{\text{Net interest bearing liabilities}}{\text{Total equity}} \times 100$$

Debt to capital, %

$$\frac{\text{Interest bearing liabilities}}{\text{Total equity + interest bearing liabilities}} \times 100$$

Equity to assets ratio, %

$$\frac{\text{Total equity}}{\text{Balance sheet total – advances received}} \times 100$$

Free cash flow
Net cash provided by operating activities – maintenance investments + proceeds from sale on intangible and tangible assets

Free cash flow/share

$$\frac{\text{Free cash flow}}{\text{Average number of outstanding shares during the period}}$$

Cash conversion, %

$$\frac{\text{Free cash flow}}{\text{Profit for the period}} \times 100$$

Interest cover (EBITDA)

$$\frac{\text{EBITDA}}{\text{Financial income and expenses, net}}$$

Interest bearing liabilities
Interest bearing liabilities, non-current and current + lease liabilities, non-current and current

Net interest bearing liabilities
Interest bearing liabilities – non-current financial assets – loan and other interest bearing receivables (current and non-current) – liquid funds

Net working capital (NWC)
Inventories + trade receivables + other non-interest bearing receivables + customer contract assets and liabilities, net – trade payables – advances received – other non-interest bearing liabilities

Capital employed
Net working capital + intangible assets and tangible assets + right-of-use assets + non-current investments + interest bearing receivables + liquid funds + tax receivables, net + interest payables, net

Operative capital employed
Intangible and tangible assets + right-of-use assets + investments in associated companies + inventories + non-interest bearing operative assets and receivables (external) – non-interest bearing operating liabilities (external)

Return on operative capital employed for reporting segments (segment ROCE), %

$$\frac{\text{Operating profit}}{\text{Operative capital employed (month-end average)}} \times 100$$

Board of Directors' proposal on the use of profit

On December 31, 2019, the distributable equity of Metso Corporation was:

Invested non-restricted equity fund	EUR	368,263,034.11
Retained earnings	EUR	420,858,625.66
Net profit for the year	EUR	107,844,991.97
Distributable equity, total	EUR	896,966,651.74

The Board of Directors proposes that a dividend of EUR 1,47 per share be paid based on the balance sheet to be adopted for the financial year, which ended December 31, 2019. Insofar as the dividend to be paid exceeds the net profit for the year ended December 31, 2019, the remaining amount will be paid from retained earnings from previous years.

Dividend payment	EUR	220,611,966.96
Distributable equity after dividend payment	EUR	676,354,684.78

These financial statements were authorized for issue by the Board of Directors on February 5, 2020 after which, in accordance with Finnish Company Law, the financial statements are either approved, amended or rejected in the Annual General Meeting.

Consolidated Financial Statements

Consolidated Statement of Income, IFRS

EUR million	Note	2019	2018
Continuing operations			
Sales	1.1, 1.2	660	593
Cost of goods sold	1.5, 3.3	–435	–391
Gross profit		225	202
Selling and marketing expenses	1.3, 1.5, 3.3	–78	–69
Administrative expenses	1.3, 1.5, 3.3	–34	–30
Research and development expenses	1.3, 1.5, 3.3	–17	–16
Other operating income and expenses, net	1.4	–4	–3
Share in profits of associated companies	5.3	0	0
Operating profit		93	83
Financial income	1.7	1	1
Foreign exchange gains/losses	1.7	0	0
Financial expenses	1.7	–2	0
Financial income and expenses, net		–2	1
Profit before taxes		91	85
Income taxes	1.8	–22	–20
Profit from continuing operations		69	65
Profit from discontinued operations [1]		230	164
Profit for the year		299	229

EUR million	Note	2019	2018
Profit from continuing operations attributable to			
Shareholders of the parent company		69	65
Non-controlling interests		0	0
Profit from discontinued operations attributable to			
Shareholders of the parent company		232	165
Non-controlling interests		–1	–1
Profit attributable to			
Shareholders of the parent company		301	230
Non-controlling interests		–1	–1
Earnings per share for continuing operations	1.9		
Basic, EUR		0.46	0.43
Diluted, EUR		0.46	0.43
Earnings per share for discontinued operations	1.9		
Basic, EUR		1.54	1.10
Diluted, EUR		1.54	1.10
Earnings per share	1.9		
Basic, EUR		2.00	1.53
Diluted, EUR		2.00	1.53

[1] The result for the period from discontinued operations is described in more detail in the appendix Analysis of discontinued operations.

Consolidated Statement of Comprehensive Income, IFRS

EUR million	Note	2019	2018
Continuing operations			
Profit for the year		69	65
Other comprehensive income			
Cash flow hedges, net of tax		–	–
Measurement at fair value, net of tax	1.8, 4.2, 4.4	0	0
Currency translation on subsidiary net investments	1.8, 4.4	0	2
Items that may be reclassified to profit or loss in subsequent periods		0	2
Defined benefit plan actuarial gains and losses, net of tax	1.8, 2.7	2	–3
Items that will not be reclassified to profit or loss		2	–3
Other comprehensive income		1	–1
Total comprehensive income from continuing operations		70	63
Profit from continuing operations attributable to			
Shareholders of the parent company		70	63
Non-controlling interests		0	0
Discountinued operations			
Profit for the year		230	164
Other comprehensive income			
Cash flow hedges, net of tax	1.8, 4.4, 4.8	3	–1
Measurement at fair value, net of tax	1.8, 4.2, 4.4	0	0
Currency translation on subsidiary net investments	1.8, 4.4	2	–15
Items that may be reclassified to profit or loss in subsequent periods		4	–16
Defined benefit plan actuarial gains and losses, net of tax	1.8, 2.7	–3	1
Items that will not be reclassified to profit or loss		–3	1
Other comprehensive income		1	–15
Total comprehensive income from discontinued operations		231	150
Profit from discontinued operations attributable to			
Shareholders of the parent company		232	151
Non-controlling interests		–1	–1
Total comprehensive income		301	213
Attributable to			
Shareholders of the parent company		303	214
Non-controlling interests		–1	–1

Consolidated Balance Sheet, IFRS

Assets

EUR million	Note	2019	2018
Non-current assets			
Intangible assets	3.1, 3.3		
Goodwill		62	525
Other intangible assets		18	83
Total intangible assets		81	608
Tangible assets	3.2, 3.3		
Land and water areas		6	40
Buildings and structures		21	97
Machinery and equipment		28	135
Assets under construction		11	33
Total tangible assets		67	305
Right-of-use assets	3.3, 3.4	46	0
Other non-current assets			
Investments in associated companies	5.3	0	4
Non-current financial assets	4.2	0	3
Loan and other interest bearing receivables	4.2	–	6
Derivative financial instruments	4.8	–	3
Deferred tax asset	1.8	13	101
Other non-current receivables	2.2, 2.3, 4.2	1	38
Total other non-current assets		14	157
Total non-current assets		208	1,070
Current assets			
Inventories	2.4	181	950
Trade receivables	2.2	95	585
Customer contract assets	1.2	–	82
Interest bearing receivables		–	1
Derivative financial instruments	4.8	0	10
Income tax receivables	1.8	2	22
Other current receivables	2.3	40	134
Deposits and securities, maturity more than three months		–	94
Cash and cash equivalents		57	332
Liquid funds	4.3	57	426
Total current assets		374	2,209
Discontinued operations, assets [1]		3,305	–
TOTAL ASSETS		3,887	3,279

Equity and Liabilities

EUR million	Note	2019	2018
Equity	4.4		
Share capital		141	141
Cumulative translation adjustments		52	–101
Fair value and other reserves		298	302
Discontinued operations		–155	–
Retained earnings		1,187	1,064
Equity attributable to shareholders		1,523	1,406
Non-controlling interests		3	10
Total equity		1,526	1,416
Liabilities			
Non-current liabilities			
Interest bearing liabilities	4.2, 4.5	36	383
Lease liabilities	4.2, 4.5	37	0
Post-employment benefit obligations	2.7	9	68
Provisions	2.6	3	29
Derivative financial instruments	4.8	–	2
Deferred tax liability	1.8	4	30
Other non-current liabilities	2.5	0	2
Total non-current liabilities		89	515
Current liabilities			
Interest bearing liabilities	4.2, 4.5	20	215
Lease liabilities	4.2, 4.5	10	0
Trade payables	2.5	63	431
Provisions	2.6	12	71
Advances received		24	208
Customer contract liabilities	1.2	–	100
Derivative financial instruments	4.8	1	14
Income tax liabilities	1.8	2	61
Other current liabilities	2.5	39	248
Total current liabilities		171	1,348
Total liabilities		259	1,863
Discontinued operations, liabilities [1]		2,102	–
TOTAL EQUITY AND LIABILITIES		3,887	3,279

[1] Discontinued operations' assets are disclosed in the appendix Analysis of discontinued operations.

Consolidated Statement of Changes in Shareholders' Equity, IFRS

EUR million	Share capital	Cumulative translation adjustments	Fair value and other reserves	Discontinued operations	Retained earnings	Equity attributable to shareholders	Non-controlling interests	Total equity
Jan 1, 2018	141	−87	305	–	987	1,346	7	1,353
Profit for the year	–	–	–	–	230	230	−1	229
Other comprehensive income								
Cash flow hedges, net of tax	–	–	−1	–	–	−1	–	−1
Measurement at fair value, net of tax	–	–	0	–	–	0	–	0
Currency translation on subsidiary net investments	–	−13	–	–	–	−13	0	−13
Defined benefit plan actuarial gains and losses, net of tax	–	–	–	–	−2	−2	–	−2
Total comprehensive income	–	−13	−1	–	228	214	−1	213
Dividends	–	–	–	–	−157	−157	0	−157
Share-based payments, net of tax	–	–	−2	–	1	−2	–	−2
Other items	–	–	0	–	1	1	0	1
Changes in non-controlling interests	–	–	–	–	4	4	5	9
Dec 31, 2018	141	−101	302	–	1,064	1,406	10	1,416
Impact of the adoption of new IFRS standards [1]	–	–	–	–	−3	−3	–	−3
Jan 1, 2019	141	-101	302	-	1,061	1,403	10	1,413
Profit for the year	–	–	–	–	301	301	−1	299
Other comprehensive income								
Cash flow hedges, net of tax	–	–	3	–	–	3	–	3
Measurement at fair value, net of tax	–	–	0	–	–	0	–	0
Currency translation on subsidiary net investments	–	1	–	–	–	1	0	1
Defined benefit plan actuarial gains and losses, net of tax	–	–	–	–	−2	−2	–	−2
Discontinued operation	–	151	0	−155	3	–	–	–
Total comprehensive income	–	152	3	−155	302	302	−1	301
Dividends	–	–	–	–	−180	−180	0	−180
Share-based payments, net of tax	–	–	5	–	0	5	–	5
Other items	–	–	−12	–	12	0	0	0
Changes in non-controlling interests	–	–	–	–	−7	−7	−7	−13
Dec 31, 2019	141	52	298	−155	1,187	1,523	3	1,526

[1] The adoption of IFRIC 23 had a EUR 3 million negative impact on the retained earnings.

Consolidated Statement of Cash Flows, IFRS

EUR million	Note	2019	2018
Operating activities			
Profit for the year from continuing operations		69	65
Profit for the year from discontinued operations		230	164
Adjustments			
Depreciation and amortization	3.3	82	58
Gain / loss on sale of intangible and tangible assets, net	1.4, 1.5	0	–2
Share of profits and losses of associated companies	5.3	–1	0
Financial expenses, net	1.7	38	30
Income taxes	1.8	95	92
Other non-cash items		–2	2
Change in net working capital		–254	–129
Net cash flow from operating activities before financial items and taxes		258	281
Interest paid		–31	–20
Interest received		1	5
Other financial items, net		–1	–2
Income taxes paid	1.8	–137	–87
Net cash flow from operating activities		91	177
Investing activities			
Capital expenditures on intangible and tangible assets	3.1, 3.2	–107	–67
Proceeds from sale of intangible and tangible assets	3.1, 3.2	8	5
Business acquisitions, net of cash acquired	5.4	–214	–77
Proceeds from sale of business, net of cash sold	5.4	9	–
Investments in associated companies		–3	–4
Net cash flow from investing activities		–308	–143

EUR million	Note	2019	2018
Financing activities			
Dividends paid		–180	–157
Transactions with non-controlling interests		–13	1
Increase in loan receivables	4.6	0	0
Decrease in loan receivables	4.6	31	–
Proceeds from / repayments of short-term debt, net	4.6	–78	14
Proceeds from issuance of long-term debt	4.6	450	–
Repayments of long-term debt	4.6	–175	–286
Repayments of lease liabilities	4.6	–34	0
Other items		–	0
Net cash flow from financing activities		2	–428
Net change in liquid funds		–215	–394
Effect from changes in exchange rates		2	–6
Liquid funds at beginning of year	4.3, 4.6	426	826
Liquid funds at end of year	4.3, 4.6	213	426
Liquid funds at end of year, continuing operations		57	–
Liquid funds at end of year, discontinued operations		156	–

Appendix: Analysis of discontinued operations

Basis of preparation

Based on the decision taken by Metso's Extraordinary General Meeting on October 29, 2019, to approve the partial demerger of the company, Metso has applied IFRS 5 and classified and disclosed its businesses of Minerals segment as discontinued operations from the beginning of November 2019. Thus, depreciations and amortizations of discontinued operations have been calculated only for the period January–October 2019. Accordingly, Flow Control businesses form the continuing operations of Metso Group.

In order to improve comparability, Metso has prepared, in addition to IFRS, financial information for the Group so that the amortization of the Minerals business has been recorded for the full year 2019. This is consistent with segment reporting and is comparable with the 2018 Metso Group figures. Assets and liabilities of discontinued operations are held for distribution purposes to shareholders and are current assets and liabilities for the continuing operations of the Metso Group. The notes present these items as current and non-current assets according to the original classification, emphasizing the Metso Minerals perspective.

The following analyzes of the Group's income statement, balance sheet and cash flow statement are presented below.

Analysis of Consolidated Income Statement

	2019				2018		
EUR million	Continuing operations	Discontinued operations[1]	Metso total[1]	Metso comparable[2]	Continuing operations	Discontinued operations	Metso total
Sales	660	2,976	3,635	3,635	593	2,580	3,173
Cost of goods sold	–435	–2,109	–2,544	–2,551	–391	–1,867	–2,257
Gross profit	225	867	1,091	1,084	202	714	916
Selling, general and administrative expenses	–128	–502	–631	–637	–116	–430	–545
Other operating income and expenses, net	–4	–25	–29	–29	–3	–16	–19
Share in profits of associated companies	0	0	1	1	0	0	0
Operating profit	93	340	432	418	83	268	351
Financial income	1	4	4	4	1	4	5
Foreign exchange gains/losses	0	1	2	2	0	0	1
Financial expenses	–2	–42	–44	–44	0	–36	–36
Net financial income and expenses	–2	–37	–38	–38	1	–31	–30
Profit before taxes	91	303	394	380	85	236	321
Income taxes	–22	–72	–95	–91	–20	–72	–92
Profit for the year	69	230	299	289	65	164	229
Attributable to							
Shareholders of the parent company	69	232	301	291	65	165	230
Non-controlling interests	0	–1	–1	–1	0	–1	–1
Earnings per share							
Basic, EUR	0.46	1.54	2.00	1.94	0.43	1.10	1.53
Diluted, EUR	0.46	1.54	2.00	1.94	0.43	1.10	1.53

[1] Amortization and depreciation of discontinued operations for year 2019 is calculated over a 10-month period, and totaling EUR 57 million. Thus, the total amortization and depreciation for year 2019 amounted to EUR 82 million.
[2] Metso 2019 comparable figures are fully comparable with the 2018 total figures. In adjusted figures, the amortization and depreciation is calculated over a 12-month period (total EUR 96 million).

Analysis of Consolidated Balance Sheet, assets

EUR million	2019 Continuing operations	2019 Discontinued operations[1]	2019 Metso total[1]	2019 Metso comparable[2]	2018 Metso total
Non-current assets					
Intangible assets					
Goodwill	62	556	618	618	525
Other intangible assets	18	171	189	185	83
Total intangible assets	81	727	807	804	608
Tangible assets					
Land and water areas	6	43	50	50	40
Buildings and structures	21	100	120	119	97
Machinery and equipment	28	132	161	156	135
Assets under construction	11	46	57	57	33
Total tangible assets	67	321	388	382	305
Right-of-use assets	46	93	140	135	0
Other non-current assets					
Investments in associated companies	0	8	8	8	4
Non-current financial assets	0	3	3	3	3
Loan and other interest bearing receivables	–	6	6	6	6
Derivative financial instruments	–	2	2	2	3
Deferred tax asset	13	108	121	121	101
Other non-current receivables	1	42	43	43	38
Total other non-current assets	14	169	183	183	157
Total non-current assets	208	1,310	1,517	1,504	1,070
Current assets					
Inventories	181	975	1,156	1,156	950
Trade receivables	95	577	672	672	585
Customer contract assets	–	87	87	87	82
Interest bearing receivables	–	1	1	1	1
Derivative financial instruments	0	16	16	16	10
Income tax receivables	2	44	46	46	22
Other current receivables	40	139	178	178	134
Deposits and securities, maturity more than three months	–	–	–	–	94
Cash and cash equivalents	57	156	213	213	332
Liquid funds	57	156	213	213	426
Total current assets	374	1,995	2,369	2,369	2,209
Discontinued operations, assets	3,305	3,305			
TOTAL ASSETS	3,887		3,887	3,873	3,279

Analysis of Consolidated Balance Sheet, equity and liabilities

EUR million	2019 Continuing operations	2019 Discontinued operations[1]	2019 Metso total[1]	2019 Metso comparable[2]	2018 Metso total
Equity					
Share capital	141	–	141	141	141
Cumulative translation adjustments	52	–	–101	–100	–101
Fair value and other reserves	298	–	295	297	302
Discontinued operations	–155	–	1	–	–
Retained earnings	1,187	–	1,187	1,174	1,064
Equity attributable to shareholders	1,523	–	1,523	1,513	1,406
Non-controlling interests	3	–	3	3	10
Total equity	1,526	–	1,526	1,516	1,416
Liabilities					
Non-current liabilities					
Interest bearing liabilities	36	801	837	837	383
Lease liabilities	37	69	106	106	0
Post-employment benefit obligations	9	61	69	69	68
Provisions	3	33	35	35	29
Derivative financial instruments	–	2	2	2	2
Deferred tax liability	4	66	70	70	30
Other non-current liabilities	0	2	2	2	2
Total non-current liabilities	89	1,034	1,123	1,123	515
Current liabilities					
Interest bearing liabilities	20	24	43	43	215
Lease liabilities	10	21	31	31	0
Trade payables	63	385	448	448	431
Provisions	12	71	83	83	71
Advances received	24	189	212	212	208
Customer contract liabilities	–	63	63	63	100
Derivative financial instruments	1	13	13	13	14
Income tax liabilities	2	51	54	50	61
Other current liabilities	39	251	291	291	248
Total current liabilities	171	1,068	1,239	1,235	1,348
Total liabilities	259	2,102	2,361	2,357	1,863
Discontinued operations, liabilities	2,102	2,102			
TOTAL EQUITY AND LIABILITIES	3,887		3,887	3,873	3,279

[1] Amortization and depreciation of discontinued operations for year 2019 is calculated over a 10-month period, and totaling EUR 57 million. Thus, the total amortization and depreciation for year 2019 amounted to EUR 82 million.
[2] Metso 2019 comparable figures are fully comparable with the 2018 total figures. In adjusted figures, the amortization and depreciation is calculated over a 12-month period (total EUR 96 million).

Analysis of Consolidated Statement of Cash Flows

EUR million	2019 Continuing operations	2019 Discontinued operations [1]	2019 Metso total [1]	2019 Metso comparable[2]	2018 Continuing operations	2018 Discontinued operations	2018 Metso total
Operating activities							
Profit for the year	69	230	299	289	65	164	229
Adjustments							
Depreciation and amortization	25	57	82	96	12	46	58
Financial expenses, net	2	37	38	38	–1	32	30
Income taxes	22	72	95	91	20	72	92
Other items	5	–7	–2	–2	4	–3	2
Change in net working capital	–30	–224	–254	–254	–19	–111	–129
Net cash flow from operating activities before financial items and taxes	92	166	258	258	81	201	281
Financial income and expenses, net	0	–30	–30	–30	2	–20	–17
Income taxes paid	–38	–100	–137	–137	–2	–85	–87
Net cash flow from operating activities	54	36	91	91	81	96	177
Investing activities							
Capital expenditures on intangible and tangible assets	–20	–87	–107	–107	–8	–59	–67
Proceeds from sale of intangible and tangible assets	0	8	8	8	0	4	5
Business acquisitions, net of cash acquired	–	–214	–214	–214	–	–77	–77
Acquisitions/disposals, Metso group	–50	50	0	0	–	–	–
Business disposals, net of cash acquired	–	9	9	9	–	–	–
Investments in associated companies	–	–3	–3	–3	–	–4	–4
Other items	–	–	–	–	0	0	0
Net cash flow from investing activities	–70	–238	–308	–308	–8	–135	–143
Financing activities							
Dividends paid	–36	–144	–180	–180	–31	–126	–157
Transactions with non-controlling interests	–	–13	–13	–13	–	1	1
Net change in loan receivables	–	31	31	31	0	–	0
Proceeds from / repayments of short-term debt, net	13	–91	–78	–78	–1	15	14
Proceeds from/ repayments of long-term debt, net	36	239	275	275	–3	–283	–286
Net borrowing / payment, Metso Group	–34	34	0	0	–67	67	0
Repayments of lease liabilities	–10	–24	–34	–34	0	0	0
Net cash flow from financing activities	–31	33	2	2	–98	–330	–428
Net change in liquid funds	–46	–169	–215	–215	–24	–370	–394
Effect from changes in exchange rates	2	0	2	2	0	–6	–6
Liquid funds at beginning of year	101	325	426	426	–	–	826
Liquid funds at end of year	57	156	213	213	–	–	426

[1] Amortization and depreciation of discontinued operations for year 2019 is calculated over a 10-month period, and totaling EUR 57 million. Thus, the total amortization and depreciation for year 2019 amounted to EUR 82 million.
[2] Metso 2019 comparable figures are fully comparable with the 2018 total figures. In adjusted figures, the amortization and depreciation is calculated over a 12-month period (total EUR 96 million).

Notes to the Consolidated Financial Statements

Basic information

Metso Corporation (the "Parent Company") with its subsidiaries ("Metso" or the "Group") is a leading global supplier of sustainable technology and services for mining, aggregates, recycling and process industries. The Group has two reporting segments, Flow Control and Minerals. More information about the segments is presented in note 1.1.

Metso Corporation is a publicly quoted company with its shares listed on Nasdaq Helsinki under the trading symbol METSO. Metso Corporation is domiciled in Finland and the address of the Group Head Office is Töölönlahdenkatu 2, 00100 Helsinki, Finland.

These consolidated financial statements were authorized for issue by Metso Corporation's Board of Directors on February 5, 2020, after which, in accordance with Finnish Companies Act, the financial statements are either approved, amended or rejected at the next Annual General Meeting.

Basis of preparation

The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS) and IFRIC Interpretations as adopted by the European Union. The consolidated financial statements have been prepared on a historical cost basis, except for financial assets and liabilities classified as at fair value through profit and loss accounts.

Based on the decision taken by Metso's Extraordinary General Meeting on October 29, 2019, to approve the partial demerger of the company, Metso has applied IFRS 5 and classified and disclosed its businesses of Minerals segment as discontinued operations from the beginning of November 2019. Thus, depreciations and amortizations of discontinued operations have been calculated only for the period January–October 2019. Accordingly, Flow Control businesses form the continuing operations of Metso Group. The profit shown for Minerals in the income statement is disclosed in the line *Profit for the year, discontinued items* and assets and liabilities related to Minerals are disclosed under *Discontinued assets or liabilities*.

In order to improve comparability, Metso has prepared, in addition to IFRS, financial information for the Group so that the amortization of the Minerals business has been recorded for the full year 2019. This is consistent with segment reporting and is comparable with the 2018 Metso Group figures. The assets and liabilities of discontinued operations are held for distribution purposes to shareholders and are current assets and liabilities for the continuing operations of the Metso Group. The notes present these items as current and non-current assets according to the original classification, emphasizing the Metso Minerals perspective. See *Appendix: Analysis of discontinued operations* for analyzes of the Group's income statement, balance sheet and cash flow statement.

The financial statements are presented in euros, which is the Parent Company's functional currency and Metso's presentation currency. The figures presented have been rounded; consequently, the sum of individual figures might differ from the presented total figure.

Metso's more detailed accounting policies are disclosed in the relevant note to the consolidated financial statements.

Critical accounting estimates and judgments by Management

The preparation of financial statements, in conformity with the IFRS, requires management to make estimates and assumptions and to exercise its judgment in the process of applying the Group's accounting policies. These affect the reported amounts of balance sheet items, the presentation of contingent assets and liabilities, and the income and expenses for the financial year. Actual results may differ from the estimates made. The assets and liabilities involving a higher degree of judgment or complexity, or areas where the assumptions and estimates are significant to Metso's consolidated financial statements, are disclosed in the following notes:

Note 1.2	Sales	Note 2.6	Provisions
Note 1.6	Share-based payments	Note 2.7	Post-employment obligations
Note 1.8	Income taxes	Note 3.1	Goodwill and other intangible assets
Note 2.2	Trade receivables	Note 3.2	Tangible assets
Note 2.3	Other receivables	Note 3.4	Right-of-use assets
Note 2.4	Inventory		

Abbreviations used in the Financial Statements

AGM	Annual general meeting
EGM	Extraordinary general meeting
CGU	Cash generating unit
EBIT	Earnings before financial expenses, net and taxes
EBITA	Earnings before financial expenses net, taxes and amortization
EBITDA	Earnings before financial expenses net, taxes, amortization and depreciation
EMTN	Euro Medium Term Note program
EPS	Earnings per share
FAS	Finnish accounting standards
HSE	Health, safety and environment
IFRIC	Interpretations of International financial reporting standards
IFRS/IAS	International financial reporting standards
KPI	Key performance indicator
LTIF	Lost time incident frequency
NWC	Net working capital
OCI	Other comprehensive income
OTC	Over the counter
P/E	Price/earnings ratio
PSP	Performance share incentive plan
R&D	Research and development
ROCE	Return on capital employed
ROE	Return on equity
RSP	Restricted share incentive plan
TSR	Total shareholder return
WACC	Weighted average cost of capital

1 Group performance

1.1 Reporting segments

Accounting policy

Metso's reportable segments are based on the type of business operations. Segments are reported in a manner consistent with the internal reporting provided to the Board of Directors, which is Metso's chief operating decision-maker and responsible for allocating resources and assessing the performance of the operating segments, deciding on strategy, selecting key employees, as well as deciding on major development projects, business acquisitions, investments, organizational structure and financing. The accounting principles applied to the segment reporting are the same as those used in preparing the consolidated financial statements.

Segment performance is measured with *operating profit/loss (EBIT)*. In addition, Metso uses alternative performance measures to reflect the underlying business performance and to improve comparability between financial periods: *Earnings before interest, tax and amortization (EBITA), adjusted* and *return on operative capital employed for reporting segments (segment ROCE)*. Adjustment items comprise capacity adjustment costs, outcome of material intellectual property rights disputes, gains and losses on business disposals, and other infrequent events. Their nature and net effect on cost of goods sold, selling, general and administrative expenses, as well as other income and expenses are presented in the segment information. Alternative performance measures, however, should not be considered as a substitute for measures of performance in accordance with the IFRS.

Corporate structure

Metso Group is a global supplier of sustainable technology and services for mining, aggregates, recycling and process industries.

Metso reports its results consistently with its reporting structure based on its strategy, which consists of two reportable segments: Flow Control and Minerals. The Flow Control segment covers the valves business. The Minerals segment covers the mining, aggregates and recycling businesses.

The segment information relating to 2018 in this Interim review has been restated to reflect a change in the reporting structure whereby Metso moved its Pumps business area from the Flow Control segment under the Minerals segment.

Metso reported its results until October 29, 2019 in accordance with its consistent reporting structure. The reporting structure consisted of two segments: Flow Control and Minerals. On 29 October 2019, the Extraordinary General Meeting approved the Board's proposal to divest Metso Minerals business from the entire Metso and to merge it with the Outotec Group.

Based on the decision taken by Metso's Extraordinary General Meeting on October 29, 2019 Minerals segment has been classified and disclosed as discontinued operations from the beginning of November 2019. Thus, depreciations and amortizations of discontinued operations have been calculated only for the period January-October 2019. Accordingly, Flow Control businesses form the continuing operations of Metso Group.

The Flow Control segment supplies process industry flow control solutions and services. Flow Control customers operate in oil and gas, pulp and paper, and other process industries. The segment is organized into one business area: Valves.

The Minerals segment supplies technology, process solutions, machinery and services for aggregates production, mining, minerals processing, and metal and waste recycling. The Minerals segment is organized into six business areas: Mining Equipment, Aggregates Equipment, Minerals Services, Minerals Consumables, Recycling and Pumps.

Group Head Office and other is comprised of the parent company with centralized group functions, such as treasury and tax, as well as shared service centers and holding companies.

Financial income and expenses as well as income taxes are not allocated to segments but included in the income statement of Group Head Office and other. The treasury activities of Metso are centralized into the Group Treasury to benefit from cost efficiency obtained from pooling arrangements, financial risk management, bargaining power, cash management, and other measures. Metso has a centralized Group tax management function. The objective of Group tax management is to ensure tax compliance and optimized and predictable overall tax cost for Metso.

Segment assets comprise intangible and tangible assets, investments in associated companies and joint ventures, inventories and non-interest bearing operating assets and receivables. They exclude interest bearing assets, cash and cash equivalents, income tax receivables and deferred tax assets, which are included in the assets of Group Head Office and other.

Segment liabilities comprise non-interest bearing operating liabilities. They exclude income tax liabilities, deferred tax liabilities and interest bearing liabilities, which are included in the liabilities of Group Head Office and other.

Non-cash write-downs include write-offs made to the value of receivables and inventories, and impairment and other write-offs recognized to reduce the value of intangible or tangible assets and other assets.

Gross capital expenditure comprises investments in intangible and tangible assets, associated companies and joint ventures.

Intra-group transactions are made at arm's length basis.

Segment information for the year 2019

2019 EUR million	Flow Control segment	Group Head office and other	Continuing operations total	Minerals segment [1]	Group Head office and other	Amortization and depreciation	Discontinued operations total
External sales	660	–	660	2,976	–	–	2,976
Intra-group sales	1	–1	–	0	0	–	–
Sales	660	–1	660	2,976	0	–	2,976
Earnings before interest, tax and amortization (EBITA)	104.2	–7.8	96.5	359.2	–17.6	10.3	351.9
% of sales	15.8	n/a	14.6	12.1	n/a	n/a	11.8
Adjusted EBITA	104.2	–7.8	96.5	380.7	–3.2	10.3	387.8
% of sales	15.8	n/a	14.6	12.8	n/a	n/a	13.0
Operating profit (EBIT)	100.4	–7.8	92.6	349.9	–24.3	13.9	339.5
% of sales	15.2	n/a	14.0	11.8	n/a	n/a	11.4
Adjustment items	–	–	–	–21.5	–14.4	–	–35.9
Amortization of intangible assets	–4	0	–4	–9	–7	4	–12
Depreciation of tangible assets	–10	0	–10	–32	0	6	–26
Depreciation of right-of-use assets	–11	0	–11	–22	–1	5	–18
Non-cash write-downs [2]	–5	0	–5	6	–	–	6
Gross capital expenditure and business acquisitions	20	0	20	341	1	–	342
Adjustment items and amortization of intangible assets							
Adjusted EBITA	104.2	–7.8	96.5	380.7	–3.2	10.3	387.8
Capacity adjustment costs	–	–	–	–15.2	–	–	–15.2
Acquisition cost	–	–	–	–4.4	–	–	–4.4
Loss on disposal	–	–	–	–1.9	–	–	–1.9
Metso Outotec transaction costs	–	–	–	–	–14.4	–	–14.4
Adjustment items, total	–	–	–	–21.5	–14.4	–	–35.9
Amortization of intangible assets	–3.8	–0.0	–3.8	–9.3	–6.7	3.6	–12.4
Operating profit (EBIT)	100.4	–7.8	92.6	349.9	–24.3	14.0	339.5

[1] The depreciation for Minerals segment is calculated over a 12 month period.
[2] Write-downs including reversals of intangible and tangible assets, inventories and trade receivables.

2019 EUR million	Flow Control segment	Group Head office and other	Continuing operations total	Minerals segment	Group Head office and other	Amortization and depreciation	Discontinued operations total
Non-current non-interest bearing assets	193	1	194	1,124	13	14	1,152
Current non-interest bearing assets	314	2	317	1,782	56	–	1,838
Interest bearing receivables	–	0	0	–	6	–	6
Tax receivables and deferred tax assets	–	15	15	–	152	–	152
Liquid funds	–	57	57	–	156	–	156
Total assets	507	75	582	2,907	384	14	3,305
Non-interest bearing liabilities	143	8	150	1,003	67	–	1,070
Tax payables and deferred tax liability	–	7	7	–	113	4	117
Interest bearing debt	–	46	46	–	822	–	822
Total liabilities	143	60	203	1,003	1,002	4	2,009
Operative capital employed / capital employed	364	61	425	1,904	204	10	2,118
Segment ROCE % / ROCE %	28.8	n/a	n/a	22.6	n/a	n/a	n/a
Orders received	681	–	681	3,009	–	–	3,009
Order backlog	280	–	280	1,408	–	–	1,408

Segment information for the year 2018

2018 EUR million	Flow Control segment	Group Head office and other	Continuing operations total	Minerals segment	Group Head office and other	Discontinued operations total
External sales	593	–	593	2,581	–	2,581
Intra-group sales	0	0	–	0	0	–
Sales	593	0	593	2,581	0	2,581
Earnings before interest, tax and amortization (EBITA)	90.3	–4.7	85.6	291.0	–7.4	283.6
% of sales	15.2	n/a	14.5	11.3	n/a	11.0
Adjusted EBITA	90.3	–4.7	85.6	291.0	–7.4	283.6
% of sales	15.2	n/a	14.5	11.3	n/a	11.0
Operating profit (EBIT)	88.0	–4.7	83.3	283.2	–15.4	267.8
% of sales	14.8	n/a	14.1	11.0	n/a	10.4
Adjustment items	–	–	–	–	–	–
Amortization of intangible assets	–2	0	–2	–8	–8	–16
Depreciation of tangible assets	–10	0	–10	30	0	30
Depreciation of right-of-use assets	–	–	–	–	–	–
Non-cash write-downs[1]	–3	0	–3	6	0	5
Gross capital expenditure and business acquisitions	8	0	9	86	2	88
Adjustment items and amortization of intangible assets						
Adjusted EBITA	90.3	–4.7	85.6	291.0	–7.4	283.6
Amortization of intangible assets	–2.3	0.0	–2.4	–7.8	–8.0	–15.8
Operating profit (EBIT)	88.0	–4.7	83.3	283.2	–15.4	267.8

[1] Write-downs including reversals of intangible and tangible assets, inventories and trade receivables.

2018 EUR million	Flow Control segment	Minerals segment	Group Head office and other	Metso total
Non-current non-interest bearing assets	141	765	14	920
Current non-interest bearing assets	283	1,480	39	1,802
Interest bearing receivables	–	–	7	7
Tax receivables and deferred tax assets	–	–	124	124
Liquid funds	–	–	426	426
Total assets	424	2,245	609	3,279
Non-interest bearing liabilities	131	975	69	1,173
Tax payables and deferred tax liability	–	–	91	91
Interest bearing debt	–	–	599	599
Total liabilities	131	975	758	1,863
Operative capital employed / capital employed	293	1,272	449	2,015
Segment ROCE % / ROCE %	37.1	23.7	n/a	16.9
Orders received	628	2,872	–	3,499
Order backlog	276	1,411	–	1,686

Geographical information

Accounting policy

Metso presents the geographical segments' sales by location of customers. Non-current assets and gross capital expenditure are presented by location of assets.

Metso's businesses are present in over 50 countries providing strong diversification. The main market areas are Europe and North America accounting for approximately 47 percent of sales. Metso has production units on all inhabited continents.

Sales to unaffiliated customers by destination

	2019			2018		
EUR million	Continuing operations	Discontinued operations	Metso total	Continuing operations	Discontinued operations	Metso total
Finland	31	66	97	32	61	94
Other European countries	138	717	855	136	617	753
North America	236	507	743	206	403	610
South and Central America	38	669	706	32	567	599
Asia-Pacific	179	795	974	143	696	839
Africa and Middle East	38	223	260	43	236	279
Total	660	2,976	3,635	593	2,580	3,173

Metso's exports from Finland by destination, including intra-group sales

	2019			2018		
EUR million	Continuing operations	Discontinued operations	Metso total	Continuing operations	Discontinued operations	Metso total
European countries	103	212	315	116	166	282
North America	7	78	85	6	83	89
South and Central America	12	31	43	10	23	33
Asia-Pacific	104	110	215	99	108	206
Africa and Middle East	20	32	52	18	33	51
Total	246	464	710	248	413	661

Non-current assets by location

EUR million	2019 Continuing operations	2019 Discontinued operations	2019 Metso total	2018 Metso total
Finland	63	79	143	106
Other European countries	14	111	125	94
North America	36	99	134	78
South and Central America	2	74	75	55
Asia-Pacific	32	150	182	125
Africa and Middle East	3	8	11	24
Non-allocated	46	672	718	477
Total	195	1,193	1,388	959

Non-current assets presented in the table above comprise intangible and tangible assets, right-of-use assets, investments in associated companies and joint ventures, equity investments and other non-interest bearing non-current assets. Non-allocated assets include mainly goodwill and other assets arising from business acquisitions that have not been pushed down to the subsidiaries' books.

Gross capital expenditure by location

EUR million	2019 Continuing operations	2019 Discontinued operations	2019 Metso total	2018 Metso total
Finland	7	10	17	9
Other European countries	1	14	15	11
North America	2	9	11	4
South and Central America	0	17	18	10
Asia-Pacific	9	37	46	28
Africa and Middle East	0	2	2	4
Total	20	89	110	67

Gross capital expenditure comprises investments in intangible and tangible assets, associated companies and joint ventures. Right-of-use assets are not included in gross capital expenditure calculation.

1.2 Sales

Accounting policy

Metso applies IFRS 15 Revenue form Contracts with Customers standard. The principle is that sales are recognized at an amount that reflects the consideration to which Metso expects to receive in exchange for transferring goods or services to a customer. Sales are recognized, when the control of goods or services is transferred to a customer. The control is transferred either at a point in time or over time.

Metso providing standardized equipment and wear or spare parts to customers, sales are recognized at a point in time, when control for the goods is transferred, typically at the delivery of the goods or after commissioning. Sales to the distributors are recognized at the delivery, when the distributor is not acting as an agent. If the distributor is acting as an agent, sales are recognized only when delivered to ultimate client.

Metso providing customized engineered system deliveries, where the asset produced does not have alternative use and Metso has enforceable right to payment for the performance completed, sales are recognized over time. Sales recognition is based on estimated sales, costs and profit. Metso measures the progress using the cost-to-cost method, where sales and profits are recorded after considering the ratio of accumulated costs to estimated total costs to complete each contract. This method is considered to reflect best the satisfaction of the performance obligation. The estimated sales, costs and profit, together with the planned delivery schedule of the contract are subject to regular revisions as the contract progresses to the completion. Revisions in profit estimates as well as projected potential loss on contract are charged through the profit and loss account in the period in which they become known.

Sales from providing services are recognized when the performance obligation is satisfied. For long-term fixed price service contracts, sales are recognized over time, because the customer receives the performance obligation simultaneously when the service is rendered. The measure of the progress is based on costs of actual services provided as a proportion of the costs of total services to be rendered. The estimated sales, costs and profit, together with the planned delivery schedule of the contract are subject to regular revisions as the contract progresses to the completion. Revisions in contract estimates as well as projected potential loss on contract are charged through the profit and loss account in the period in which they become known.

For short-term service contracts with hourly fee based on valid price list, sales are recognized to the extent Metso has the right to invoice the customer, and for service contracts with fixed hourly fee agreed in the contract, sales are recognized based on invoicing.

Client contracts may include promises such as volume-based rebates, late delivery penalties or right to return delivered parts. The impact of these promises on the final consideration will be estimated, when recognition is started and systematically during the contract period. Sales will be recognized to the extent that Metso is entitled to the consideration. Also, creditworthiness of the client and collectability of the consideration is assessed through the contract period. Extended warranties are treated as a separate performance obligation and appropriate transaction price is allocated to them and recognized in sales when occurred.

Metso typically requires advance payments from clients. Applying IFRS 15, advances received do not include a financing component, because the payment schedule of them follows closely the timing of performance obligations to be satisfied.

Estimates and assessments by Management

Sales recognized at a point in time may require judgement on facts and circumstances when the control is considered to have passed to the client, affecting on timing of sales to be recognized. Transfer of the control is assessed mainly based on terms of delivery in the contract and local legislation. Customer contracts including clauses on rebates, late delivery penalties, right to return promises or extended warranties requires management judgement on the probability of such clauses to have an effect on contracts sales. Judgements are based on earlier experience and market practice, when it is available.

Sales recognized over time is based on cost-to-cost method, which requires management to be able to estimate total sales, costs, margin and cash flow to complete the project. To assess the progress and margin to be recognized as well as the total costs estimated to complete the contracts requires judgments by management throughout the contract period. The most critical judgments are needed in case of a loss-making contract to estimate the performance needed to be able to satisfy the contract. Changes in general market conditions and the possible act to contracts need to be predicted as well. The credit worthiness of the customer is verified, and collectability of the consideration assessed before entering into a contract. However, a risk of non-payment might arise afterwards, and it requires then management judgement on the impact on final sales recognition.

Hedging of foreign currency denominated firm commitments

Under Metso hedging policy, business units are required to hedge their foreign currency risk when they become engaged in a firm commitment denominated in a currency other than their functional currency. When a firm commitment qualifies for over time recognition, the business unit applies hedge accounting and recognizes the effect of the hedging instruments in other comprehensive income (OCI) until the commitment is recognized. Though Metso has defined the characteristics triggering a firm commitment, the final realization of the unrecognized commitment depends also on factors beyond management control, which cannot be foreseen when initiating the hedging relationship. Such factors can be a change in the market environment causing the other party to postpone or cancel the commitment. To the extent possible, management strives to include clauses in its contracts that reduce the impact of such adverse events on its results.

Disaggregation of sales

Sales by segments

EUR million	2019	2018
Flow Control	660	593
Group Head Office and other	–1	0
Continuing operations total	660	593
Minerals	2,976	2,581
Other	0	0
Discontinued operations total	2,976	2,581

External sales by category

EUR million	2019	2018
Flow Control		
Sales of services	152	128
Sales of projects, equipment and goods	508	465
Flow Control total	660	593
Minerals		
Sales of services	1,815	1,644
Sales of projects, equipment and goods	1,161	937
Minerals total	2,976	2,581

External sales by timing of sales recognition

EUR million	2019	2018
Flow Control		
At a point in time	660	593
Over time	0	0
Flow Control total	660	593
Minerals		
At a point in time	2,485	2,220
Over time	491	360
Minerals total	2,976	2,581

External sales by destination

EUR million	2019 Continuing operations	2019 Discontinued operations	2019 Metso total	2018 Continuing operations	2018 Discontinued operations	2018 Metso total
Finland	31	66	97	32	61	94
Other European countries	138	717	855	136	617	753
North America	236	507	743	207	403	610
South and Central America	38	669	706	31	567	599
Asia-Pacific	179	795	974	143	696	839
Africa and Middle East	38	223	260	43	236	279
Total	660	2,976	3,635	593	2,581	3,173

Contract balances

EUR million	2019 Continuing operations	2019 Discontinued operations	2019 Metso total	2018 Metso total
Trade receivables	95	577	672	585
Customer contract assets	–	87	87	82
Customer contract liabilities	–	63	63	100
Advances received	24	189	212	208

Customer contract liabilities and advances received are annually recognized as sales mainly during the following year. When providing standardized equipment, valves and pumps and wear or spare parts, invoicing takes place in general at the delivery or after commissioning. In engineered system delivery and long-term service contracts invoicing is based on the client contracts. Short-term service contracts are invoiced when service is rendered.

Trade receivables are based on the invoicing to customers and are generally on terms of 30–90 days. The acquisitions in 2019 resulted in increase in trade receivables of EUR 15 million (EUR 10 million in 2018), see note 5.4. Information about provision for expected credit losses on trade receivables is presented in note 2.2.

Engineered system delivery contracts and long-term service contracts are mainly fixed priced contracts, where customers are invoiced with fixed amounts based on contracts' schedule. In case, the performance obligation satisfied exceeds the invoiced payment from the customer, a contracts asset is recognized. In case, the invoiced payment from the customer exceeds the performance obligation satisfied, a contract liability is recognized. Advances received is the amount paid in advance to Metso by customers. Typically, Metso receives advance payments in the customized large scale engineered system and equipment delivery projects.

Change in receivables from customers or liabilities to customers and advances received is the result of changes in business volume operations in 2019 compared to the previous year.

Unsatisfied performance obligations

Unsatisfied performance obligations relate to customized engineered system projects and long-term service contracts amounting to EUR 267 million. These performance obligations are expected to be materially satisfied in two years.

Performance obligations

Metso's sales consist of the sale of standardized equipment deliveries and services with wear or spare parts as well as customized large scale engineered system and/or equipment deliveries in Minerals segment and sale of process industry flow control solutions with delivery of pumps and valves and services to delivered equipment in Flow Control segment. Metso's performance obligations are as follows:

Equipment and wear or spare parts deliveries

Metso providing standardized equipment and wear or spare parts to customers, revenue will be recognized at a point in time, when control for the goods is transferred, typically at the delivery of the goods or after commissioning. These contracts may include promises such as volume-based rebates, late delivery penalties or right to return delivered parts. The impact of these promises on the final consideration will be estimated and sales will be recognized to the extent that Metso is entitled to. Extended warranties are treated as a separate performance obligation and appropriate transaction price is allocated to them and recognized in sales when occurred.

Metso cooperates with distributors specially in aggregates, valves and recycling businesses. Based on the current distributor contracts, Metso recognizes sales at the delivery to a distributor. Promises on volume-based rebates and right to return of the goods are assessed and sales will be recognized to the extent Metso is entitled to.

Engineered system and equipment deliveries

With customized large scale engineered system and equipment deliveries, where assets produced do not have alternative use for another client and Metso has the right to payment for the performance completed, revenue will be recognized over time. Each large scale engineered system and equipment delivery contract is assessed separately. These contracts usually have a customer specific, one total performance obligation agreed with the client.

These contracts may include promises such as late delivery penalties, performance guarantees and extended warranties. The impact of these promises on the final consideration will be estimated and sales will be recognized to the extent that Metso is entitled to. Metso typically requires advance payments from clients, which in general, do not include a financing component, because the payment schedule of advances follows closely the timing of performance obligations to be satisfied.

Service contracts

Sales from providing services are recognized when the services are rendered. For long-term fixed price contracts, sales are recognized over time. The measure of the progress is based on costs of actual services provided as a proportion of the costs of total services to be rendered. For short-term service contracts with hourly fee based on valid price list, revenue is recognized to the extend

Metso has right to invoice the customer, and for service contracts with fixed hourly fee agreed in the contract, revenue is recognized based on invoicing. Typical promises in service contacts are late delivery penalties, performance guarantees or right to return promises, the impact of these promises are assessed, and sales recognized to the extent Metso is entitled to.

Major customers

In 2019 and 2018, Metso did not have a single customer whose sales would have exceeded 10 percent of the consolidated sales.

1.3 Selling, general and administrative expenses

	2019			2018		
EUR million	Continuing operations	Discontinued operations	Metso total	Continuing operations	Discontinued operations	Metso total
Marketing and selling expenses [1]	–76	–256	–332	–67	–215	–282
Research and development expenses, net	–17	–30	–47	–16	–23	–39
Digitalization costs [1]	–2	–10	–13	–2	–9	–12
Administrative expenses [1]	–33	–206	–239	–30	–183	–213
Selling, general and administrative expenses	–128	–502	–631	–116	–430	–545

[1] Digitalization expenses are included in marketing and selling and administrative expenses in the consolidated statement of income.

Accounting policy

Research and development expenses comprise salaries, administration costs, digital investments, depreciation and amortization of tangible and intangible assets, and are mainly recognized as incurred. When material development costs meet certain capitalization criteria under IAS 38, they are capitalized and amortized over the expected useful life of the underlying technology.

Research and development expenses

	2019			2018		
EUR million	Continuing operations	Discontinued operations	Metso total	Continuing operations	Discontinued operations	Metso total
Research and development expenses, total	–21	–41	–62	–18	–32	–50
Capitalized development costs	1	–	1	–	–	–
Capital expenditure	0	1	1	0	–	0
Grants received	1	0	1	0	0	0
Depreciation and amortization	0	0	–1	0	0	–1
Research and development expenses, net	–19	–41	–60	–18	–32	–51

1.4 Other operating income and expenses

Accounting policy

Other operating income and expenses comprise income and expenses that do not directly relate to the operating activity of businesses within Metso or which arise from unrealized and realized changes in fair value of foreign currency denominated financial instruments related to operations, including forward exchange contracts. Such items include costs related to significant restructuring programs, gains and losses on disposal of assets, and foreign exchange gains and losses, excluding those qualifying for hedge accounting and those, which are reported under financial income and expenses, net. Additionally, non-recoverable foreign taxes, which are not based on taxable profits, are reported in other operating income and expenses, net. In particular, these include foreign taxes and such like payments not based on Double Taxation treaties in force.

	2019			2018		
EUR million	Continuing operations	Discontinued operations	Metso total	Continuing operations	Discontinued operations	Metso total
Other operating income						
Gain on sale of intangible and tangible assets	0	0	0	0	2	2
Rental income	0	0	0	0	0	0
Foreign exchange gains [1]	4	55	58	4	62	66
Other income	1	6	7	1	4	5
Other operating income, total	5	61	66	5	68	73
Other operating expenses						
Loss on disposed businesses	–	–2	–2	–	–	–
Loss on sale of intangible and tangible assets	0	0	0	0	0	0
Impairment of intangible and tangible assets	0	–7	–7	0	–1	–1
Foreign exchange losses [1]	–5	–75	–79	–5	–79	–84
Other expenses	–4	–3	–7	–3	–4	–7
Other operating expenses, total	–9	–86	–95	–8	–84	–92
Other operating income and expenses, net	–4	–25	–29	–3	–16	–19

[1] Includes foreign exchange gains and losses resulting from trade receivables and payables and related derivatives.

1.5 Personnel expenses and the number of personnel

Personnel expenses

	2019			2018		
EUR million	Continuing operations	Discontinued operations	Metso total	Continuing operations	Discontinued operations	Metso total
Salaries and wages	–107	–485	–592	–104	–430	–534
Pension costs, defined contribution plans	–11	–27	–38	–8	–27	–34
Pension costs, defined benefit plans [1]	–1	–2	–3	–1	–4	–6
Other post-employment benefits [1]	0	–1	–1	0	–1	–2
Share-based payments [2]	–1	–5	–6	0	–2	–3
Other indirect employee costs	–21	–73	–94	–20	–84	–103
Total	–141	–592	–734	–134	–549	–683

[1] For more information on pension costs, see note 2.7.
[2] For more information on share-based payments, see note 1.6.

Number of personnel at end of year

	2019	2018
Flow Control	2,866	2,723
Group Head Office and other	61	60
Continuing operations total	2,927	2,783
Minerals	12,451	9,942
Other	443	425
Discontinued operations total	12,894	10,367
Metso total	15,821	13,150

Average number of personnel during the year

	2019	2018
Flow Control	2,828	2,444
Group Head Office and other	62	73
Continuing operations total	2,890	2,517
Minerals	11,016	9,678
Other	425	410
Discontinued operations total	11,441	10,087
Metso total	14,331	12,605

Board remuneration

EUR thousand	2019	2018
Serving Board members December 31		
Mikael Lilius	–140	–139
Christer Gardell	–81	–80
Peter Carlsson	–58	–59
Lars Josefsson	–68	–67
Antti Mäkinen	–73	–69
Kari Stadigh[1]	–60	–
Arja Talma	–83	–84
Raimo Brand[2]	–10	–7
Former Board members		
Nina Kopola[3]	–44	–74
Ozey K. Horton, Jr. [4]	–13	–89
Total	–631	–668

[1] Elected to the Board of Directors at April 25, 2019
[2] Has attended meetings as a personnel representative, without voting right.
[3] Resigned from Metso's Board of Directors as of August 1, 2019
[4] Member of the board until April 25, 2019

According to the decision of the 2019 Annual General Meeting, the annual fees paid to the Board members were: Chairman of the Board EUR 120,000, Vice Chairman of the Board EUR 66,000 and other Board members EUR 53,000. An additional annual remuneration is paid to the member of the Board elected in the position of Chairman of the Audit Committee EUR 20,000, members of the Audit Committee EUR 10,000, Chairman of Remuneration and HR Committee EUR 10,000 and members of the Remuneration and HR Committee EUR 5,000.

In addition, an attendance fee of EUR 800 per meeting attended, excluding committee meetings, is paid to members whose residence is in the Nordic countries, EUR 1,600 to members whose residence is elsewhere in Europe and EUR 3,200 for those residing outside Europe. Compensation for travel expenses and daily allowances are paid in accordance with Metso's travel policy.

Based on the decision of the 2019 Annual General Meeting, 40 percent of the Board's annual fees were used to buy Metso shares from the market. The shares were acquired within the two weeks following the publication of the first-quarter 2019 Interim Review.

Remuneration paid to Chief Executive Officer and other Executive Team members

EUR	Salary	Performance bonus paid	Fringe benefits	Share based payment	Total
2019					
President and CEO Pekka Vauramo [1]	719,886	–	32,688	–	752,574
Other Executive Team members	2,201,113	885,588	27,513	641,446	3,755,660
Total	2,920,999	885,588	60,201	641,446	4,508,234
2018					
President and CEO Pekka Vauramo [1]	120,073	–	4,927	–	125,000
Interim President and CEO Eeva Sipilä [2]	382,817	84,240	180	–	467,237
President and CEO Nico Delvaux [3]	66,428	157,500	3,073	–	227,001
Other Executive Team members	2,122,015	422,398	26,838	–	2,571,251
Total	2,691,333	664,138	35,018	–	3,390,489

[1] President and CEO from November 1, 2018.
[2] Interim President and CEO between February 3–October 31, 2018.
[3] President and CEO between August 1, 2017–February 2, 2018.

Remuneration paid to President and CEO Pekka Vauramo in 2019 is presented in the table above. Mr. Vauramo participates in the remuneration programs according to the respective terms and conditions decided by the Board. For more information on share-based payments, see note 7.

According to his executive contract, Pekka Vauramo is eligible to retire at the age of 65, unless otherwise to be agreed by the Company and the President and CEO, and belongs to a supplementary defined contribution pension plan with 25% contribution of annual salary. The notice period for both parties is six months. Severance pay is full monthly salary multiplied by twelve (12) if the agreement is terminated by the company. For year ending December 31, 2019 pension premium payments for supplementary defined contribution pension plan totaled approximately EUR 188 thousands.

Metso has subscribed supplementary pension plans for other Metso Executive Team members for retirement. These pension premium payments totaled approximately EUR 278 thousand in 2019 (EUR 273 thousand in 2018).

Board share ownership in Metso

	Dec 31, 2019
Mikael Lilius	35,781
Christer Gardell	7,864
Peter Carlsson	2,939
Lars Josefsson	4,521
Antti Mäkinen	1,617
Kari Stadigh	10,783
Arja Talma	3,926
Total	67,431

Executive Team share ownership in Metso

	Dec 31, 2019
Pekka Vauramo	10,500
Eeva Sipilä	11,213
Stephan W Kirsch	–
Markku Simula	5,025
Sami Takaluoma	628
Giuseppe Campanelli	–
Kalle Sipilä	–
Uffe Hansen	515
Olli Isotalo	865
Jani Puroranta	–
Total	28,746

1.6 Share-based payments

Accounting policy

Metso has share-based incentive plans for its key personnel.

The equity-settled share awards are valued based on the market price of Metso share as of the grant date and recognized as an employee benefit expense over the vesting period with corresponding entry in other reserves of the equity. The historical development of Metso share and the expected dividends have been taken into account when calculating the fair value. From 2018 the entire share incentive, including the cash-for-taxes portion is recognized in equity. Also, the value of the cash portion is based on the grant date value. As a market condition, total shareholder return of the Performance Share Plans will be taken into account when determining the fair value at grant and it will not be changed during the plan. The fair value of the cost estimate of the Performance Share Plans will only be changed when service condition and non-market conditions are concerned.

At each balance sheet date, Metso revises its estimates on the amount of share-based payments that are expected to vest. The impact of the revision to previous estimate is accrued as an employee benefit expense with corresponding entry to equity. The historical development of Metso share and the expected dividends have been taken into account when calculating the fair value.

Estimates and assessments by Management

At each balance sheet date, the management revises its estimates for the number of shares that are expected to vest. As part of this evaluation, Metso takes into account the changes in the forecasted performance of the Group and its reporting segments, the expected turnover of the personnel benefiting from the incentive plan and other pertinent information impacting the number of shares to be vested.

Performance and Restricted Share Plans

In December 2014, Metso's Board decided on new long-term share-based incentive plans: Performance Share Plan (PSP) and Restricted Share Plan (RSP). The commencement of each new PSP and RSP and the earnings criteria for each new PSP plan will be subject to a separate decision by the Board. The PSP consists of an annually commencing plan, each with a three-year earning period, and the complementary RSP consists of an annually commencing plan, each with a three-year vesting period. The possible rewards are paid partly in Metso's shares and partly in cash.

If the participant's employment or service ends for reasons relating to the participant before the reward payment, no reward will be paid from the long-term incentive plans.

Performance Share Plan 2015–2017

The earning criteria for the PSP 2015–2017 and the potential reward is based on the total shareholder return (TSR) of Metso's share during 2015–2017. In 2018 the earning criteria was not met and there were no payout from the plan.

Performance Share Plan 2016–2018

The earning criteria for the PSP 2016–2018 and the potential reward is based on the total shareholder return (TSR) of Metso's share during 2016–2018. A total of 79.040 treasury shares were used to pay rewards to 80 participants in March 2019.

Performance Share Plan 2017–2019

The earning criteria for the PSP 2017–2019 is based on the total shareholder return of Metso's share during 2017–2019. At the end of 2019, there were 84 participants in the plan and the potential reward corresponds to a maximum of 306,492 Metso shares, out of which the Metso Executive Team can receive a maximum reward of 33,000 shares. The potential reward will be paid in 2020.

Restricted Share Plan 2017–2019

At the end of 2019, there were three participants in the RSP plan, and the potential reward corresponds to a 14,500 Metso shares. The potential reward will be paid in 2020.

Performance Share Plan 2018–2020

The earning criteria for the PSP 2018–2020 is based on the total shareholder return of Metso's share during 2018–2020. At the end of 2019, there were nine participants in the plan and the potential reward corresponds to a maximum of 105,886 Metso shares, out of which the Metso Executive Team can receive a maximum reward of 86,016 shares. The potential reward will be paid in 2021.

Restricted Share Plan 2018–2020

At the end of 2019, there was one participant in the RSP plan and the potential reward corresponds to a 15,000 Metso shares, out of which the Metso Executive Team can receive a reward of 15,000 shares. The potential reward will be paid in 2021.

Performance Share Plan 2019–2021

The earning criteria for the PSP 2019–2021 is based on the total shareholder return of Metso's share during 2019–2021. At the end of 2019, there were nine participants in the plan and the potential reward corresponds to a maximum of 133,854 Metso shares, out of which the Metso Executive Team can receive a maximum reward of 120,600 shares. The potential reward will be paid in 2022.

Restricted Share Plan 2019–2021

At the end of 2019, there were three participants in the RSP plan and the potential reward corresponds to a 25,000 Metso shares, out of which the Metso Executive Team can receive a reward of 25,000 shares. The potential reward will be paid in 2022.

Deferred Share Unit Plan

In December 2017, Metso Board of Directors decided to establish a new long-term incentive plan for senior managers and key employees. Deferred Share Unit Plan (DSUP) is a long-term share value-based incentive plan that aligns and rewards the employee's performance and Metso share value development during a performance period. Metso Executive Team members are not eligible to participate DSUP.

Deferred Share Unit plan 2018–2020

At the end of 2019, there were 109 participants in the DSUP plan. The potential reward will be paid in 2021.

Deferred Share Unit plan 2019–2021

At the end of 2019, there were 124 participants in the DSUP plan. The potential reward will be paid in 2022.

Matching Share Plan 2018–2022

Metso has one active Matching Share Plan for President and CEO Pekka Vauramo. The plan requires personal investment in Metso shares. The potential reward corresponds to maximum 18,750 shares and will be delivered in three installments and are subject to fulfill the performance criterion adjusted EBITA for each installment.

Beneficiaries of and granted shares under the share ownership plan as at December 31, 2019

	Metso Executive Team	Shares	Other beneficiaries	Shares	Beneficiaries total	Shares total
Plan 2016–2018						
Granted 2019	5	11,722	75	67,318	80	79,040

Costs recognized for the share ownership plans

EUR thousand	Plan PSP 2015–2017	Plan PSP 2016–2018	Plan PSP 2017–2019	Plan PSP and DSUP 2018–2020	Plan PSP and DSUP 2019–2021	Total
2019						
Metso Executive Team	–	–111	–84	–572	–598	–1,365
Other beneficiaries	–	–254	–661	–2,415	–1,423	–4,753
Total	–	–365	–745	–2,987	–2,021	–6,118
Continuing operations						–1,010
Discontinued operations						–5,108
2018						
Metso Executive Team	–	–50	–188	–484	–	–722
Other beneficiaries	–20	–114	–578	–1,369	–	–2,081
Total	–20	–164	–766	–1,853	–	–2,803
Continuing operations						–416
Discontinued operations						–2,387

1.7 Financial income and expenses

EUR million	2019 Continuing operations	2019 Discontinued operations	2019 Metso total	2018 Continuing operations	2018 Discontinued operations	2018 Metso total
Financial income						
Interest income on cash and cash equivalents	0	1	1	1	3	4
Income on financial investments	–	0	0	–	0	0
Other financial income	0	3	3	0	1	1
Gain from foreign exchange	0	1	2	0	0	1
Financial income total	1	5	6	1	4	6
Financial expenses						
Interest expenses from financial liabilities at amortized cost	–1	–28	–29	0	–25	–25
Interest expenses on leases	–1	–4	–5	–	–	–
Other financial expenses	0	–10	–10	0	–10	–10
Financial expenses total	–2	–42	–44	0	–36	–36
Financial income and expenses, net	–2	–37	–38	1	–31	–30

1.8 Income taxes

Accounting policy

Income taxes in the consolidated income statement includes taxes of subsidiaries based on taxable income for the current period, tax adjustments for previous periods and the changes in deferred taxes. The other comprehensive income statement (OCI) includes taxes on items presented in OCI. Deferred taxes are determined for temporary differences arising between the tax base of assets and liabilities and their financial statement carrying amounts, measured using substantially enacted tax rates.

Estimates and assessments by Management

Metso is subject to income tax in its operating countries. Metso's management is required to make certain assumptions and estimates in preparing the annual tax calculations for which the ultimate tax consequence is uncertain. Annually, Metso has tax audits ongoing in several subsidiaries and recognizes tax liabilities on for anticipated tax audit issues based on estimate of whether additional taxes will be due. Where the final outcome of these issues is different from the estimated amounts, the difference will impact the income tax in the period in which such determination is made.

The components of income taxes

EUR million	2019 Continuing operations	2019 Discontinued operations	2019 Metso total	2018 Continuing operations	2018 Discontinued operations	2018 Metso total
Income taxes for current year	–22	–78	–100	–19	–79	–98
Income taxes for prior years	0	15	14	–1	2	2
Change in deferred tax asset and liability	0	–10	–9	0	4	4
Income taxes	–22	–72	–95	–20	–72	–92

The differences between income tax expense computed at the Finnish statutory rate and income tax expense provided on earnings

	2019			2018		
EUR million	Continuing operations	Discontinued operations	Metso total	Continuing operations	Discontinued operations	Metso total
Profit before taxes	93	303	394	79	242	321
Income tax at Finnish statutory tax rate of 20.0%	–19	–61	–79	–16	–48	–64
Effect of different tax rates in foreign subsidiaries	–3	–12	–15	–12	–17	–30
Non-deductible expenses	–2	–8	–10	–1	–4	–5
Tax exempt income or tax incentives	1	7	8	8	7	15
Foreign non-creditable withholding taxes	–1	–2	–3	0	–1	–1
Deferred tax liability on undistributed earnings	0	–9	–9	–1	–7	–8
Effect of enacted change in tax rates	0	0	0	1	2	3
Reassessment of deferred taxes for prior years	–	–	–	–	–	–
Income tax for prior years	0	15	14	–1	2	2
Other	1	–3	–1	1	–6	–5
Income taxes	–22	–72	–95	–20	–72	–92

Tax effects of components in other comprehensive income

Continuing operations

	2019			2018		
EUR million	Before taxes	Tax	After taxes	Before taxes	Tax	After taxes
Cash flow hedges	–	–	–	–	–	–
Defined benefit plan actuarial gains (+) / losses (–)	3	–1	2	–3	1	–3
Currency translation on subsidiary net investments	0	–	0	2	–	2
Total comprehensive income (+) / expense (–)	3	–1	1	–2	1	–1
Current year tax		–			–	
Deferred tax		–1			1	
Total		–1			1	

Discontinued operations

	2019			2018		
EUR million	Before taxes	Tax	After taxes	Before taxes	Tax	After taxes
Cash flow hedges	4	–1	3	–1	0	–1
Defined benefit plan actuarial gains (+) / losses (–)	–4	1	–3	1	0	1
Currency translation on subsidiary net investments	2	–	2	–15	–	–15
Total comprehensive income (+) / expense (–)	1	0	1	–15	0	–15
Current year tax		–1			0	
Deferred tax		1			0	
Total		0			0	

Metso total

	2019			2018		
EUR million	Before taxes	Tax	After taxes	Before taxes	Tax	After taxes
Cash flow hedges	4	–1	3	–1	0	–1
Defined benefit plan actuarial gains (+) / losses (–)	–1	0	–2	–2	0	–2
Currency translation on subsidiary net investments	1	–	1	–13	–	–13
Total comprehensive income (+) / expense (–)	3	–1	2	–16	0	–16
Current year tax		–1			0	
Deferred tax		0			0	
Total		–1			0	

Accounting policy

The deferred tax asset or liability is determined for temporary differences arising between the tax bases of assets and liabilities and their financial statement carrying amounts using the substantially enacted tax rates expected to apply in future years. Typical temporary differences arise from provisions, depreciation and amortization expense, inter-company inventory margins, defined benefit plans and tax loss carry forwards. Deferred tax liabilities are recognized in the balance sheet in full, and the deferred tax assets are only recognized if it is probable there will be taxable income in the future against which deferred tax can be used. Deferred tax assets are set off against deferred tax liabilities if they relate to taxes levied by the same taxation authority.

Estimates and assessments by Management

In determining the deferred tax assets and liabilities, Metso is required to make certain assumptions and estimates on in particular future operating performance and the taxable income of subsidiaries, recoverability of tax loss carryforwards and potential changes of tax laws in jurisdictions where Metso operates. A deferred tax liability based on foreign subsidiaries undistributed earnings has been provided only where Metso management has elected to distribute such earnings in the coming years and the distribution is subject to taxation. Because the tax consequences are difficult to predict, the deferred tax asset and liabilities may need to be adjusted in coming financial years, which will have an impact in the period in which such determination is made.

Reconciliation of deferred tax balances, continuing operations

2019 EUR million	Metso total January 1	Discontinued operations January 1	Charged to income statement	Charged to shareholders' equity	Acquisitions and disposals	Translation differences and Group items	December 31
Deferred tax assets							
Tax losses carried forward	6	–6	0	–	–	0	0
Intangible and tangible assets	17	–13	0	–	–	0	4
Inventory	25	–21	0	–	–	0	4
Provisions	18	–17	0	–	–	–1	0
Accruals	10	–10	0	–	–	0	0
Pension related items	13	–4	0	0	–	–6	3
Other	24	–22	0	–	–	0	3
Total deferred tax assets	114	–93	0	0	–	–7	14
Offset against deferred tax liabilities	–12	12	–	–	–	0	–1
Net deferred tax assets	101	–81	0	0	–	–7	13
Deferred tax liabilities							
Purchase price allocations	12	–8	0	–	–	0	4
Intangible and tangible assets	6	–6	0	–	–	0	0
Other	25	–24	0	–	–	0	1
Total deferred tax liabilities	43	–38	0	–	–	0	5
Offset against deferred tax assets	–12	12		–	–	0	–1
Net deferred tax liabilities	30	–26	0	–	–	0	4
Deferred tax assets, net	71	–55	0	–	–	–7	9

Reconciliation of deferred tax balances, discontinued operations

2019 EUR million	January 1	Charged to income statement	Charged to shareholders' equity	Acquisitions and disposals	Translation differences and Group items	December 31
Deferred tax assets						
Tax losses carried forward	6	1	0	1	–	8
Intangible and tangible assets	13	–2	0	–1	–	11
Inventory	21	0	0	–	0	21
Provisions	17	–2	0	2	0	17
Accruals	10	0	0	–	–1	9
Pension related items	4	0	0	–	6	10
Other	22	10	0	1	16	49
Total deferred tax assets	93	7	0	3	21	124
Offset against deferred tax liabilities	–12	0	–	–	–4	–16
Net deferred tax assets	81	7	0	3	17	108
Deferred tax liabilities						
Purchase price allocations	8	–2	0	28	–	34
Intangible and tangible assets	6	0	–1	–	0	5
Other	24	19	0	0	0	43
Total deferred tax liabilities	38	17	–1	28	0	82
Offset against deferred tax assets	–12				–4	–16
Net deferred tax liabilities	26	17	–1	28	–4	66
Deferred tax assets, net	55	–10	1	–25	21	43

Reconciliation of deferred tax balances, comparison period, Metso total

2018 EUR million	January 1	Charged to income statement	Charged to shareholders' equity	Acquisitions and disposals	Translation differences	December 31
Deferred tax assets						
Tax losses carried forward	11	–4	–1	–	–	6
Intangible and tangible assets	10	5	2	–	–	17
Inventory	24	–3	0	–	–	21
Provisions	21	–2	0	–	–1	18
Accruals	5	1	–	–	–	6
Pension related items	7	11	–4	–	–	14
Other	22	1	1	0	–1	24
Total deferred tax assets	101	8	–2	0	–2	105
Offset against deferred tax liabilities	–10	6	–	–	–	–4
Net deferred tax assets	91	14	–2	0	–2	101
Deferred tax liabilities						
Purchase price allocations	10	–2	0	4	–	12
Intangible and tangible assets	5	–2	–	–	0	4
Other	10	7	0	1	0	19
Total deferred tax liabilities	25	4	0	5	0	34
Offset against deferred tax assets	–10	6	–	–	–	–4
Net deferred tax liabilities	15	10	0	5	0	30
Deferred tax assets, net	76	4	–2	–5	–2	71

Deferred tax liability on undistributed retained earnings in subsidiaries will be recognized when the dividend distribution is probable in the near future and it will cause a tax impact. At the end of year 2019 there are no substantial undistributed earnings in subsidiaries from which deferred tax liability is not booked.

1.9 Earnings per share

Basic

Basic earnings per share is calculated by dividing the profit attributable to shareholders of the company by the weighted average number of shares issued and outstanding for the year, excluding own shares held by the Parent company.

2019	Continuing operations	Discontinued operations	Metso total
Profit attributable to shareholders of the company, EUR million	69	232	301
Weighted average number of shares issued and outstanding (in thousands)	150,057	150,057	150,057
Earnings per share, basic, EUR	0.46	1.54	2.00

2018	Continuing operations	Discontinued operations	Metso total
Profit attributable to shareholders of the company, EUR million	65	165	230
Weighted average number of shares issued and outstanding (in thousands)	149,997	149,997	149,997
Earnings per share, basic, EUR	0.43	1.10	1.53

Diluted

The shares to be potentially issued in the future are treated as outstanding shares when calculating the Diluted earnings per share if they have a dilutive effect. The own shares held by Metso are reissued within the terms of the share ownership plan to the key personnel if the targets defined in the plan are met. Diluted earnings per share are calculated by increasing the weighted average number of outstanding shares with the number of those shares, which would be distributed to the beneficiaries based on the results achieved, if the conditional earnings period ended at the end of the financial period in question. As at December 31, 2019, Metso held 272,088 own shares to be used as consideration under the share ownership plans.

2019	Continuing operations	Discontinued operations	Metso total
Profit attributable to shareholders of the company, EUR million	69	232	301
Weighted average number of shares issued and outstanding (in thousands)	150,057	150,057	150,057
Adjustment for potential shares distributed (in thousands)	143	143	143
Weighted average number of diluted shares issued and outstanding (in thousands)	150,200	150,200	150,200
Earnings per share, diluted, EUR	0.46	1.54	2.00

2018	Continuing operations	Discontinued operations	Metso total
Profit attributable to shareholders of the company, EUR million	65	165	230
Weighted average number of shares issued and outstanding (in thousands)	149,997	149,997	149,997
Adjustment for potential shares distributed (in thousands)	190	190	190
Weighted average number of diluted shares issued and outstanding (in thousands)	150,187	150,187	150,187
Earnings per share, diluted, EUR	0.43	1.10	1.53

2 Operational assets and liabilities

2.1 Net working capital and capital employed

Net working capital, balance sheet value

EUR million	2019 Continuing operations	2019 Discontinued operations	2019 Metso total	2018 Metso total
Inventories	181	975	1,156	950
Trade receivables	95	577	672	585
Other non-interest bearing receivables	41	198	239	185
Customer contract assets and liabilities, net	–	24	24	–18
Trade payables	–63	–385	–448	–431
Advances received	–24	–189	–212	–208
Other non-interest bearing liabilities	–64	–429	–493	–430
Net working capital	166	772	939	633

Net working capital, cash flow effect

EUR million	2019 Metso total	2018 Metso total
Inventories	–107	–197
Trade receivables	–42	–85
Other non-interest bearing receivables	–52	–6
Customer contract assets and liabilities, net	–41	24
Trade payables	–38	82
Advances received	1	16
Other non-interest bearing liabilities	26	37
Net working capital	–254	–129

Capital employed

EUR million	2019 Continuing operations	2019 Discontinued operations	2019 Metso total	2018 Metso total
Net working capital	166	772	939	633
Intangible assets	81	727	807	608
Tangible assets	67	321	388	305
Right-of-use assets	46	93	140	0
Non-current investments	0	10	11	7
Interest bearing receivables	–	6	6	7
Liquid funds	57	156	213	426
Tax receivables, net	8	36	44	32
Interest payables, net	0	–4	–4	–4
Capital employed	425	2,118	2,543	2,015
Total capital employed, average	n/a	n/a	2,279	2,109
Profit before taxes + interest and other financial expenses	94	345	438	357
Profit after taxes + interest and other financial expenses	71	272	344	264
Return on capital employed (ROCE) before taxes, %	n/a	n/a	19.2	16.9
Return on capital employed (ROCE) after taxes, %	n/a	n/a	15.1	12.5

Longer time serie is presented in Key figures section.

2.2 Trade receivables

Accounting policy

Trade receivables are invoiced receivables from customers related to Metso's ordinary business transactions. General payment terms are typically from 30 days to 90 days and they are non-interest bearing receivables. Trade receivables are initially recognized at recoverable value and subsequently valued at amortized cost. If exceptionally over 360 days payment term has offered to a client, the invoiced amount is discounted to its fair value.

Metso may enter an agreement to sell trade receivables. Trade receivable will be derecognized as payment has been received and there is certainty that credit risk and other risks and rewards have been transferred to a third party.

Receivables from customer contracts are recognized receivables related to sales recognition over time, at the time when performance obligation satisfied by Metso exceeds the amount invoiced from the client. These receivables will be invoiced according to invoicing schedules in the client contract, see note 1.2.

Metso applies the IFRS 9 simplified approach to measuring expected credit losses, which uses a lifetime expected loss allowance to be assessed and recognized regularly. Credit loss risk related to customer contract assets is for material part covered with the advance payments received from the clients.

Based on the analysis of previous year's credit losses by aging category and nature, as well as macroeconomic outlook in the near future, Metso recognizes a credit loss allowance from 0.2% to 5% on undue or less than 180 days overdue trade receivables. For more than 180 days overdue trade receivables the impairment is assessed individually, but without any credit guarantee, collateral or similar assurance on the recoverability, a minimum credit loss provision of 25% (over 180 days overdue) and 100% (over 360 days overdue) will be recognized. Trade receivables are written off when there is no reasonable expectation of recovery. Probability of bankruptcy, other financial reorganization or similar situation indicating insolvency of the client trigger final write off.

Estimates and assessments by Management

Estimate on expected credit losses and credit loss provision to be recognized are based on management's best judgement. The judgement is based on earlier experience on past years credit losses and current economic outlooks and client segment and location information. Trade receivables are collected actively, and possible impairment analyzed regularly by businesses and Metso legal units, and necessary actions to secure the receivables are made by the management. When credit loss provision of a trade receivable is assessed individually, collateral, credit guarantees, financial position of client and earlier payment behavior are taken into account.

	2019			2018
EUR million	Continuing operations	Discontinued operations	Metso total	Metso total
Trade receivables	95	572	667	576
Trade receivables for sale	–	5	5	9
Customer contract assets	–	87	87	82
Total	95	664	759	667

Provision on trade receivables by ageing category

	Continuing operations		Discontinued operations	
2019 EUR million	Trade receivables, gross	of which provided	Trade receivables, gross	of which provided
Undue	55	0	395	1
overdue 1–30 days	17	0	93	1
overdue 31–180 days	20	1	81	3
overdue 181–360 days	3	1	17	4
overdue 360– days	4	3	18	17
Total	99	4	603	26

Provision on trade receivables by ageing category, comparison period, Metso total

	Metso total 2019		Metso total 2018	
EUR million	Trade receivables, gross	of which provided	Trade receivables, gross	of which provided
Undue	450	1	418	1
overdue 1–30 days	109	1	92	0
overdue 31–180 days	101	3	66	2
overdue 181–360 days	20	5	14	3
overdue 360– days	22	20	25	25
Total	702	30	616	31

Realized write-offs for discontinued operations totaled EUR 4 million in 2019 (EUR 3 million in 2018). Realized write-offs for continuing operations totaled less than EUR 1 million.

Provision for impairment of trade receivables, continuing operations

EUR million	2019	2018
Accumulated provision January 1, Metso total	31	33
Accumulated provision January 1, discontinued operations	–27	–
Impact in income statement	0	–3
Currency rate differences	0	–1
Other change	1	2
Accumulated provision December 31, continuing operations total	4	31

Provision for impairment of trade receivables, discontinued operations

EUR million	2019
Accumulated provision January 1	27
Impact in income statement	–4
Currency rate differences	2
Other change	1
Accumulated provision December 31, discontinued operations total	26

2.3 Other receivables

Accounting policy

Other non-interest bearing receivables are recognized in the balance sheet at fair value which can be subsequently written down due to impairment. The impairment is expensed under selling, general and administrative expenses.

Estimates and assessments by Management

Metso's policy is to calculate an impairment loss based on the best estimate of the amounts that are potentially uncollectable at the balance sheet date. Metso's management actively monitors the amount of receivables past due globally and initiates action as necessary.

2019	Continuing operations			Discontinued operations		
EUR million	Non-current	Current	Total	Non-current	Current	Total
Loan receivables	–	–	–	–	1	1
Prepaid expenses and accrued income	–	27	27	0	44	44
VAT, payroll tax and social charge receivables	–	11	11	0	76	76
Pension assets	–	0	0	16	0	16
Other receivables	1	1	2	26	18	44
Non-interest bearing receivables total	1	40	41	42	139	180

	Metso total 2019			Metso total 2018		
EUR million	Non-current	Current	Total	Non-current	Current	Total
Loan receivables	–	1	1	–	–	–
Prepaid expenses and accrued income	–	71	71	–	54	54
VAT, payroll tax and social charge receivables	–	88	88	–	69	69
Pension assets	16	0	16	15	–	15
Other receivables	27	19	46	24	11	35
Non-interest bearing receivables total	43	178	221	38	134	173

Other non-interest bearing receivables included EUR 17 million in 2019 (EUR 15 million in 2018) Brazilian tax credits arising from delivery of goods and transfer of services (ICMS) recognized by local subsidiary. Of that amount EUR 1 million was classified as long-term in 2019 (EUR 1 million in 2018).

2.4 Inventory

Accounting policy

Inventories are valued at the lower of historical cost calculated or net realizable value. Costs are measured on a weighted average cost basis and include purchase costs as well as transportation and processing costs. The costs of finished goods include direct materials, wages and salaries plus employer social contributions, subcontracting and other direct costs, as well as a portion of production and project administration overheads. Net realizable value is the estimated amount that can be realized from the sale of the asset in the normal course of business less costs to sell.

Inventories are shown net of a provision for obsolete and slow-moving inventories. Metso's policy is to maintain a provision for slow-moving and obsolete inventory based on the best estimate of such amounts at the balance sheet date. An obsolescence provision is charged to income statement in the period in which the obsolescence is determined. Estimates are based on a systematic, on-going review and evaluation of inventory balance.

Trade-in equipment received is recorded as inventory at the lower of cost or net realizable value.

Estimates and assessments by Management

Inventory valuation requires management to make estimates and judgements particularly relating to obsolescence and expected selling prices in different market conditions. It also entails management's assessment of general market trends in global markets.

	2019			2018
EUR million	Continuing operations	Discontinued operations	Metso total	Metso total
Materials and supplies	60	157	217	160
Work in process	28	195	223	209
Finished products	92	624	716	581
Inventories	181	975	1,156	950

The cost of inventories recognized as expense totaled EUR 426 million for continuing operations and EUR 2,082 million for discontinued operations in 2019 (Metso total EUR 2,508 million in 2019 and EUR 2,222 million in 2018).

Changes in provision for inventory obsolescence

	2019			2018
EUR million	Continuing operations	Discontinued operations	Metso total	Metso total
Balance at beginning of year, Metso total	64	–	64	66
Balance at beginning of year, discontinued operations	−53	53	–	–
Impact of exchange rates	1	0	1	0
Additions charged to expense	5	5	10	8
Acquisitions	–	3	3	0
Used reserve	−2	−6	−8	−2
Deductions / other additions	−1	−9	−10	−9
Balance at end of year	14	46	60	64

2.5 Trade and other payables

Accounting policy

The fair values and carrying amounts of trade and other payables are considered to be the same due to the short-term maturities. The maturities of the current non-interest bearing liabilities rarely exceed six months. The maturities of trade payables are largely determined by trade practices and individual agreements between Metso and its supplier.

Accrued personnel costs, including holiday pay, are settled in accordance with local laws and regulations.

2019	Continuing operations			Discontinued operations		
EUR million	Non-current	Current	Total	Non-current	Current	Total
Trade payables	–	63	63	–	385	385
Derivative instruments	–	1	1	2	13	15
Other payables						
Accrued interests	–	0	0	–	4	4
Accrued personnel costs	–	21	21	–	90	90
Accrued project costs	–	0	0	–	55	55
VAT, payroll tax and social charge payables	–	7	7	–	39	39
Other payables	0	12	12	2	64	66
Other payables	0	39	39	2	251	253

	Metso total 2019			Metso total 2018		
EUR million	Non-current	Current	Total	Non-current	Current	Total
Trade payables	–	448	448	–	431	431
Derivative instruments	2	13	16	2	14	16
Other payables						
Accrued interests	–	4	4	–	5	5
Accrued personnel costs	–	111	111	–	105	105
Accrued project costs	–	55	55	–	54	54
VAT, payroll tax and social charge payables	–	46	46	–	39	39
Other payables	2	75	78	2	45	48
Other payables	2	291	293	2	248	251

2.6 Provisions

Accounting policy

Provisions are recognized when the Group has a legal or constructive obligation as a result of a past event, and it is probable that financial benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation.

Provisions, for which settlement is expected to occur more than one year after the initial recognition, are discounted to their present value and adjusted in subsequent closings for the time effect.

Warranty and guarantee provisions

Metso issues various types of contractual product warranties under which it generally guarantees the performance levels agreed in the sales contract, the performance of products delivered during an agreed warranty period and services rendered for a certain period or term. The provision for estimated warranty costs is based on historical realized warranty costs for deliveries of standard products and services in the past. The typical warranty period is 12 months from the accepted delivery. The adequacy of provisions is assessed periodically on a case by case basis.

Restructuring and capacity adjustment costs

A provision for restructuring and capacity adjustment costs is recognized only after management has approved, committed to and started to implement a formal plan. Employee termination benefits are recognized after the representatives of employees or individual employees have been informed of the intended measures in detail and the related compensation packages can be reliably measured. The costs included in a provision for capacity adjustment are those costs that are either incremental or incurred as a direct result of the plan or are as the result of a continuing contractual obligation with no continuing economic benefit to Metso or a penalty incurred to cancel the contractual obligation. Restructuring and capacity adjustment expenses are recognized in either cost of goods sold or selling, general and administrative expenses depending on the nature of the restructuring expenses. Restructuring costs can also include other costs incurred as a result of the plan, which are recorded under other operating income and expenses, net, such as asset write-downs.

Environmental remediation costs

Metso recognizes provisions associated with environmental remediation obligations when there is a present obligation as a result of past events, an outflow of resources is considered probable and the obligation can be estimated reliably. Such provisions are adjusted as further information develops or circumstances change. Recoveries of environmental remediation costs from other parties are recorded as assets when their receipt is deemed virtually certain.

Provision for loss making projects

A provision for loss making projects is booked when the costs needed to settle the performance obligations of the contract exceed the consideration to be received. Such a provision for the unrecognized portion of the loss is recognized immediately when these conditions have been met and is revised according to the progress of the project.

Estimates and assessments by Management

Provisions booked require management to estimate the future costs needed to settle the obligations and to estimate the possible outcomes of claims or lawsuits. The outcome depends on future development and events, so the final costs needed and timing to settle the obligation may differ from the initial provision estimated.

For larger and long-term delivery projects and sales involving new technology, additional warranty provisions can be established on a case by case basis to take into account the potentially increased risk.

Provisions

2019	Continuing operations			Discontinued operations		
EUR million	Non-current	Current	Total	Non-current	Current	Total
Warranty and guarantee provision	–	5	5	0	43	43
Restructuring provision	–	1	1	1	11	11
Environmental remedial provision	0	1	1	1	0	1
Other provisions [1]	3	5	8	31	17	48
Total	3	12	15	33	71	104

[1] Includes provisions related to lawsuit, personnel liabilities and provisions for loss making projects.

	Metso total 2019			Metso total 2018		
EUR million	Non-current	Current	Total	Non-current	Current	Total
Warranty and guarantee provision	0	49	49	0	50	51
Restructuring provision	1	12	12	0	5	5
Environmental remedial provision	1	1	2	0	1	1
Other provisions [1]	34	22	56	28	15	43
Total	35	83	119	29	71	100

[1] Includes provisions related to lawsuit, personnel liabilities and provisions for loss making projects.

Changes in provisions, continuing operations

2019 EUR million	Warranty and guarantee provision	Restructuring provision	Environmental remediation provision	Total
Carrying value at January 1, Metso total	51	5	1	57
Carrying value at January 1, discontinued operations	–47	–5	–1	–52
Impact of exchange rates	0	0	0	0
Addition charged to expense	3	1	0	4
Used reserve	–1	0	0	–1
Reversal of reserve / other changes	0	–	–	0
Carrying value at December 31, continuing operations	5	1	1	7

Changes in provisions, discontinued operations

2019 EUR million	Warranty and guarantee provision	Restructuring provision	Environmental remediation provision	Total
Carrying value at January 1	47	5	1	52
Impact of exchange rates	0	0	0	0
Acquisitions	2	–	0	2
Addition charged to expense	28	11	0	40
Used reserve	–19	–3	0	–22
Reversal of reserve / other changes	–15	–3	–	–18
Carrying value at December 31, discontinued operations	43	10	1	54

2.7 Post-employment obligations

Accounting policy

Metso has several different pension schemes in accordance with local regulations and practices in countries where it operates. In certain countries, the pension schemes are defined benefit plans with retirement, disability, death, and other post-retirement benefits, such as health services, and termination income benefits. The retirement benefits are usually based on the number of service years and the salary levels of the final service years. Metso has both defined contribution and defined benefit schemes. The schemes are generally funded through payments to insurance companies or to trustee-administered funds. Other arrangements are unfunded with benefits being paid directly by Metso as they fall due. All arrangements are subject to local tax and legal restrictions in their respective jurisdictions.

In the case of defined benefit plans, the liability recognized from the plan is the present value of the defined benefit obligation as of the balance sheet date less the fair value of the plan assets. Independent actuaries calculate the defined benefit obligation by applying the projected unit credit method under. The present value of the defined benefit obligation is determined by discounting the estimated future cash flows using the interest rates of high-quality corporate bonds that are denominated in the currency in which the benefits will be paid, and having maturity approximating to the terms of the related pension obligation. The cost of providing retirement and other post-retirement benefits to personnel is charged to profit and loss concurrently with the service rendered by personnel. Net interest is recorded through financial income and expenses in the income statement. Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions are recognized through OCI in shareholders' equity in the period in which they arise. Past service costs, gains and losses on curtailments or settlements are recognized immediately in the income statement.

The contributions to defined contribution plans and multi-employer and insured plans are recognized in the income statement concurrently with the payment obligations.

Estimates and assessments by Management

The present value of the pension obligations is based on annual actuarial calculations, which use several assumptions such as the discount rate and expected return on assets, salary and pension increases and other actuarial factors. As a result, the liability recorded on Metso's balance sheet and cash contributions to funded arrangements are sensitive to changes. Where the actuarial experience differs from those assumptions gains and losses result, which are recognized in OCI. Sensitivity analyses on the present value of the defined benefit obligation have been presented in the tables. Assets of Metso's funded arrangements are managed by external fund managers. The allocation of assets is reviewed regularly by those responsible for managing Metso's arrangements based on local legislation, professional advice and consultation with Metso, based on acceptable risk tolerances.

Metso's pension and other post-employment plans

The pension arrangements in the US, Canada and the UK together represent 72 percent of Metso's defined benefit obligation and 83 percent of its pension assets. These arrangements provide income in retirement which is substantially based on salary and service at or near retirement. In the US and Canada annual valuations are carried out to determine whether cash funding contributions are required in accordance with local legislation. In the UK, Metso's defined benefit pension arrangement is closed to the future accrual. Plan assets are held by a separate pension fund and are administered by a board of trustees. Cash contributions are determined on a triennial basis in accordance with local funding legislation, with the level of cash payments being agreed between the trustees and Metso. Defined benefit pension arrangements in Sweden are offered in accordance with collective labor agreements and are unfunded.

Assets of Metso's funded arrangements are managed by external fund managers. The allocation of assets is reviewed regularly by those responsible for managing Metso's arrangements based on local legislation, professional advice and consultation with Metso, based on acceptable risk tolerances.

The expected contributions to plans in 2020 are EUR 5 million. Metso paid contributions of EUR 6 million to defined benefit plans in 2019.

The amounts recognized as of December 31 in the balance sheet

EUR million	Pension benefits 2019	Pension benefits 2018	Other post-employment benefits 2019	Other post-employment benefits 2018	Total 2019	Total 2018
Present value of funded obligations	228	237	–	–	228	237
Fair value of plan assets	–250	–254	–	–	–250	–254
	–22	–17	–	–	–22	–17
Present value of unfunded obligations	48	42	26	26	75	68
Unrecognized asset	0	1	–	–	0	1
Net liability	27	27	26	26	53	53
of which continuing operations	7		1		8	
of which discontinued operations	20		25		45	
Amounts in the balance sheet, continuing operations						
Liabilities	7	42	1	26	8	68
Assets	–	15	–	–	–	15
Amounts in the balance sheet, discontinued operations						
Liabilities	36	–	25	–	61	–
Assets	16	–	–	–	16	–

Movements in the net liability recognized in the balance sheet (total)

EUR million	Pension and other post-employment benefits 2019	Pension and other post-employment benefits 2018
Net liability at beginning of year	53	52
Net expense recognized in the income statement	4	6
Employer contributions	–6	–8
Gain (+) / loss (–) recognized through OCI	2	3
Translation differences	0	1
Net liability at end of year	53	53

The amounts recognized in the income statement

EUR million	Pension benefits 2019	Pension benefits 2018	Other post-employment benefits 2019	Other post-employment benefits 2018	Total 2019	Total 2018
Employer's current service cost	2	3	0	0	2	3
Net interest on net surplus (+) / deficit (–)	0	0	1	1	1	1
Settlements	1	–	–	–	1	–
Recognition of past service cost (+) / credit (–)	–1	1	–	–	–1	1
Administration costs paid by the scheme	1	0	–	–	1	0
Expense (+) / income (–) recognized in income statement	3	4	1	1	4	6
of which continuing operations	1	1	0	0	1	1
of which discontinued operations	2	4	1	1	3	5

The amounts recognized through OCI

EUR million	Pension benefits 2019	Pension benefits 2018	Other post-employment benefits 2019	Other post-employment benefits 2018	Total 2019	Total 2018
Return on plan assets, excluding amounts included in interest expense (+) / income (–)	–20	18	–	–	–20	18
Actuarial gain (–) / loss (+) on liabilities due to change in financial assumptions	22	–11	2	–1	25	–13
Actuarial gain (–) / loss (+) on liabilities due to change in demographic assumptions	0	0	–1	–	–1	0
Actuarial gain (–) / loss (+) on liabilities due to experience	0	–3	–	–	–1	–3
Gain (–) / loss (+) as result of asset ceiling	–1	0	–	–	–1	0
Total gain (–) / loss (+) recognized through OCI	1	4	1	–1	1	2
of which continuing operations	0	2	0	1	–3	3
of which discontinued operations	0	1	2	–2	4	–1

The changes in the value of the defined benefit obligation

	Pension benefits		Other post-employment benefits		Total	
EUR million	**2019**	**2018**	**2019**	**2018**	**2019**	**2018**
Defined benefit obligation at beginning of year	281	305	25	27	306	332
Other adjustment to present value	–	–	0	0	0	0
Employer's current service cost	2	3	0	0	2	3
Interest cost	7	8	1	1	8	9
Plan participant contributions	0	0	–	–	0	0
Past service cost (+) / credit (–)	–1	1	–	–	–1	1
Actuarial gain (–) / loss (+) due to change in financial assumptions	23	–11	3	–1	26	–13
Actuarial gain (–) / loss (+) on liabilities due to change in demographic assumptions	–1	0	–	–	–1	0
Actuarial gain (–) / loss (+) due to experience	2	–3	–1	0	1	–3
Settlements	–29	–	–	–	–29	–
Benefits paid from the arrangement	–13	–22	–	–	–13	–22
Benefits paid direct by employer	–3	–3	–2	–2	–5	–5
Translation differences	8	3	0	1	8	4
Defined benefit obligation at end of year	276	281	26	25	302	306
of which continuing operations	91	–	1	–	92	–
of which discontinued operations	185	–	25	–	210	–

The changes in the fair value of the plan assets during the year

	Pension and other post-employment benefits total	
EUR million	**2019**	**2018**
Fair value of assets at beginning of year	254	280
Interest income on assets	7	8
Return on plan assets excluding interest income	20	–18
Assets distributed on settlements	–28	–
Employer contributions	6	8
Plan participant contributions	0	0
Benefits paid from the arrangements	–13	–22
Benefits paid direct by employer	–5	–5
Administration expenses paid from the scheme	0	0
Translation differences	8	3
Fair value of assets at end of year	249	254
of which continuing operations	84	–
of which discontinued operations	165	–

The major categories of plan assets as a percentage of total plan assets as at December 31

	Quoted		Unquoted		Total	
	2019	2018	2019	2018	2019	2018
Equity securities	9%	17%	0%	0%	9%	17%
Bonds	40%	36%	2%	2%	41%	38%
Property	1%	1%	0%	0%	1%	1%
Cash	1%	1%	1%	0%	2%	1%
Insurance contracts	2%	2%	10%	11%	12%	12%
Other	22%	18%	13%	12%	35%	31%
Total	74%	75%	26%	25%	100%	100%

As at 31, December 2019 there were no plan assets invested in affiliated or property occupied by affiliated companies.

The principal actuarial assumptions at December 31 expressed as weighted averages

	2019	2018
Benefit obligation		
Discount rate	2.25%	3.26%
Rate of salary increase	2.99%	3.07%
Rate of pension increase	2.42%	2.68%
Expense in income statement		
Discount rate	3.26%	2.87%
Rate of salary increase	3.07%	3.05%
Rate of pension increase	2.68%	2.66%

The weighted average life expectancy used for the major defined benefit plans

	Life expectancy at age of 65 for a male member currently aged 65		Life expectancy at age of 65 for a male member currently aged 45	
In years	2019	2018	2019	2018
United Kingdom	22.0	21.9	22.6	23.3
United States	20.6	21.8	22.2	22.8
Canada	21.8	20.7	22.9	22.3

Life expectancy is allowed for in the assessment of the Defined Benefit Obligation using mortality tables which are generally based on experience within the country in which the arrangement is located with (in many cases) an allowance made for anticipated future improvements in longevity.

Sensitivity analyses on present value of Defined Benefit Obligation in below table present the present value of the Defined Benefit Obligation when major assumptions are changed while others held constant.

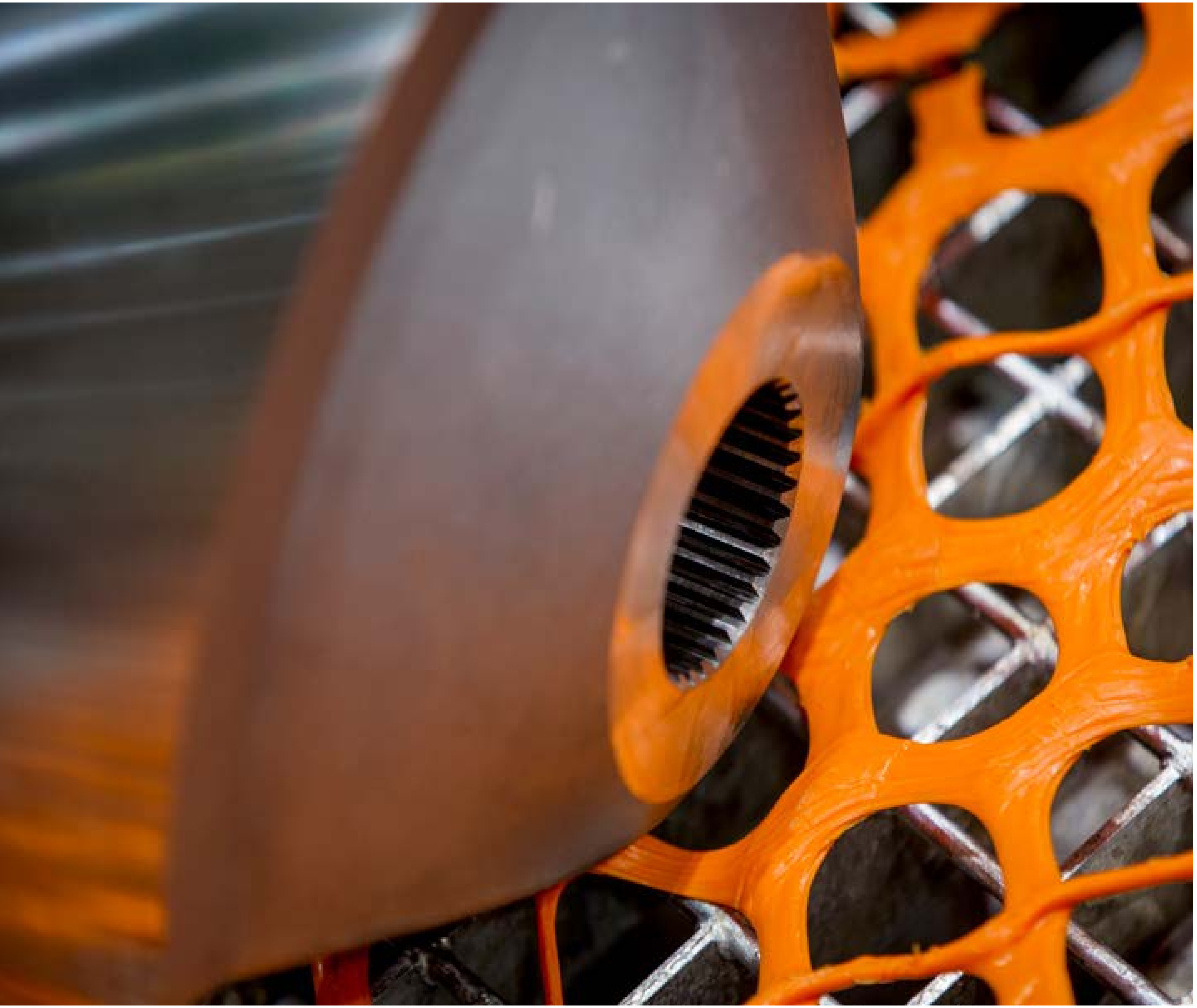
Sensitivity analyses

	2019			2018		
EUR million	Pension	Other	Total	Pension	Other	Total
Discount rate						
Increase of 0.25%	–8.1	–0.6	–8.7	–7.4	–0.6	–8.0
Decrease of 0.25%	8.8	0.7	9.5	7.8	0.6	8.4
Salary increase rate						
Increase of 0.25%	0.2	0.1	0.3	0.1	0.1	0.2
Decrease of 0.25%	–0.2	–0.1	–0.3	–0.1	–0.1	–0.2
Pension increase rate						
Increase of 0.25%	3.1	–	3.1	2.8	–	2.8
Decrease of 0.25%	–2.8	–	–2.8	–2.5	–	–2.5
Medical cost trend						
Increase of 0.25%	–	1.3	1.3	–	1.1	1.1
Decrease of 0.25%	–	–1.2	–1.2	–	–1.0	–1.0
Life expectancy						
Increase of one year	13.1	0.9	14.0	13.1	0.8	13.9
Decrease of one year	–12.5	–0.9	–13.4	–12.9	–0.8	–13.7

Weighted average duration of Defined Benefit Obligation expressed in years

	2019			2018		
In years	Pension	Other	Total	Pension	Other	Total
At December 31	12.5	9.9	12.2	11.4	9.5	11.2

3 Intangible and tangible assets



3.1 Goodwill and other intangible assets

Accounting policy

Goodwill and other intangible assets with an indefinite useful life

Goodwill represents the excess of acquisition costs over the fair value of net identified assets acquired and liabilities assumed and the fair values of previously owned interests and non-controlling interests. Goodwill is allocated to cash generating units (CGUs), which are the reportable segments such as Flow Control or Minerals. If Metso reorganizes its reporting structure, goodwill is reallocated to the cash generating units affected based on their relative fair values at the time of the reorganization. The carrying value of goodwill is tested with the CGU's value in use or CGU's fair value less costs of disposal, when appropriate. Previously recognized impairment losses on goodwill are not reversed.

Other intangible assets with an indefinite useful life, such as brand values, are not amortized. Currently such assets are tested for impairment annually as part of the appropriate CGU tested for impairment. Previous losses on impairment are only reversed to the extent that the new carrying amount of the assets does not exceed the carrying amount the asset would have had, if the asset had not been impaired.

Other intangible assets

Other intangible assets with a definite useful life, mainly trademarks, patents, licenses, IT software or acquired order backlog are measured at costs less accumulated amortizations and impairment losses.

Amortization of intangible assets

Amortization of intangible assets with a definite useful life is calculated on a straight-line basis over the useful life of the assets as follows:

Patents and licenses	5–10 years
Computer software	3–5 years
Technology	3–20 years
Customer relationships	3–20 years
Other intangible assets	<1–20 years

The probable useful lives of assets are reviewed annually. If material deviations from previous estimates arise, the useful lives are reassessed. The carrying value of intangible assets subject to amortization is reviewed for impairment whenever events or circumstances indicate that the carrying amount of an asset may not be recoverable. A previously recognized impairment loss may be reversed if there is a significant improvement of the circumstances having initially caused the impairment, but not to a higher value than the carrying amount, which would have been recorded had there been no impairment in prior years.

Research and development expenses comprise salaries, administration costs, depreciation and amortization of tangible and intangible assets and they are mainly recognized as incurred. When material development costs meet certain capitalization criteria under IAS 38, they are capitalized and amortized during the expected useful life of the underlying technology.

Goodwill and other intangible assets, continuing operations

2019 EUR million	Goodwill	Patents and licences	Capitalized software	Other intangible assets	Intangible assets total
Acquisition cost at beginning of year, Metso total	525	27	92	139	783
Acquisition cost at beginning of year, discontinued operations	–462	–27	–75	–108	–672
Translation differences	0	0	0	0	–1
Business acquisitions	–1	–	–	–	–1
Capital expenditure	–	0	1	2	3
Reclassifications	–	–	2	–2	–
Other changes	0	0	0	1	0
Acquisition cost at end of year	62	0	21	31	111
Accumulated amortization at beginning of year, Metso total	–	–19	–81	–74	–175
Accumulated amortization at beginning of year, discontinued operations	–	19	66	60	145
Translation differences	–	0	0	0	0
Other changes	–	0	0	1	1
Impairment losses	–	0	–	–1	–1
Amortization charges for the year	–	0	–2	–2	–4
Accumulated amortization at end of year	–	0	–16	–17	–30
Net book value at end of year, continuing operations	62	0	4	14	81

Goodwill and other intangible assets, discontinued operations

2019 EUR million	Goodwill	Patents and licences	Capitalized software	Other intangible assets	Intangible assets total
Acquisition cost at beginning of year	462	27	75	108	672
Translation differences	–2	0	0	0	–2
Business acquisitions	99	0	1	109	209
Business disposals	–3	–	0	–12	–15
Capital expenditure	–	1	1	6	9
Reclassifications	–	–	1	0	0
Other changes	0	0	–1	3	2
Acquisition cost at end of year	556	28	77	215	876
Accumulated amortization at beginning of year	–	–19	–66	–60	–145
Translation differences	–	0	0	0	–1
Business acquisitions	–	–	0	–	0
Business disposals	–	–	–	10	10
Other changes	–	0	1	0	1
Impairment losses	–	0	–	0	0
Amortization charges for the year	–	–2	–5	–6	–12
Accumulated amortization at end of year	–	–22	–71	–56	–149
Net book value at end of year, discontinued operations	556	6	6	158	727

Goodwill and other intangible assets, comparison period, Metso total

2018 EUR million	Goodwill	Patents and licences	Capitalized software	Other intangible assets	Intangible assets total
Acquisition cost at beginning of year	466	28	93	119	706
Translation differences	2	0	0	1	3
Business acquisitions	57	–	–	16	73
Capital expenditure	–	2	1	3	6
Reclassifications	–	–	1	–1	–
Other changes	–	–3	–2	–	–5
Acquisition cost at end of year	525	27	92	139	783
Accumulated amortization at beginning of year	–	–19	–76	–66	–161
Translation differences	–	0	0	0	0
Other changes	–	2	2	–	5
Impairment losses	–	0	0	–	0
Amortization charges for the year	–	–3	–8	–8	–18
Accumulated amortization at end of year	–	–19	–81	–74	–175
Net book value at end of year	525	7	11	65	608

Impairment testing

Accounting policy

Goodwill and other intangible assets with an indefinite useful life are tested for impairment annually. The testing of goodwill and other intangible assets with an indefinite useful life is performed at the cash generating unit level. If the carrying value of goodwill exceeds the recoverable value, an impairment is recognized in the income statement under depreciations and amortizations. Impairment losses on goodwill are not reversed. Currently Metso's management has defined two separate CGUs, Flow Control and Minerals, to which goodwill has been allocated.

The recoverable amounts of CGU's are based on value in use calculations, where the estimated future cash flows of CGUs are discounted to their present value. The cash flows are derived from the current year's last quarter estimate, the following year's budget and the approved strategy for the next four years, beyond which cash flows are calculated using the terminal value method. The terminal growth rate used is based on management's judgment regarding the average long-term growth. Cash flows include only normal maintenance investments and exclude any potential investments that enhance the CGUs performance and acquisitions.

Estimates and assessments by Management

Value in use calculations are inherently judgmental and highly susceptible to change from period to period because they require management to make assumptions about future supply and demand related to its individual business units, future sales prices, profit margins and achievable efficiency savings over time. The value of benefits and savings expected from the efficiency improvement programs are inherently subjective. Metso management estimates sales growth rate and EBITDA development for the testing period as well as the discount factor used. The present value of the cash generating units is discounted using the CGU's weighted average cost of capital (WACC) calculated by Metso. WACC calculations include judgments on regarding, among other things, relevant beta factors, peer companies and capital structure to use.

Metso performs impairment testing annually, or whenever there is an indication of impairment. Typical triggering events are material and permanent deterioration in the global economy or political environment, observed significant under-performance relative to projected future performance and significant changes in Metso's strategic orientations.

Expected useful lives and remaining amortization periods for other intangible assets are reviewed annually by management. Acquisitions, disposals and restructuring actions typically generate a need for the reassessment of the recoverable amounts and remaining useful lives of the assets. When the other intangible assets are measured at fair value less costs of disposal, the selling price, incremental costs and selling costs need to be estimated by management.

Upon initial acquisition Metso uses readily available market values to determine the fair values of acquired net assets to be allocated. However, when this is not possible, the valuation is based on past performance of such an asset and expected future cash generating capacity, which requires management to make estimates and assumptions of the future performance and use of these assets. Any change in Metso's future business priorities may affect the recoverable amounts.

Goodwill allocation to cash generating units

EUR million	Flow Control (continuing operations)	Minerals (discontinued operations)	Total
2019			
Balance at beginning of year	86	439	525
Translation differences and other changes	–1	–2	–2
Transfer	–23	23	0
Acquisitions and disposals	–	96	96
Balance at end of year	62	556	618
As percent of total goodwill	10%	90%	100%
2018			
Balance at beginning of year	44	422	466
Translation differences and other changes	2	0	2
Acquisitions / disposals	40	17	57
Balance at end of year	86	439	525
As percent of total goodwill	16%	84%	100%

From the beginning on year 2019 Pumps business area was transferred from Flow Control Segment to Minerals segment, consequently, EUR 23 million was reallocated between the segments. The EUR 96 million net increase in 2019 relates to acquisitions of Industrial Support Company SpA and McCloskey International Ltd as well as to disposal of grinding media business in Spain, see more in Note 5.4.

In 2018, EUR 57 million increase in goodwill relates to the acquisitions of AB P.J. Jonsson och Söner, RMEBS Controls Private Limited and Kiln Flame Systems Ltd.

The value of other intangible assets with indefinite useful life totaled EUR 16 million in 2019 (EUR 16 million in 2018), which comprises of the brand values in Minerals segment.

Annual impairment test in 2019

As at December 31, 2019, goodwill totaled EUR 618 million, of which EUR 62 million is allocated to continuing operations and EUR 556 million to discontinued operations. EUR 23 million was reallocated from Flow Control segment to Minerals segment related to changes in reporting structure at the beginning of year 2019. The cash generating units tested were the reportable segments Flow Control and Minerals, and the cost of centralized group services were allocated to CGUs based on their proportional share on the sales volume.

Given that the recoverable amounts of each CGU significantly exceeded the carrying value of goodwill and other tested assets, no indication of impairment was found in 2019. The value in use calculations were derived from estimates, budgets and strategy figures reviewed by Metso's management and approved by the Board of Directors.

The key assumptions used in assessing the recoverable amount are the profitability and growth rate for the estimate period, long-term average growth in the terminal period and discount rate. The key values used were the following:

%	Flow Control (continuing operations)	Minerals (discontinued operations)
Sales growth in four years estimate period	5.9%	7.9%
EBITDA % range in four years estimate period	14.9%–19.7%	12.1%–17.0%
Growth rate in the terminal period	1.7%	1.7%
WACC after tax	9.0%	10.1%
WACC before tax	11.4%	13.0%

Values assigned to key assumptions reflect past experience and the management's expectations on the future sales and production volumes, which are based on the current structure and production capacity of each CGU. The seasonality and current market situation of each cash generating unit have been considered separately. In addition, data on growth, demand and price development provided by various research institutions have been utilized. The growth rate of 1.7% for the terminal period is based on the long-term expectations on the growth in the Metso's market environments considering the current low interest rate environment and overall financial market situation.

WACC before tax is used as a discount factor in the calculations. It takes into account the expected return on both debt and equity and has been derived from the WACC on comparable peer industry betas, capital structure and tax rates. CGU WACCs are evaluated annually for testing and CGU specific risk is incorporated through individual beta factors from the market data of the segment's peer companies.

Sensitivity analysis

The sensitivity to impairment of the calculations of both cash generating unit was tested in the following scenarios:

- Scenario 1: increasing WACC by 2.0 percentage points
- Scenario 2: reducing the terminal growth rate from 1.7% to 1.2% and increasing WACC by 2.0 percentage points

The impact to the value in use of the CGUs in the sensitivity analysis

%	Flow Control (continuing operations)	Minerals (discontinued operations)	Metso total
WACC increase by 2 p.p.	–24%	–23%	–20%
Terminal growth from 1.7% to 1.2% and WACC increase by 2 p.p.	–21%	–20%	–18%

The sensitivity analysis also includes several cash projections on break-even levels of EBITDA-%, WACC and sales growth based on reasonable change in the future performance of the CGU. However, the impact on the present value obtained is limited as long as there is no permanent weakening expected for the business, which would affect the terminal value. Based on these sensitivity analyses, the management believes that no reasonably possible change of the key assumptions used would cause the carrying value of any CGU to exceed its recoverable amount. In 2019, the sensitivity analysis did not indicate risks of impairment.

3.2 Tangible assets

Accounting policy

Tangible assets are stated at historical cost, less accumulated depreciation and impairment loss, if any. The tangible assets of acquired subsidiaries are measured at their fair value at the acquisition date.

Depreciation is calculated on a straight-line basis over the expected useful lives of the assets as follows:

Buildings and structures 15–40 years
Machinery and equipment 3–20 years
Land and water areas are not depreciated.

Expected useful lives are reviewed at each balance sheet date and if they differ significantly from previous estimates, the remaining depreciation periods are adjusted accordingly.

Subsequent improvement costs related to an asset are included in the carrying value of such asset or recognized as a separate asset, as appropriate, only when the future economic benefits associated with the costs are probable and the related costs can be separated from normal maintenance costs.

Metso reviews tangible assets to be held and used by the company for impairment whenever events and changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Gains and losses on the disposal of tangible asset and possible impairments are recognized in operating income and expenses. Previously recognized impairment loss may be reversed if there is a significant improvement to the circumstances having initially caused the impairment, however not to a higher value than the carrying amount, which would have been recorded had there been no impairment in prior years.

Capitalized interests

The interest expenses of self-constructed tangible assets are capitalized in Metso's financial statements. The capitalized interest expense is amortized over the estimated useful life of the underlying asset.

Government grants

Government grants relating to additions to tangible assets are deducted from the acquisition cost of the asset and they reduce the depreciation charge of the related asset. Other government grants are deferred and recognized as profit concurrently with the costs they compensate.

Estimates and assessments by Management

Acquisitions, disposals and restructuring actions typically generate a need for the reassessment of the recoverable values and remaining useful lives of the assets. When tangible assets are valued at fair value less costs of disposal, selling price, incremental costs and selling costs need to be estimated by management.

Tangible assets, continuing operations

2019 EUR million	Land and water areas	Buildings and structures	Machinery and equipment	Assets under construction	Tangible assets total
Acquisition cost at beginning of year, Metso total	40	228	562	33	863
Acquisition cost at beginning of year, discontinued operations	−35	−181	−438	−31	−684
Translation differences	0	0	1	0	2
Capital expenditure	0	0	4	12	16
Reclassifications	–	0	2	−3	–
Other changes	–	–	−3	0	−3
Acquisition cost at end of year	6	48	128	11	194
Accumulated depreciation at beginning of year, Metso total	–	−131	−428	–	−558
Accumulated depreciation at beginning of year, discontinued operations	–	105	333	–	438
Translation differences	–	0	−1	–	−1
Other changes	–	0	3	–	4
Impairment losses	–	–	0	–	0
Amortization charges for the year	–	−2	−8	–	−10
Accumulated depreciation at end of year	–	−28	−100	–	−128
Net book value at end of year, continuing operations	6	21	28	11	67

Tangible assets, discontinued operations

2019 EUR million	Land and water areas	Buildings and structures	Machinery and equipment	Assets under construction	Tangible assets total
Acquisition cost at beginning of year	35	181	438	31	684
Translation differences	0	0	0	0	0
Business acquisitions	9	18	17	0	45
Business disposals	0	−1	−14	0	−16
Capital expenditure	–	3	23	52	78
Reclassifications	–	12	21	−32	0
Other changes	0	−7	−25	−4	−36
Acquisition cost at end of year	43	206	460	46	755
Accumulated depreciation at beginning of year	–	−105	−333	–	−438
Translation differences	–	0	0	–	0
Business acquisitions	–	−1	−3	–	−4
Business disposals	–	0	12	–	12
Other changes	–	2	20	–	22
Impairment losses	–	3	−2	–	1
Amortization charges for the year	–	−5	−21	–	−26
Accumulated depreciation at end of year	–	−106	−327	–	−433
Net book value at end of year, discontinued operations	43	100	132	46	321

Tangible assets, comparison period, Metso total

2018 EUR million	Land and water areas	Buildings and structures	Machinery and equipment	Assets under construction	Tangible assets total
Acquisition cost at beginning of year	43	229	558	10	840
Translation differences	0	−2	−14	−1	−17
Business acquisitions	1	9	5	0	14
Capital expenditure	–	4	24	33	62
Reclassifications	–	0	10	−10	–
Other changes	−3	−12	−20	0	−35
Acquisition cost at end of year	40	228	562	33	863
Accumulated depreciation at beginning of year	–	−131	−422	–	−553
Translation differences	–	1	11	–	12
Acquisitions	–	−1	−2	–	−3
Other changes	–	9	17	–	27
Impairment losses	–	−1	−1	–	−2
Depreciation for the year	–	−8	−32	–	−40
Accumulated depreciation at end of year	–	−131	−428	–	−558
Net book value at end of year, Metso total	40	97	135	33	305

3.3 Depreciation and amortization

Depreciation and amortization

2019 EUR million	Continuing operations	Discontinued operations	Reversal of amortization and depreciation	Metso total
Intangible assets from acquisitions	–2	–5	–3	–10
Other intangible assets	–2	–7	–1	–10
Tangible assets				
Buildings and structures	–2	–5	–1	–8
Machinery and equipment	–8	–21	–5	–33
Right-of-use assets				
Land areas	0	–	0	0
Buildings	–10	–12	–3	–25
Machinery and equipment	–1	–6	–2	–9
Total	–25	–57	–14	–96

Depreciation and amortization by function

2019 EUR million	Continuing operations	Discontinued operations	Reversal of amortization and depreciation	Metso total
Cost of goods sold	–17	–33	–8	–58
Selling, general and administrative expenses	–7	–24	–6	–38
Total	–25	–57	–14	–96

Depreciation and amortization, comparison period

2018 EUR million	Continuing operations	Discontinued operations	Metso total
Intangible assets from acquisitions	0	–5	–5
Other intangible assets	–2	–11	–13
Tangible assets			
Buildings and structures	–2	–6	–8
Machinery and equipment	–8	–24	–32
Total	–12	–46	–58

Depreciation and amortization by function, comparison period

2018 EUR million	Continuing operations	Discontinued operations	Metso total
Cost of goods sold	–8	–27	–35
Selling, general and administrative expenses	–4	–19	–23
Total	–12	–46	–58

3.4 Right-of-use assets

Accounting policy

A lease is a contract in which the right to use an asset is granted for a specified period in exchange for compensation.

Until December 31, 2018, a lease was defined as an agreement in which the lessor conveys to the lessee the right to use an asset for a specified period in return for a payment. Under IAS 17, beneficial ownership of leased asset was transferred to the lessee if the lessee substantially bore all risks and rewards incidental to ownership of the leased asset. If beneficial ownership of the leased asset was attributed to Metso as the lessee, the asset was capitalized at the lower of the fair value of the leased property or the present value of the minimum lease payments. A corresponding lease liability was recognized under non-current liabilities, net of finance charges. The lease liability was subsequently measured at amortized cost and lease payments were allocated between repayment of the lease liability and finance charges. Assets acquired under finance leases were depreciated over the useful life of the asset or over the lease period, if shorter.

When acting as a lessee, Metso has recognized assets for the right of use received and liabilities for the payment obligations for all leases in the balance sheet since 1 January 2019. The right-of-use assets and corresponding lease liabilities are recognized at present value. Lease liabilities include the following payments:

- fixed payments, less any lease incentives provided by the lessor;
- variable payments that depend on an index or a rate;
- expected payments under residual value guarantees;
- the exercise price of purchase options when exercise is estimated to be reasonably certain; and
- penalties for terminating the lease if the lease term reflects the exercise of a termination option.

Lease payments are discounted by using the implicit interest rate in the lease to the extent it can be readily determined. Otherwise the incremental borrowing rate is used as the discount rate. Right-of-use assets are measured at cost. The cost comprises of the following:

- lease liability
- lease payments made at or before the commencement of the lease, less lease incentives received
- initial direct costs and
- estimated dismantling and restoration costs.

Subsequently, right-of-use assets are measured at cost and depreciated over the shorter of estimated useful life and the lease term. Metso's right-of-use assets consist primarily of operative and office premises in the category of Building, and cars, operative machinery, and equipment in the category of Machinery and equipment.

Metso uses practical expedients provided for leases. Lease payments for leases of low value assets and short-term leases (shorter than twelve months) are expensed in the income statement on a straight-line basis. Low value assets comprise IT equipment and other small office items. In addition, the new requirements are not applied to lease contracts for intangible assets. Also, for contracts that comprise both lease components and non-lease components, the payments are not split between these components.

A number of lease contracts include extension and termination options. Such options have been taken into account when determining the lease term. A period covered by Metso's option to extend the lease is included in the lease term if such option is sufficiently likely to be exercised. Further, a period covered by Metso's option to terminate the lease is included in the lease term if it is reasonably certain that such option will not be exercised.

Estimates and assessments by Management

The most significant management judgment relates to lease agreements that include extension or early termination options for Metso. For these contracts, management needs to assess the probability of exercising such option, which may significantly affect the estimated length of lease term and consequently the amounts of right-of-use asset and lease liability as well as the related depreciation and interest expense. Management judgment is also applied in defining the incremental borrowing rate used to calculate the present value of the future lease payments.

Amounts recognized in balance sheet, continuing operations

2019 EUR million	Land and water areas	Buildings	Machinery and equipment	Right-of-use assets total
Acquisition cost at beginning of year, Metso total	0	107	19	126
Acquisition cost at beginning of year, discontinued operations	0	–58	–16	–74
Additions	–	5	2	7
Derecognition	–	–2	0	–2
Acquisition cost at end of year	0	53	5	57
Translation differences	–	0	–	0
Other changes	–	0	0	0
Depreciation for the year	0	–10	–1	–11
Accumulated depreciation at end of year	0	–10	–1	–11
Net book value at end of year, continuing operations	0	43	3	46

Amounts recognized in balance sheet, discontinued operations

2019 EUR million	Land and water areas	Buildings	Machinery and equipment	Right-of-use assets total
Acquisition cost at beginning of year	–	58	16	74
Translation differences	–	0	0	0
Acquisitions	–	3	3	6
Additions	1	29	6	35
Derecognition	–	–3	–1	–4
Disposals	–	0	0	0
Acquisition cost at end of year	1	87	23	110
Translation differences	0	0	0	0
Other changes	0	1	1	1
Depreciation for the year	0	–12	–6	–18
Accumulated depreciation at end of year	0	–11	–6	–17
Net book value at end of year, discontinued operations	1	76	17	93

Amounts recognized in profit and loss

	2019			2018
EUR million	Continuing operations	Discontinued operations	Metso total	Metso total
Rental expenses, continuing operations	–	–	–	–17
Rental expenses, discontinued operations	–	–	–	–22
Rental expenses, total	–	–	–	–39
Operating profit				
Depreciation expense on right-of-use assets	–11	–18	–30	–
Rental expense relating to leases of low-value assets	–1	–2	–3	–
Rental expense relating to leases of short-term assets	0	–2	–2	–
Finance expenses				
Interest expense on lease liabilities	–1	–4	–5	–
Total amount recognized in profit and loss	–14	–26	–40	–39

The total cash outflow for leases including short-term leases and leases of low value assets in 2019 was EUR 12 million in continuing operations and EUR 32 million in discontinued operations.

Maturity analysis of lease liabilities is presented in note 4.5.

4 Capital structure and financial instruments

4.1 Financial risk management

As a global company, Metso is exposed to a variety of business and financial risks. Financial risks are managed centrally by the Group Treasury under annually reviewed written policies approved by the Board of Directors. Treasury operations are monitored by the Treasury Management Team chaired by the CFO. Group Treasury identifies, evaluates and hedges financial risks in close co-operation with the operating units. Group Treasury functions as counterparty to the operating units, manages centrally external funding and is responsible for the management of financial assets and appropriate hedging measures. The objective of financial risk management is to minimize potential adverse effects on Metso's financial performance.

Sensitivity analysis

Sensitivity analysis figures presented in connection with different financial risks are based on the risk exposures at the balance sheet date. The sensitivity is calculated by assuming a change in one of the risk factors of a financial instrument, such as interest or currency. It is not likely that the future volatility of a risk factor will develop in accordance with the test assumptions and that only one factor would be impacted.

When calculating the sensitivity, Metso has chosen to use market conventions in assuming a one percentage point (100 basis points) variation in interest rates, 10 percent change in foreign exchange rates and in commodity prices because this provides better comparability from one period to another and information on the volatility to users of financial statements. Metso is aware that such assumptions may not be realistic when compared to past volatility and they are not intended to reflect the future. Metso has chosen not to use past volatility as this could mislead the users of financial statements to assume the analysis reflect management's view on future volatility of the financial instruments.

Liquidity and refinancing risk and capital structure management

Liquidity or refinancing risk arises when a company is not able to arrange funding at terms and conditions corresponding to its creditworthiness. Sufficient cash, short-term investments and committed and uncommitted credit facilities are maintained to protect short-term liquidity. Diversification of funding among different markets and adequate number of financial institutions is used to safeguard the availability of liquidity at all times. Group Treasury monitors bank account structures, cash balances and forecasts of the operating units and manages the utilization of the consolidated cash resources.

The liquidity position of the Group remained good supported by the available back up credit facilities and maturity structure of the funding. During the year bank loans with nominal values EUR 300 million and EUR 150 million and commercial paper loan with a nominal value EUR 10 million were withdrawn. Public bonds with a nominal value EUR 174 matured and were repaid. At the end of 2019 liquid funds amounted to EUR 213 million (EUR 426 million in 2018). Liquid funds consisted of cash and cash equivalents amounted to EUR 213 million (EUR 332 million in 2018), and there were no deposits nor securities with maturity over three months (EUR 94 million in 2018). Additionally, committed undrawn revolving credit facility amounted to EUR 600 million (EUR 500 million in 2018) and committed undrawn European Investment Bank loan facility to EUR 40 million (EUR 40 million in 2018). The syndicated revolving credit facility matures in September 2024, and has two extension options for one year each. Additionally, the uncommitted Finnish Commercial Paper program totaling EUR 500 million can be utilized for funding. Metso has also negotiated a syndicated revolving credit facility of EUR 200 million maturing in 2023 with two one-year extension options. The EUR 200 million -facility will be available for future Neles on the effective date of Metso's demerger.

Metso's refinancing risk is managed by balancing the proportion of short-term and long-term debt as well as the average remaining maturity of long-term debt. The tables below analyze the repayments and interests on Metso's liabilities by the remaining maturities from the balance sheet date to the contractual maturity date. The net interest payments of interest rate swaps hedging long-term loans are included in the long-term debt repayment figures.

Maturities of debts

2019	Continuing operations Dec 31, 2019			Discontinued operations Dec 31, 2019		
EUR million	<1 year	1–5 years	>5 years	<1 year	1–5 years	>5 years
Long-term debt						
Repayments	–	36	–	–	814	–
Interests	0	1	–	11	24	–
Other liabilities	–	0	–	–	2	–
Short-term debt						
Repayments	20	–	–	24	–	–
Interests	0	–	–	0	–	–
Trade payables	63	–	–	385	–	–
Other liabilities	1	–	–	23	–	–
Total	84	37	–	443	840	–

	Metso total Dec 31, 2019			Metso total Dec 31, 2018		
EUR million	<1 year	1–5 years	>5 years	<1 year	1–5 years	>5 years
Long-term debt						
Repayments	–	850	–	174	100	300
Interests	11	25	–	9	24	4
Other liabilities	–	2	–	–	–	–
Short-term debt						
Repayments	43	–	–	41	–	–
Interests	1	–	–	1	–	–
Trade payables	448	–	–	431	–	–
Other liabilities	25	–	–	8	2	–
Metso total	528	877	–	664	126	304

Detailed information on balance sheet items is presented in other notes to consolidated financial statements.

Capital structure is assessed regularly by the Board of Directors and managed operationally by the Group Treasury.

Capital structure management in Metso comprises both equity and interest-bearing debt. As of December 31, 2019, the equity attributable to shareholders was EUR 1,516 million (EUR 1,406 million in 2018) and the amount of interest-bearing debt was EUR 880 million (EUR 598 million in 2018). The objectives are to safeguard the ongoing business operations and to optimize the cost of capital. Metso has a target to maintain a solid investment grade credit rating.

Metso's credit rating was as at December 31, 2019: Standard & Poor's, BBB / A–2, credit watch negative.

There are no prepayment covenants in Metso's financial contracts which would be triggered by changes in credit rating. Covenants included in some loan agreements refer to a combination of certain credit rating level and Metso's capital structure. Metso is in compliance with all covenants and other terms of its debt instruments.

Interest rate risk

Interest rate risk arises when changes in market interest rates and interest margins influence finance costs, returns on financial investments and valuation of interest bearing balance sheet items. Interest rate risks are managed by balancing the ratio between fixed and floating interest rates and administrating duration of debt and investment portfolios. Additionally, Metso may use derivative instruments such as forward rate agreements, swaps, options and futures contracts to mitigate the risks arising from interest bearing assets and liabilities. The interest rate risk is managed and controlled by the Group Treasury and measured using sensitivity analysis and duration of long-term debt. The duration[1] of long-term debt was 1.7 years as at December 31, 2019 (2.9 years in 2018).

At the end of 2019 the balance sheet items exposed to interest rate risk were interest-bearing assets of EUR 219 million (EUR 423 million in 2018) and interest-bearing debt of EUR 880 million (EUR 598 million in 2018). Of the total interest-bearing debt 96 percent (93 percent in 2018) was denominated in EUR.

The basis for the interest rate sensitivity analysis is an aggregate group level interest exposure, composed of interest-bearing assets, interest bearing debt and financial derivatives, such as interest rate swaps, which are used to hedge the underlying exposures. For all interest-bearing current debt and assets to be fixed during next 12 months a one percentage point move upwards or downwards in interest rates with all other variables held constant would have an effect on Metso's net interest expenses, net of taxes, of EUR –/+ 2.0 million (EUR +/– 0.7 million in 2018).

For financial assets valued at fair value, a one percentage point change upwards or downwards in all interest rates with all other variables held constant would have following effects, net of taxes, in income statement and equity:

[1] Macaulay duration

	2019			2018
EUR million	Continuing operations	Discontinued operations	Metso total	Metso total
Effects in				
Income statement	–	+/– 1.7	+/– 1.7	+/– 1.5
Equity	–	+/– 0.0	+/– 0.0	+/– 0.0

The effect in the income statement comprises of the changes in the fair value on the financial instruments, which are measured at fair value through profit and loss. The effect in the equity is comprised of the changes in the fair value on the financial instruments, which are measured at fair value through other comprehensive income, such as derivatives under hedge accounting.

Foreign exchange risk

Metso operates globally and is exposed to foreign exchange risk in several currencies, although the geographical diversity of operations decreases the significance of any individual currency. About 80 percent of Metso's sales originate from outside the euro zone; the main currencies being Euro, US dollar, Australian dollar, Chilean peso, Swedish crown and Indian rupee.

Transaction exposure

Foreign exchange transaction exposure arises when an operating unit has commercial or financial transactions and payments in other than its own functional currency, and when related cash inflow and outflow amounts are not equal or concurrent.

In accordance with the Metso Treasury Policy, operating units are required to hedge in full the foreign currency exposures on balance sheet and other firm commitments. Future cash flows denominated in a currency other than the functional currency of the unit are hedged with internal foreign exchange contracts with the Group Treasury for periods, which do not usually exceed two years. Operating units also do some hedging directly with banks in countries, where regulation does not allow corporate internal cross-border contracts.

Group Treasury monitors the net position of each currency and decides to what extent a currency position is to be closed. Group Treasury is however responsible for entering into external forward transaction whenever an operating unit applies hedge accounting. Metso Treasury Policy defines upper limits on the open currency exposures managed by the Group Treasury; limits have been calculated on the basis of their potential profit impact. To manage the foreign currency exposure Group Treasury may use forward exchange contracts and foreign exchange options.

Total amount of foreign currency exposures on December 31

	2019			2018
EUR million	Continuing operations	Discontinued operations	Metso total	Metso total
Operational items	28	232	260	224
Financial items	119	499	618	471
Hedges	–146	–712	–857	–660
Total exposure	1	19	21	34

This aggregate group level currency exposure is the basis for the sensitivity analysis of foreign exchange risk. This exposure, net of respective hedges, is composed of all assets and liabilities denominated in foreign currencies, projected cash flows for unrecognized firm commitments, both short- and long-term sales and purchase contracts and anticipated operational cash flows to the extent their realization has been deemed highly probable and therefore hedged. This analysis excludes net foreign currency investments in subsidiaries together with instruments hedging these investments.

Assuming euro to appreciate or depreciate ten percent against all other currencies, the impact on cash flows, net of taxes, derived from the year-end net exposure as defined above, would be EUR +/– 1.1 million (EUR +/– 0.7 million in 2018). Transaction exposure is spread in about 40 currencies and as of December 31, 2019, the biggest open exposures were in US dollar, 40 percent, and Indian Rupee, 10 percent.

A sensitivity analysis of financial instruments as required by IFRS 7, excludes following items: projected cash flows for unrecognized firm commitments, advance payments, both short- and long-term purchase contracts and anticipated operational cash flows. The next table presents the effects, net of taxes, of a +/– 10 percent change in EUR foreign exchange rates:

2019	Continuing operations				Discontinued operations			
EUR million	USD	ZAR	Others	Total	AUD	CNY	Others	Total
Effects in								
Income statement	+/– 0.3	–/+ 0.6	–/+ 0.8	–/+ 1.1	–/+ 1.3	+/– 1.0	–/+ 1.1	–/+ 1.5
Equity	–	–	–	–	+/– 0.1	–/+ 0.1	–/+ 0.2	–/+ 0.2

	2019 Metso total				2018 Metso total			
EUR million	AUD	SEK	Others	Total	USD	SEK	Others	Total
Effects in								
Income statement	–/+ 1.3	–/+ 0.9	–/+ 0.3	–/+ 2.5	+/– 2.1	+/– 0.5	–/+ 0.8	+/– 1.8
Equity	+/– 0.0	–/+ 0.6	+/– 0.1	–/+ 0.5	–/+ 0.5	–/+ 2.5	+/– 0.6	–/+ 2.4

Effect in equity is the fair value change in derivatives contracts qualifying as cash flow hedges for unrecognized firm commitments. Effect in income statement is the fair value change for all other financial instruments exposed to foreign exchange risk including derivatives, which qualify as cash flow hedges, to the extent the underlying sales transaction, recognized over time, has been recognized as revenue.

Translation or equity exposure

Foreign exchange translation exposure arises when the equity of a subsidiary is denominated in currency other than the functional currency of the Parent Company. The major translation exposures are US dollar, Chinese yuan, Brazilian real, Indian rupee and in Pound sterling, which altogether comprise approximately 70 percent of the total equity exposure. Metso is currently not hedging any equity exposure.

Commodity risk

Metso is exposed to variations in prices of raw materials and of supplies. Metso units identify their commodity price hedging needs and hedges are executed through the Group Treasury using approved counterparties and instruments. Hedging is done on a rolling basis with a declining hedging level over time.

To reduce its exposure to the volatility caused by the surcharge for certain metal alloys (Alloy Adjustment Factor) comprised in the price of stainless steel charged by its suppliers, Metso has entered into average-price swap agreements for nickel. The Alloy Adjustment Factor is based on monthly average prices of its components of which nickel is the most significant. As of December 31, 2019, Metso had outstanding nickel swaps amounting to 336 tons (288 tons in 2018).

The sensitivity analysis of the commodity prices based on financial instruments under IFRS 7 comprises the net aggregate amount of commodities bought through forward contracts and swaps but excludes the anticipated future consumption of raw materials.

A 10 percent change upwards or downwards in commodity prices would have effects, net of taxes, of EUR +/– 0.2 million to income statement in year 2019 (EUR +/–0.2 million to income statement in year 2018).

Hedge accounting is not applied to nickel agreements, and the change in the fair value is recorded through profit and loss.

Other commodity risks are not managed using financial derivative instruments.

Credit and counterparty risk

Credit or counterparty risk is defined as the possibility of a customer or a financial counterparty not fulfilling its commitments towards Metso. The operating units of Metso are primarily responsible for credit risks pertaining to sales and procurement activities. The units assess the credit quality of their customers, by taking into account their financial position, past experience and other relevant factors. When appropriate, advance payments, letters of credit and third party guarantees, or credit insurance are used to mitigate credit risks. Group Treasury provides centralized services related to customer financing and seeks to ensure that the principles of the Treasury Policy are adhered to with respect to terms of payment and required collateral. Metso has no significant concentrations of credit risks.

The maximum credit risk equals the carrying value of trade and loan receivables. The credit quality is evaluated both on the basis of aging of the trade receivables and also on the basis of customer specific analysis. The aging structure of trade receivables is presented in note 2.2.

Counterparty risk arises also from financial transactions agreed upon with banks, financial institutions and corporates. The risk is managed by careful selection of banks and other counterparties, by counterparty specific limits determined in the Treasury Policy, and netting agreements such as ISDA (Master agreement of International Swaps and Derivatives Association). The compliance with counterparty limits is regularly monitored.

Credit risk exposure relates to carrying value of financial assets valued at amortized cost, such as trade receivables, interest bearing receivables, other receivables, deposits and security investments and cash and cash equivalents, and customer contract assets.

Impairment on cash on hand, bank accounts, deposits and interest-bearing investments is assessed regularly, but seen minor, because of their high investment grade and short duration.

Group Treasury makes a financial analysis of corporate counterparties regularly. In addition, the investments are constantly monitored by Group Treasury and Metso does not expect any future credit losses from these investments.

For trade receivables and customer contract assets Metso applies the IFRS 9 simplified approach to measuring expected credit losses, which uses a lifetime expected loss allowance to be assessed and recognized regularly, see note 2.2.

Fair value estimation

For those financial assets and liabilities which have been recognized at fair value in the balance sheet, the following measurement hierarchy and valuation methods have been applied:

Level 1 Quoted unadjusted prices at the balance sheet date in active markets. The market prices are readily and regularly available from an exchange, dealer, broker, market information service system, pricing service or regulatory agency. The quoted market price used for financial assets is the current bid price. Level 1 financial instruments include fund investments classified as fair value through profit and loss.

Level 2 The fair value of financial instruments in Level 2 is determined using valuation techniques. These techniques utilize observable market data readily and regularly available from an exchange, dealer, broker, market information service system, pricing service or regulatory agency. Level 2 financial instruments include:

- Over-the-counter derivatives classified as financial assets/liabilities at fair value through profit and loss or qualified for hedge accounting
- Debt securities classified as financial instruments at fair value through profit and loss
- Fixed rate debt under fair value hedge accounting

Level 3 A financial instrument is categorized into Level 3 if the calculation of the fair value cannot be based on observable market data. Metso had no such instruments in 2019 or in 2018.

Metso's financial assets and liabilities measured at fair value

	Continuing operations			Discontinued operations		
2019 EUR million	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
Assets						
Financial assets at fair value through profit and loss						
Derivatives not under hedge accounting	–	0	–	–	10	–
Interest bearing investments	–	–	–	–	–	–
Fund investments	–	–	–	–	–	–
Financial assets at fair value through other comprehensive income						
Derivatives under hedge accounting	–	–	–	–	8	–
Interest bearing investments	–	–	–	–	–	–
Total assets	–	0	–	–	18	–
Liabilities						
Financial liabilities at fair value through profit and loss						
Derivatives not under hedge accounting	–	1	–	–	11	–
Long-term debt at fair value	–	–	–	–	102	–
Derivatives qualified for hedge accounting						
Derivatives under hedge accounting	–	–	–	–	5	–
Total liabilities	–	1	–	–	118	–

Metso's financial assets and liabilities measured at fair value, comparison period, Metso total

2018 EUR million	Level 1	Level 2	Level 3
Assets			
Financial assets at fair value through profit and loss			
Derivatives not under hedge accounting	–	5	–
Interest bearing investments	–	–	–
Fund investments	10	–	–
Financial assets at fair value through other comprehensive income			
Derivatives under hedge accounting	–	8	–
Interest bearing investments	–	–	–
Total assets	10	13	–
Liabilities			
Financial liabilities at fair value through profit and loss			
Derivatives not under hedge accounting	–	10	–
Long-term debt at fair value	–	188	–
Derivatives qualified for hedge accounting			
Derivatives under hedge accounting	–	7	–
Total liabilities	–	205	–

4.2 Financial assets and liabilities by category

Accounting policy

Under IFRS 9 Metso classifies financial assets and liabilities in to the measurement categories according to contractual terms of the cash flows and Metso's business model to manage the investment at the inception. Reclassification of the categories will be made only, if the business model for managing those assets changes. Financial assets and liabilities are classified as non-current items, when the remaining maturity exceeds 12 months and as current items, when the remaining maturity is 12 months or less. Financial assets and liabilities are classified as follows:

At amortized cost

Financial assets

Financial assets valued at amortized cost are investments in debt instruments or receivables, which are held end of maturity and for collection of contractual cash flows, where those cash flows are solely payments of principal and/or interest. These are recognized at fair value less transaction costs, and subsequently measured at amortized cost using the effective interest method. Interest income is recognized in financial income in income statement. Financial assets at amortized cost include deposit, commercial papers, interest bearing loans and receivables, trade receivables and non-interest bearing receivables. Impairment is assessed regularly and when the carrying value exceed the recoverable value of discounted cash flows, appropriate impairment is recognized in income statement.

For trade receivables, Metso applies the simplified method in IFRS 9, which requires expected lifetime losses to be recognized from initial recognition of the receivables. See more in note 2.2.

Financial liabilities

Issued bonds and withdrawn loan facilities from financial institutions as well as trade and other liabilities are valued at fair value, net transaction costs, and subsequently measured at amortized cost using the effective interest method. Trade and other receivables are non-interest bearing short-term unpaid debts.

The difference, between the debt amount net transaction cost recognized of bonds and loans from financial institutions and the redemption amount, is recognized in income statement as interest cost over the period of the borrowings using the effective interest method. Fees paid on the establishment of loan facilities are recognized income statement as other finance expense over the period of the facility, or, if the withdrawn of the loan is probable, as part of transaction cost.

At fair value through other comprehensive income (FVOCI)

Financial assets valued at fair value through other comprehensive income are debt instruments or receivables, which are held for collection of contractual cash flows or held for selling the assets, and where contractual cash flows are solely payments of principal and/or interest. Interest income is recognized in income statement using the effective interest method. Change in fair value is recognized in other comprehensive income (OCI). At the derecognition, the cumulative previously booked gains and losses in OCI are released from equity to income statement. Metso includes in this measurement category derivatives under hedge accounting, trade receivables for sale and security investments with maturity less than three months. Impairment is assessed regularly and when the carrying value exceed the recoverable value of discounted cash flows, appropriate impairment is recognized in income statement.

At fair value through profit and loss (FVPL)

Financial assets

Financial assets valued at fair value through profit and loss are equity investments, investments in funds and derivatives not under hedge accounting. Change in fair value and gain or loss at the derecognition will be recognized in income statement. The change in the fair value includes the valuation of the impairment risk as well. Fair value of listed equity shares or investments in funds are the quoted market price on the balance sheet date. Unlisted shares are valued at cost less impairment, if any.

Financial liabilities

Fixed rate debts covered by fair value hedges accounting and derivatives not under hedge accounting are included in this measurement category. Change in fair value and gains or losses at the derecognition will be recognized in income statement.

Financial assets and liabilities by categories as of December 31, continuing operations

2019 EUR million	At fair value through profit and loss	At fair value through other comprehensive income	At amortized cost	Carrying value	Fair value
Non-current financial assets					
Equity investments	–	–	–	–	–
Loan receivables	–	–	–	–	–
Derivatives	–	–	–	–	–
Other receivables	–	–	–	–	–
Total	–	–	–	–	–
Current financial assets					
Trade receivables	–	–	95	95	95
Trade receivables, for sale	–	–	–	–	–
Loan receivables	–	–	–	–	–
Derivatives	0	–	–	0	0
Other receivables	–	–	40	40	40
Fund investments	–	–	–	–	–
Deposits and securities, maturity three months or less	–	–	15	15	15
Cash at hand and on bank accounts	–	–	42	42	42
Total	0	–	192	192	192
Non-current liabilities					
Bonds	–	–	–	–	–
Lease liabilities	–	–	37	37	37
Other non-current debt	–	–	36	36	36
Derivatives	–	–	–	–	–
Other liabilities	–	–	0	0	0
Total	–	–	73	73	73
Current liabilities					
Current portion of non-current debt	–	–	–	–	–
Lease liabilities	1	–	10	10	10
Loans from financial institutions	–	–	20	20	20
Trade payables	–	–	63	63	63
Derivatives	0	–	–	1	1
Other liabilities	–	–	39	39	39
Total	1	–	132	132	132

Financial assets and liabilities by categories as of December 31, discontinued operations

2019 EUR million	At fair value through profit and loss	At fair value through other comprehensive income	At amortized cost	Carrying value	Fair value
Non-current financial assets					
Equity investments	3	–	–	3	3
Loan receivables	–	–	6	6	6
Derivatives	2	0	–	2	2
Other receivables	–	–	10	10	10
Total	6	0	16	21	21
Current financial assets					
Trade receivables	–	–	572	572	572
Trade receivables, for sale	–	5	–	5	5
Loan receivables	–	–	1	1	1
Derivatives	10	6	–	16	16
Other receivables	–	–	139	139	139
Fund investments	–	–	–	–	–
Deposits and securities, maturity three months or less	–	–	15	15	15
Cash at hand and on bank accounts	–	–	141	141	141
Total	10	11	868	889	889
Non-current liabilities					
Bonds	98	–	290	388	406
Lease liabilities	–	–	69	69	69
Other non-current debt	–	–	414	414	414
Derivatives	2	–	–	2	2
Other liabilities	–	–	2	2	2
Total	100	–	775	875	893
Current liabilities					
Current portion of non-current debt	–	–	–	–	–
Lease liabilities	–	–	21	21	21
Loans from financial institutions	–	–	14	14	14
Commercial papers	–	–	10	10	10
Trade payables	–	–	385	385	385
Derivatives	8	5	–	13	13
Other liabilities	–	–	251	251	251
Total	8	5	660	673	673

Financial assets and liabilities by categories as of December 31, comparison period, Metso total

2018 EUR million	At fair value through profit and loss	At fair value through other comprehensive income	At amortized cost	Carrying value	Fair value
Non-current financial assets					
Equity investments	3	–	–	3	3
Loan receivables	–	–	6	6	6
Derivatives	1	2	–	3	3
Other receivables	–	–	10	10	10
Metso total	4	2	16	22	22
Current financial assets					
Trade receivables	–	–	575	575	575
Trade receivables, for sale	–	9	–	9	9
Loan receivables	–	–	1	1	1
Derivatives	4	6	–	10	10
Other receivables	–	–	134	134	134
Deposits and securities, maturity more than three months	–	–	94	94	94
Fund investments	10	–	–	10	10
Deposits and securities, maturity three months or less	–	–	32	32	32
Cash at hand and on bank accounts	–	–	289	289	289
Metso total	14	15	1,125	1,154	1,154
Non-current liabilities					
Bonds	95	–	288	383	402
Lease liabilities	–	–	0	0	0
Other non-current debt	–	–	–	–	–
Derivatives	2	–	–	2	2
Other liabilities	–	–	2	2	2
Metso total	97	–	290	387	406
Current liabilities					
Current portion of non-current debt	87	–	87	174	174
Lease liabilities	–	–	0	0	0
Loans from financial institutions	–	–	41	41	41
Trade payables	–	–	431	431	431
Derivatives	7	7	–	14	14
Other liabilities	–	–	248	248	248
Metso total	94	7	807	908	908

For more information on derivative financial instruments, see note 4.8.

4.3 Liquid funds

Accounting policy

Deposits and securities with maturities over 3 months, consist of highly liquid investments, which are part of Metso's cash management. These commercial papers deposit and debt investments have maturity less than twelve months, and they are measured at amortized cost.

Cash and cash equivalents consist of cash on hand and bank accounts, deposits and interest bearing investments, which are easily convertible to known amount of cash within the period of three months or less as well as bond fund investments, with the same risk profile.

Cash on hand, bank accounts, deposits and interest bearing investments are measured at amortized cost. The bond fund investments are measured at fair value through profit and loss accounts.

Impairment on cash on hand, bank accounts, deposits and interest bearing investments is assessed regularly, but seen minor, because of their high investment grade and short duration. Impairment risk of bond fund investment is included in the change in fair value of them.

EUR million	2019 Metso total	2018 Metso total
Deposits and securities, maturity more than three months	–	94
Cash and cash equivalents		
Fund investments	–	10
Deposits and securities, maturity three months or less	15	32
Cash on hand and bank accounts	42	289
Cash and cash equivalents	57	332
Liquid funds attributable for discontinued operations	156	–
Liquid funds	213	426

Average returns for deposits and securities

	2019			2018
EUR million	Continuing operations	Discontinued operations	Metso total	Metso total
With maturity more than three months	–	–	–	0.01%
With maturity three months or less	2.03%	4.24%	3.11%	2.80%

4.4 Equity

Accounting policy

Issue of new shares and own shares

Transaction costs directly attributable to the issue of new shares or options are shown net of their tax effect in equity as a deduction from the proceeds.

Own shares held by the Parent Company valued at the historical acquisition price are deducted from equity. Should such shares be subsequently sold or reissued, the consideration received, net of any directly attributable transaction costs and related income tax, is recorded in equity.

Translation differences

The translation differences arising from subsidiary net investments and non-current subsidiary loans without agreed settlement dates are recognized through the Other Comprehensive Income (OCI) to cumulative translation adjustments under equity. When Metso hedges the net investment of its foreign subsidiaries with foreign currency loans and with financial derivatives, the translation difference is adjusted by the currency effect of the hedging instruments which has been recorded, net of taxes, through OCI in equity. When a foreign entity is disposed of, the respective accumulated translation difference, including the effect from qualifying hedging instruments, is reversed through OCI and recognized in the consolidated statement of income as part of the gain or loss on the sale. If the equity of a subsidiary denominated in a foreign currency is reduced by a return of capital, the translation difference relating to the reduction is reversed through OCI and recognized in the consolidated statement of income.

Dividends

Dividends proposed by the Board of Directors are not recognized in the financial statements until they have been approved by the shareholders in the Annual General Meeting.

Share capital and number of shares

Metso Corporation's registered share capital, which is fully paid, was EUR 140,982,843.80 as at December 31, 2019 and 2018.

Shares	2019	2018
Number of outstanding shares at beginning of year	149,997,128	149,997,128
Shares granted from share ownership plans	79,040	–
Number of outstanding shares at end of year	150,076,168	149,997,128
Own shares held by the Parent Company	272,088	351,128
Total number of shares at December 31	150,348,256	150,348,256

As at December 31, 2019 the acquisition price of 272,088 own shares held by the Parent Company was EUR 6,197,235.34 and was recognized in treasury stock.

Dividend proposal

The Board of Directors proposes that a dividend of EUR 1,47 per share be paid based on the balance sheet to be adopted for the financial year, which ended December 31, 2019. Insofar as the dividend to be paid exceeds the net profit for the year ended December 31, 2019, the remaining amount will be paid from retained earnings from previous years. These financial statements do not reflect this dividend payable of EUR 221 million.

Fair value and other reserves

The hedge reserve includes the fair value movements of derivative financial instruments which qualify as cash flow hedges.

The fair value reserve includes the change in fair values of assets classified as trade receivables for sale. Share-based payments are presented within the fair value reserve.

The legal reserve consists of restricted equity, which has been transferred from distributable funds under the Articles of Association, local company act or by a decision of the shareholders.

The other reserves consist of the distributable fund and the invested non-restricted equity fund held by the Parent Company.

Changes in fair value and other reserves

EUR million	Treasury stock	Hedge reserve	Fair value reserve	Legal reserve	Other reserves	Total
January 1, 2018	–9	–2	8	14	293	305
Cash flow hedges						
Fair value gains (+) / losses (–), net of tax	–	2	–	–	–	2
Transferred to profit and loss, net of tax						
Sales	–	0	–	–	–	0
Cost of goods sold / Administrative expenses	–	0	–	–	–	0
Interest income / expenses	–	–3	–	–	–	–3
Instruments at fair value and share-based rewards						
Fair value gains (+) / losses (–), net of tax	–	–	0	–	–	0
Transferred to profit and loss, net of tax	–	–	0	–	–	0
Share-based payments, net of tax	–	–	–2	–	–	–2
Other	–	–	–	0	–	0
December 31, 2018	–9	–3	6	14	293	302
Cash flow hedges						
Fair value gains (+) / losses (–), net of tax	–	8	–	–	–	8
Transferred to profit and loss, net of tax						
Sales	–	–4	–	–	–	–4
Interest income / expenses	–	–2	–	–	–	–2
Share-based payments, net of tax	2	–	3	–	–	5
Other	–	–	–	–13	0	–12
Discontinued operations	–	0	–	–	–	0
December 31, 2019	–6	–	9	1	293	298

Currency translation adjustments on subsidiary net investments

EUR million	2019	2018
Cumulative translation adjustment at beginning of year	–101	–87
Currency translation, change	–	–13
Currency translation, change, continuing operations	0	–
Currency translation, change, discontinued operations	2	–
Currency translation, discontinued operations	151	–
Cumulative translation adjustment at December 31	52	–101

4.5 Borrowings and lease liabilities

Accounting policy

Long-term debt is initially recognized at fair value, net of transaction costs incurred and subsequently measured at amortized cost using the effective interest method. The difference, between the debt amount recognized and the redemption amount, is recognized in income statement as interest expense over the period of the borrowings. The fair value changes in borrowings covered by fair value hedge are, in respect of hedged risk, recognized through profit and loss. A portion of long-term debt is classified as short-term debt, when the settlement of the liability is due within 12 months from the balance sheet date. Borrowings are derecognized only, if the contractual obligation is discharged, cancelled or expired.

Fees paid on the establishment of loan facilities are recognized in income statement as other finance expense over the period of the facility, or, if the withdrawal of the loan is probable, as part of transaction cost. Transaction costs arising from modification to debt instruments are included in the carrying value of the debt and amortized using the effective interest method over the remaining period of the modified liability provided that the new conditions obtained through the modification do not substantially differ from those of the original debt. Modification gain or loss will be recognized in income statement at the time of non-substantial modification.

2019	Continuing operations		Discontinued operations	
EUR million	Carrying values	Fair values	Carrying values	Fair values
Bonds	–	–	388	406
Loans from financial institutions	36	36	413	414
Total borrowings	36	36	801	820
Lease liabilities	37	37	69	69
Total long-term interest bearing debt	73	73	870	889
Loans from financial institutions	20	20	14	14
Commercial papers	–	–	10	10
Total short-term borrowings	20	20	24	24
Lease liabilities	10	10	21	21
Total short-term interest bearing debt	30	30	45	45
Total interest bearing debt	103	103	915	934

	Metso total 2019		Metso total 2018	
EUR million	Carrying values	Fair values	Carrying values	Fair values
Bonds	388	406	383	402
Loans from financial institutions	449	450	–	–
Total borrowings	837	856	383	402
Lease liabilities	106	106	–	–
Total long-term interest bearing debt	943	962	383	402
Current portion of bonds	–	–	174	174
Loans from financial institutions	33	33	41	41
Commercial papers	10	10	–	–
Total short-term borrowings	43	43	215	215
Lease liabilities	31	31	–	–
Total short-term interest bearing debt	74	74	215	215
Total interest bearing debt	1,017	1,036	598	617

Bonds, discontinued operations

2019 EUR million	Nominal interest rate	Effective interest rate	Outstanding original loan amount	Outstanding carrying value
Public bond 2017–2024	1.13%	2.33%	300	288
Private placements 2022		3.80%	100	100
Bonds total			400	388

Bonds, comparison period, Metso total

2018 EUR million	Nominal interest rate	Effective interest rate	Outstanding original loan amount	Outstanding carrying value
Public bond 2012–2019	2.75%	2.91%	174	174
Public bond 2017–2024	1.13%	2.33%	300	283
Private placements 2022		3.80%	100	100
Bonds total			574	557

Metso has a Euro Medium Term Note Program (EMTN) of EUR 1.5 billion, under which EUR 388 million at carrying value were outstanding at the end of 2019 (EUR 557 million in 2018). EUR 288 million (EUR 457 million) of the outstanding amount were public bonds and EUR 100 million (EUR 100 million) private placements.

In 2019, public bond with nominal value of EUR 174 million matured in October. Two term loans from financial institutions were withdrawn, EUR 300 million in September with a maturity of 2 years for financing the McCloskey acquisition, and EUR 150 million in November with a maturity of 3 years for general corporate purposes. The EUR 150 million term loan will be part of the financing structure of the future Neles.

The average interest rate of total loans and derivatives was 1.45% (1.96%) on December 31, 2019. The duration of medium and long-term debt interest-bearing debt was 1.7 years (2.9 years) and the average maturity 2.9 years (3.7 years) on December 31, 2019.

Short term loans from financial institutions consists of bank loans withdrawn by Metso subsidiaries to fund local operations. The subsidiary loans are mainly Indian rupee denominated. In addition, commercial papers with nominal value EUR 10 million were withdrawn in December 2019. The weighted average interest rate applicable to the short-term borrowing at December 31, 2019 was 5.3% (6.8% in 2018). In 2020, interest amounting to EUR 0.7 million is expected to be paid concurrently with respective principals on the short-term debt presented above.

Metso has a syndicated revolving credit facility of EUR 600 million with 10 banks, maturing in 2024 (EUR 500 million in 2018) with two one-year extension options. In addition, Metso has a EUR 40 million committed loan facility for research, development and innovation costs with a disbursement period until June 2020, and a tenor up to ten years from European Investment Bank. Metso also has a Finnish commercial paper program amounting to EUR 500 million. Both revolving credit facility and EUR 40 million committed facility were undrawn at the end of 2019. From commercial paper program there was an issuance with nominal amount EUR 10 million.

Metso has negotiated a syndicated revolving credit facility of EUR 200 million with four banks, maturing in 2023 with two one-year extension options. The facility will be available for future Neles on the effective date of Metso's demerger.

Contractual maturities of interest bearing debt, continuing operations

2019 EUR million	Borrowings	Of which repayments	Of which interests	Lease liabilities[1]
2020	20	1	0	10
2021	–	0	0	9
2022	36	0	0	8
2023	–	–	–	8
2024	–	–	–	7
Later	–	–	–	8
Continuing operations total	56	1	0	49

Contractual maturities of interest bearing debt, discontinued operations

2019 EUR million	Borrowings	Of which repayments	Of which interests	Lease liabilities[1]
2020	35	24	11	26
2021	310	300	10	19
2022	221	214	8	14
2023	3	–	3	10
2024	303	300	4	8
Later	–	–	–	30
Discontinued operations total	872	838	36	108

[1] Future lease payments at nominal value.

The maturities of derivative financial instruments are presented in note 4.8.

4.6 Interest bearing net debt reconciliation

Net interest bearing liabilities

EUR million	2019 Continuing operations	2019 Discontinued operations	2019 Metso total	2018 Metso total
Non-current interest bearing liabilities [1]	36	801	837	557
Lease liabilities [2]	47	90	137	0
Current interest bearing liabilities	20	24	43	41
Loan and other interest bearing receivables	–	–6	–6	–7
Liquid funds	–57	–156	–213	–426
Net interest bearing liabilities	46	753	798	165

[1] Including current portion of non-current liabilities EUR 0 million in 2019 (EUR 174 million in 2018).
[2] 2019 figures include lease liabilities recognized due to adoption of IFRS 16.

Changes in net interest bearing liabilities, continuing operations

2019

EUR million	Balance at beginning of year, Metso total	Balance at beginning of year, discontinued operations	Cash flows	Acquisitions	Translation differences	Other non-cash movements	Balance at end of year
Non-current interest bearing liabilities	557	–557	36	–	–	–	36
Lease liabilities	126	–74	–10	–	0	4	47
Current interest bearing liabilities	41	–35	13	–	0	–	20
Loan and other interest bearing receivables	–7	7	–	–	–	–	–
Liquid funds	–426	325	46	–	–2	–	–57
Net interest bearing liabilities	292	–334	86	–	–2	–	46

Changes in net interest bearing liabilities, discontinued operations

2019

EUR million	Balance at beginning of year	Cash flows	Acquisitions	Disposals	Translation differences	Other non-cash movements	Balance at end of year
Non-current interest bearing liabilities	557	239	–	–	–	5	801
Lease liabilities	74	–24	6	–	0	35	90
Current interest bearing liabilities	35	–91	87	–	0	–7	24
Loan and other interest bearing receivables	–7	31	–	–31	0	1	–6
Liquid funds	–325	174	–8	3	0	–	–156
Net interest bearing liabilities	334	329	84	–28	0	33	753

Changes in net interest bearing liabilities, comparison period, Metso total

2018

EUR million	Balance at beginning of year	Cash flows	Acquisitions	Translation differences	Other non-cash movements	Balance at end of year
Non-current interest bearing liabilities	833	–286	3	–	8	557
Lease liabilities	0	0	–	0	–	0
Current interest bearing liabilities	21	14	8	–1	–	41
Loan and other interest bearing receivables	–3	0	–	1	–5	–7
Liquid funds	–826	398	–4	6	–	–426
Net interest bearing liabilities	24	127	7	7	2	165

4.7 Contingent liabilities and other commitments

Accounting policy

The repurchase commitments represent engagements whereby Metso agrees to purchase back equipment sold to customer. The conditions triggering the buy-back obligation are specific to each sales contract.

EUR million	2019 Continuing operations	2019 Discontinued operations	2019 Metso total	2018 Metso total
Guarantees				
External guarantees given by parent and group companies	39	268	308	380
Other commitments				
Repurchase commitments	11	1	12	2
Other contingencies	4	1	6	6
Total	55	270	325	388

Metso companies have guaranteed obligations arising in the ordinary course of business. These guarantees have typically been given to secure customer's advance payments or to secure commercial contractual obligations, or given counter guarantees to banks, which have given commercial guarantees to a group company.

4.8 Derivative instruments

Accounting policy

Derivatives are initially recognized in the balance sheet at fair value and subsequently measured at their fair value at each balance sheet date. Derivatives are designated at inception either as hedges of firm commitments or forecasted transactions (cash flow hedge) or as hedges of fixed rate debt (fair value hedge), or as hedges of net investment in a foreign operation (net investment hedge), or as derivatives at fair value through profit and loss that do not meet the hedge accounting criteria.

In case of hedge accounting, Metso documents at inception the relationship between the hedging instruments and the hedged items in accordance with its risk management strategy and objectives. Metso also tests the effectiveness of the hedge relationships at hedge inception, and quarterly both prospectively and retrospectively.

Derivatives are classified as non-current assets or liabilities when the remaining maturities exceed 12 months and as current assets or liabilities when the remaining maturities are less than 12 months.

Cash flow hedge

Metso applies cash flow hedge accounting to certain interest rate swaps, foreign currency forward contracts and to electricity forwards.

Metso designates only the currency component of the foreign currency forward contracts as the hedging instrument to hedge foreign currency denominated firm commitments. The interest component is recognized under other operating income and expenses, net. The gain or loss relating to the effective portion of the currency forward contracts is recognized in the income statement concurrently with the underlying in the same line item. The effective portion of foreign currency forwards hedging sales and purchases is recognized in the sales and the cost of goods sold, respectively. The gain or loss relating to the effective portion of interest rate swaps hedging variable rate borrowings is reversed from the hedge reserve through the other comprehensive income (OCI) to the income statement within financial items concurrently with the recognition of the underlying liability. Both at hedge inception and at each balance sheet date an assessment is performed to ensure the continued effectiveness of the designated component of the derivatives in offsetting changes in the fair values of the cash flows of hedged items.

Metso assesses regularly the effectiveness of the fair value changes of the electricity forwards in offsetting the changes in the fair value changes of the underlying forecasted electricity purchases in different countries. The gain or loss relating to the effective portion of the electricity forward contracts is recognized in the cost of goods sold. The effective portion of the derivatives is recognized through OCI in the hedge reserve under equity and reversed through OCI to be recorded through profit and loss concurrently with the underlying transaction being hedged.

The gain or loss relating to the ineffective portion of the derivatives is reported under other operating income or expenses, net or under financial items when contracted to hedge variable rate borrowings. Should a hedged transaction no longer be expected to occur, any cumulative gain or loss previously recognized under equity is reversed through OCI to profit and loss.

Fair value hedge

Metso applies fair value hedge accounting to certain fixed rate loans. The change in fair value of the interest rate swap hedging the loan is recognized through profit and loss concurrently with the change in value of the underlying. Both at inception and quarterly the effectiveness of the derivatives is tested by comparing their change in fair value against those of the underlying instruments.

Derivatives at fair value through profit and loss

Certain derivative instruments do not qualify for hedge accounting. These instruments, which have been contracted to mitigate risks arising from operating and financing activities, comprise foreign exchange forward contracts, currency and interest rate options, interest rate swaps and swap agreements for nickel.

Changes in the fair value of interest rate swaps are recognized in interest expenses. Changes in the fair value of foreign exchange forward contracts are mainly recognized in other operating income and expenses. However, when the foreign exchange forwards have been contracted to mitigate the exchange rate risks arising from foreign currency denominated cash and from financial instruments used for cash management, the changes in fair value of the derivatives are recognized in financial income and expenses. Changes in the fair value of other derivative instruments such as commodity instruments are recognized in other operating income and expenses.

Fair value estimation of derivative instruments

The fair value of the foreign currency forward contracts is determined using forward exchange market rates at the balance sheet date. The fair value of the interest rate swaps is calculated as the present value of the estimated future cash flows based on observable yield curves. The fair value of the commodity forwards and swaps are based on quoted market prices at the balance sheet date. The fair value of options is determined using Black-Scholes valuation model.

Notional amounts and fair values of derivative financial instruments at end of year

2019 EUR million	Notional amount	Fair value, assets	Fair value, liabilities	Fair value, net
Continuing operations				
Forward exchange contracts [1]	34	0	0	0
Interest rate swaps	–	–	–	–
Nickel swap contracts [2]	336	0	0	0
Continuing operations total		0	0	0
Discontinued operations				
Forward exchange contracts [1]	1,488	16	13	3
Interest rate swaps	145	2	2	0
Nickel swap contracts	–	–	–	–
Discontinued operations total		18	16	3

2018 EUR million	Notional amount	Fair value, assets	Fair value, liabilities	Fair value, net
Metso total				
Forward exchange contracts [1]	1,369	10	14	–4
Interest rate swaps	345	3	2	1
Nickel swap contracts [2]	288	0	0	0
Metso total	–	13	16	–3

[1] Ca. 23 percent and 35 percent of the notional amount at the end of 2019 and 2018, respectively, qualified for cash flow hedge accounting.
[2] Notional amount in tons.

The notional amounts indicate the volumes in the use of derivatives, but do not indicate the exposure to risk.

Derivative financial instruments recognized in balance sheet at end of year

2019 EUR million	Continuing operations Assets	Continuing operations Liabilities	Discontinued operations Assets	Discontinued operations Liabilities
Interest rate swaps – fair value hedges	–	–	2	–
Interest rate swaps – non-qualifying hedges	–	–	–	2
	–	–	2	2
Forward exchange contracts – cash flow hedges	–	–	6	5
Forward exchange contracts – non-qualifying hedges	0	0	10	8
	0	0	16	13
Nickel swaps – non-qualifying hedges	0	0	–	–
Derivatives total	0	0	18	16

2018 EUR million	Metso total Assets	Metso total Liabilities
Interest rate swaps – fair value hedges	2	–
Interest rate swaps – non-qualifying hedges	1	2
	3	2
Forward exchange contracts – cash flow hedges	6	7
Forward exchange contracts – non-qualifying hedges	4	7
	10	14
Nickel swaps – non-qualifying hedges	0	0
Derivatives total	13	16

In the years ended December 31, 2019 and December 31, 2018 there has not been ineffectiveness related to the cash flow hedges. As at December 31, 2019, the fixed interest rates of swaps varied from 0.4 percent to 2.6 percent.

Maturities of financial derivatives as at December 31, 2019 (expressed as notional amounts)

EUR million	2020	2021	2022	2023	2024
Continuing operations total					
Forward exchange contracts	34	–	–	–	–
Nickel swap contracts [1]	288	48	–	–	–
Discontinued operations					
Forward exchange contracts	1,443	44	–	–	–
Interest rate swaps	–	20	–	–	125

[1] Notional amount in tons.

Notional and carrying amounts of financial derivatives applying hedge accounting at end of year

2019 EUR million	Notional amount	Fair value, assets	Fair value, liabilities	Fair value, net
Discontinued operations	–	–	–	–
Forward exchange contracts	346	6	5	1
Interest rate swaps	100	2	–	2
Discontinued operations total		8	5	3

2018 EUR million	Notional amount	Fair value, assets	Fair value, liabilities	Fair value, net
Metso total				
Forward exchange contracts	484	6	7	–1
Interest rate swaps	187	2	–	2
Metso total		8	7	1

Forward exchange contracts hedge commercial cash flows of projects applying hedge accounting. The hedge ratio is 1:1. 97% of hedged cash flows mature during the year 2020, 3% in year 2021.

The impact of cash flow hedge in the statement of financial position in 2019, discontinued operations

EUR million	Notional amount	Hedging gain/loss recognized in OCI, net of tax	Amount reclassified from OCI to P/L	Cost of hedging recognized in OCI
	346	3	5	–1

Metso applies fair value hedge accounting to a bond maturing in 2024. The hedge accounted total nominal value is EUR 100 million (EUR 187 million in 2018). The terms of the interest rate swap match the terms of the fixed rate bonds (maturity date, interest fixing and payments dates). Fair values of cash flows of interest rate swap and bond are compared when measuring hedge accounting effectiveness. Credit margin is added to the discount curve of the bond.

Bonds applying fair value hedge accounting as at December 31, 2019, discontinued operations

Nominal amount of loan, EUR million	Hedge ratio	Maturity date of loan	Fair value of loan, EUR million	Nominal amount of interest rate swap, EUR million	Maturity date of interest rate swap	Fair value of interest rate swap, EUR million
300	33%	June 13, 2024	–2	100	June 13, 2024	2

5 Consolidation

5.1 Principles of consolidation

Subsidiaries

The consolidated financial statements include the financial statements of the Parent Company and each of those companies over which Metso exercises control. Control is achieved when Metso is exposed, or has rights, to variable returns from the investee and has the ability to affect those returns through its power over the investee. The companies acquired during the financial period have been consolidated from the date Metso acquired control. Subsidiaries sold or distributed to the owners have been included up to their date of disposal.

All intercompany transactions, balances and gains or losses on transactions between subsidiaries are eliminated as part of the consolidation process. Non-controlling interests are presented in the consolidated balance sheet within equity, separate from equity attributable to shareholders. Non-controlling interests are separately disclosed in the consolidated statement of income.

Acquisitions of businesses are accounted for using the acquisition method. The purchase consideration of an acquisition is measured at fair value over the assets given up, shares issued, or liabilities incurred or assumed at the date of acquisition. For each acquisition, the non-controlling interest in the acquiree, if any, can be recognized either at fair value or at the non-controlling interest's proportionate share of the acquiree's net assets. The excess acquisition price over the fair value of net assets acquired is recognized as goodwill (see also intangible assets). If the purchase consideration is less than the fair value of the Group's share of the net assets acquired, the difference is recognized directly through profit and loss.

When Metso ceases to have control, any retained interest in equity is re-measured to its fair value at the date when control is lost, with the change in carrying amount recognized in profit or loss. The fair value is the initial carrying amount for the purposes of subsequently accounting for the retained interest as an associate, joint venture or financial asset. In addition, any amounts previously recognized in other comprehensive income in respect of that entity is accounted for as if the group had directly disposed of the related assets or liabilities.

Non-controlling interest

Transactions with non-controlling interests are regarded as transactions with equity owners. In the case of purchases from non-controlling interests, the difference between any consideration paid and the relevant share of the carrying value of net assets acquired in the subsidiary is recorded in shareholders' equity. Gains or losses on disposal to non-controlling interests are also recorded directly in shareholders' equity.

Non-current assets or disposal group held-for-sale

Metso classifies a non-current asset or disposal group as held for sale if it's carrying amount will be recovered principally through a sale transaction rather than through continuing use. These assets are valued at the lower of its carrying value and fair value less costs to sell, and assets subject to depreciation or amortization are no longer amortized. Assets related to non-current assets or a disposal group classified a held-for-sale are disclosed separately from other assets, but financial statements for prior periods are not reclassified.

Foreign currency translation

The financial statements are presented in euros, which is the parent company's functional currency and Metso's presentation currency.

Transactions in foreign currencies are recorded at the rates of exchange prevailing at the date of the transaction. At the end of the reporting period, unsettled foreign currency transaction balances are valued at the rates of exchange prevailing at the balance sheet date. Trade related foreign currency exchange gains and losses are recorded in other operating income and expenses, unless the foreign currency denominated transactions are subject to hedge accounting, in which case the related exchange gains and losses are recorded in the same line item as the hedged transaction. Foreign exchange gains and losses associated with financing are entered as a net amount under financial income and expenses.

The statement of income of a subsidiary with a functional currency different from the presentation currency is translated into euros at the average month end exchange rate for the financial year, and the balance sheet is translated at the exchange rate in effect on the balance sheet date. This exchange rate difference is recorded through other comprehensive income (OCI) within cumulative translation adjustments under equity.

The translation differences arising from subsidiary net investments and long-term subsidiary loans without agreed settlement dates are recognized through OCI with in cumulative translation adjustments under equity. When Metso hedges the net investment of its foreign subsidiaries with foreign currency loans and financial derivatives, the translation difference is adjusted by the currency effect of hedging instruments which has been recorded, net of taxes, through OCI under equity. When a foreign entity is disposed of, the respective accumulated translation difference, including the effect from qualifying hedging instruments, is reversed through OCI and recognized in the consolidated statement of income as part of the gain or loss on the sale. If the equity of a foreign currency denominated subsidiary is reduced by reimbursement of invested funds, the translation difference relating to the reduction is reversed through OCI and recognized in the consolidated statement of income.

Net investment hedge

Metso may hedge its net foreign investments in certain currencies to reduce the effect of exchange rate fluctuations. The hedging instruments are mainly foreign currency loans and foreign currency forward contracts. Both realized and unrealized exchange gains and losses measured on these instruments are recorded, net of taxes, through OCI in a separate component of equity against the translation differences arising from consolidation to the extent these hedges are effective. The interest portion of derivatives qualifying as hedges of net investment is recognized under financial income and expenses.

5.2 Subsidiaries

Company name	Ownership Dec 31, 2019
Algeria	
Metso Algerie EURL	100.0%
Argentina	
Metso Argentina SA	100.0%
Australia	
Metso Australia Ltd	100.0%
Neles Australia Flow Control Pty Ltd	100.0%
Precision Rubber NSW Pty Ltd	100.0%
WearX Holdings Pty Ltd	100.0%
WearX Pty Ltd	100.0%
WearX Employee Services Pty Ltd	100.0%
Wear Application & Management Services Pty Ltd	100.0%
Wamcast Pty Ltd	100.0%
Austria	
Metso Austria GmbH	100.0%
Bulgaria	
Metso Bulgaria EOOD	100.0%
Brazil	
Metso Brazil Indústria e Comércio Ltda	100.0%
Neles do Brazil Indústria e Comércio Ltda	100.0%
Canada	
McCloskey International Limited	100.0%
Metso Canada Holdings Inc	100.0%
Metso Minerals Canada Inc.	100.0%
Metso Shared Services Ltd	100.0%
Neles Canada Ltd	100.0%
Chile	
Industrial Support Company SpA	100.0%
Metso Chile SpA	100.0%
China	
Metso (China) Investment Co. Ltd	100.0%
Metso Flow Control (Shanghai) Co. Ltd	100.0%
Metso Flow Control (China) Co. Ltd	100.0%
Metso Minerals (Quzhou) Co. Ltd	100.0%
Metso Minerals (Tianjin) Co. Ltd	100.0%
Metso Minerals (Tianjin) International Trade Co. Ltd	100.0%
Shaoguan City Shaorui Heavy Industries Co. Ltd	100.0%
Czech Republic	
Metso Czech Republic s.r.o.	100.0%
Neles Czech Republic s.r.o.	100.0%
Denmark	100,0%
Metso Denmark A/S	100.0%
Metso Denmark Properties Aps	100.0%
Finland	
Metso Flow Control Oy	100.0%
Metso Minerals Oy	100.0%
Rauma Oy	100.0%
France	
Metso France SAS	100.0%
Neles France SAS	100.0%
Germany	
Metso Germany GmbH	100.0%
Neles Germany GmbH	100.0%
Ghana	
Metso Ghana Ltd	100.0%
India	
Metso India Private Ltd	100.0%
Neles India Private Limited	100.0%
Indonesia	
PT Metso Minerals Indonesia	99.9%
Italy	
Neles Italy S.p.A	100.0%
Japan	
Metso Japan Co. Ltd	100.0%
Kazakhstan	
Metso (Kazakhstan) LLP	100.0%
Lithuania	
Metso Lithuania UAB	100.0%
Macedonia	
Metso Minerals Dooel Skopje	100.0%
Malaysia	
Metsotec Malaysia Sdn. Bhd.	100.0%
Neles Flow Control Malaysia Sdn. Bhd.	100.0%
Mexico	
Metso Mexico SA de CV	100.0%
Metso SA de CV	100.0%
Netherlands	
Neles Netherlands B.V	100.0%
Metsotec NL BV	100.0%
Norway	
Metso Norway AS	100.0%
Panama	
Metso Central America SA	100.0%
Papua New Guinea	
Metso PNG Limited	100.0%
Peru	
Metso Perú SA	100.0%
Poland	
Neles Poland Sp zoo	100.0%
Portugal	
Metso Portugal, Lda	100.0%
Qatar	
Metso Automation Qatar LLC [1)]	49.0%
Romania	
Metso Minerals Romania S.R.L.	100.0%
Russia	
OOO Metso	100.0%
Saudi Arabia	
Metso Plant Saudi Arabia LLC	70.0%
Serbia	
Metso d.o.o. Beograd	100.0%
Singapore	
Metso Asia Pacific Pte Ltd	100.0%
Neles Asia Pacific Pte Ltd	100.0%
South Africa	
Metso South Africa Pty Ltd	86.7%
Metso South Africa Sales Pty Ltd	86.7%
South Korea	
Neles Korea Co. Ltd	100.0%
Spain	
Metso Espana SA	100.0%
Sweden	
AB P. J. Jonsson och Söner	100.0%
Metso Sweden AB	100.0%
Neles Sweden AB	100.0%
Taiwan	
Neles Taiwan Co Ltd	100.0%
Thailand	
Metso (Thailand) Co. Ltd [1)]	48.4%
Turkey	
Metso Minerals Anonim Sirketi	100.0%
Neles Turkey Dis Ticaret A.S.	100.0%
United Arab Emirates	
Metso Flow Control LLC [1)]	49.0%
Metso FZE	100.0%
United Kingdom	
Kiln Flame System Enterprises Limited	100.0%
Kiln Flame Systems Ltd	100.0%
McCloskey International Ltd	100.0%
Metso Captive Insurance Limited	100.0%
Metso UK Ltd	100.0%
Neles UK Ltd	100.0%
United States	
Metso McCloskey USA LLC	100.0%
Metso Minerals Industries Inc.	100.0%
Metso USA Inc.	100.0%
Neles-Jamesbury Inc.	100.0%
Neles USA Inc.	100.0%
Vietnam	
Metso Vietnam Co. Ltd	100.0%
Zambia	
Metso Zambia Ltd	100.0%
WearX Zambia Ltd	100.0%

[1)] Has been 100% consolidated

5.3 Associated companies, joint ventures and related party transactions

Accounting policy

The equity method of accounting is used for investments in associated companies in which the investment provides Metso the ability to exercise significant influence over the operating and financial policies of the investee company. Such influence is presumed to exist for investments in companies in which Metso's direct or indirect shareholding is between 20 and 50 percent of the voting rights or if Metso is able to exercise significant influence. Investments in associated companies are initially recognized at cost after which Metso's share of their post-acquisition retained profits and losses is included as part of investments in associated companies in the consolidated balance sheets.

Under the equity method, the share of profits and losses of associated companies and joint ventures is presented separately in the consolidated statement of income.

A joint arrangement is an arrangement of which two or more parties have joint control. Within Metso Group, all the joint arrangements are joint ventures. Investments in joint ventures in which Metso has the power to jointly govern the financial and operating activities of the investee company are accounted for using the equity method. Investments in joint ventures in which Metso has the control over the financial and operating activities of the investee company are fully consolidated and a non-controlling interest is recognized.

Associated companies and joint ventures

	2019		2018	
EUR million	Ownership	Carrying value	Ownership	Carrying value
Liugong Metso Construction Equipment (Shanghai) Co. Ltd	50.0%	7	50.0%	3
Sefate Capital (Pty) Limited	49.0%	1	49.0%	1
Others		0		0
Total		8		4

All associated companies and joint ventures are related to the discontinued operations.

The movements in the carrying value of investments in associated companies and joint ventures

EUR million	2019	2018
Investments in associated companies and joint ventures		
Acquisition cost as of January 1	6	2
Investments	3	4
Acquisition cost as of December 31	8	6
Equity adjustments in investments in associated companies and joint ventures		
Equity adjustments as of January 1	–2	–1
Share of results	1	0
Translation differences	0	0
Equity adjustments as of December 31	–1	–2
Carrying value as of December 31	8	4

Metso's share of the assets and liabilities, sales and results of the associated companies and joint ventures, which have been accounted for using the equity method

EUR million	2019	2018
Assets	22	15
Liabilities	15	11
Sales	15	7
Profit	1	0

Related party transactions

Transactions carried out and related balances with associated companies and joint ventures

EUR million	2019	2018
Sales	26	0
Purchases	0	0
Receivables	15	0
Payables	0	–

5.4 Acquisitions and business disposals

Acquisitions 2019

On May 3, 2019, Metso acquired 100% share of the company Industrial Support Company SpA in Chile, which used to form the service division of the Chilean mining engineering, construction and technology company HighService Corp. The acquired business was consolidated into the Minerals Services business area and contributed sales of EUR 35 million to Metso for the period from May 3, 2019 to December 31, 2019. The company's sales in 12 months fiscal year that ended on December 31, 2018, was EUR 57 million. The company employs 869 persons.

On October 1, 2019, Metso acquired 100% share of the company McCloskey International Limited in Canada, a mobile crushing and screening equipment manufacturer, having operations in Canada, the United States and United Kingdom. With McCloskey acquisition, Metso expanded its offering in the aggregates industry globally and strengthened its customer reach to the general contractor segment. With this acquisition, Metso is able to better take part in the attractive, long-term growth of the mobile equipment market within the aggregates industry. The acquired business was consolidated into the Minerals Aggregates business area and contributed sales of EUR 55 million to Metso for the period from October 1, 2019 to December 31, 2019. The company's sales in 12 months fiscal year that ended on September 30, 2019, was EUR 322 million. The company has about 900 employees.

Preliminary assets and liabilities recognized as a result of the acquisitions

2019 EUR million	McCloskey International Ltd	Industrial Support Company	Total
Intangible assets	101	8	109
Tangible assets	38	0	38
Right-of-use assets	2	3	6
Deferred tax assets	15	2	17
Inventory	113	0	113
Trade receivables	49	7	56
Other receivables	5	1	6
Liquid funds	8	0	8
Interest bearing liabilities	–84	–3	–87
Trade payables	–43	–4	–47
Other liabilities	–27	–6	–33
Accrued income taxes	–24	–	–24
Deferred tax liabilities	–25	–2	–27
Net identifiable assets acquired at fair value	126	7	133
Goodwill	77	24	100
Purchase consideration	203	30	233

The goodwill is attributable to personnel knowhow and synergies. The goodwill on McCloskey acquisition is partly tax deductible.

Initial calculation on goodwill generated are based on the result of acquired companies, adjusted by changes in accounting principles and effects from the fair value adjustment of acquired assets and related tax adjustments.

Net cash flow impact of the acquisitions

2019 EUR million	McCloskey International Ltd	Industrial Support Company	Total
Cash consideration paid	–192	–30	–222
Cash and cash equivalents acquired	8	0	8
Net cash flow for the year	–184	–30	–214
Contingent consideration	–11	–	–11
Cash considerations, total	–195	–30	–225

Contingent consideration of the McCloskey acquisition will be paid if the profitability requirements are met for a two-year period.

Acquisition costs of 5 million are expensed and included in administrative expenses in the income statement and in operating cash flow in the statement of cash flows.

Acquisitions 2018

On July 2, 2018, Metso acquired 100% of the share capital of Swedish mobile crushing and screening solution provider P.J.Jonsson och Söner AB. The acquired business was consolidated into Aggregate Equipment business area of the Minerals segment. The acquired business contributed sales of EUR 20 million to the Metso Group for the period from July 2, 2018, to December 31, 2018. The company's sales in 12 months fiscal year 2017 that ended on August 31, was approximately EUR 33 million and the number of personnel was 40.

On November 1, 2018, Metso acquired 100% of the share capital of Indian valve automation provider RMEBS Controls Private Limited. The company has an advanced offering of switches, process valves, and valve automation products and solutions. The acquired business was consolidated into Valves business area of the Flow Control segment. The acquired business contributed sales of EUR 3 million to the Metso Group for the period from November 1, 2018, to December 31, 2018. The company's sales in 12 months fiscal year 2018 that ended on March 31, amounted approximately to EUR 19 million and the number of personnel was 275.

On December 4, 2018, Metso acquired 100% of the share capital of UK-based combustion solutions and technology provider Kiln Flame Systems Ltd. The company is specialized in rotary kiln and calcining processes, combustion optimization and burner technologies. The acquired business was consolidated into Minerals Services business area of the Minerals segment. The company's sales in 12 months fiscal year 2018 that ended on August 31, amounted approximately to EUR 4 million and the number of personnel was 13.

Assets and liabilities recognized as a result of the acquisitions

EUR million	2018
Intangible assets	16
Tangible assets	11
Inventory	13
Trade receivables	10
Other receivables	1
Cash	4
Interest bearing liabilities	–10
Trade payables	–12
Other liabilities	–4
Deferred tax liabilities	–5
Net identifiable assets acquired at fair value	24
Goodwill	58
Purchase consideration	82

The goodwill is attributable to synergies related to sales and personnel know-how. Goodwill is not tax deductible.

The calculations on goodwill generated are based on the results of acquired companies, adjusted by changes in accounting principles and effects from the fair value adjustments of acquired assets and related tax adjustments.

Net cash flow impact of the acquisitions

EUR million	2018
Cash consideration paid	–81
Cash and cash equivalents acquired	4
Net cash flow for the year	–77
Contingent consideration	–1
Cash considerations, total	–78

Acquisition costs of 2 million are expensed and included in administrative expenses in the income statement and in operating cash flow in the statement of cash flows.

Disposal 2019

On January 4, 2019 Metso had successfully completed the divestment of its grinding media business to Moly-Cop, a portfolio company of American Industrial Partners. The transaction included the sale of Metso Spain Holding, S.L.U, including operations in Bilbao and Seville, Spain. As part of the transaction, approximately 80 employees transferred from Metso to Moly-Cop. The turnover of the divested business in 2018 was approximately EUR 60 million. The grinding media business was part of Minerals segment.

The cash consideration was EUR 11 million. The net assets of the disposed entity were EUR 13 million, whereby Metso booked a small loss on the transaction.

EUR million	2019
Intangible assets	6
Tangible assets	4
Inventories	21
Trade receivables	15
Other receivables	2
Cash and cash equivalents	3
Interest bearing liabilities	–31
Trade payables	–9
Other liabilities	–1
Deferred tax liabilities	3
Net assets of disposed business	13
Consideration received in cash	11
Net assets of disposed business	–13
Loss on disposal	–2
Consideration received in cash	11
Cash and cash equivalents disposed of	–3
Debt repayments of disposal	31
Net cash inflow on disposal	39

5.5 New accounting standards

New and amended standards adopted in 2019

IFRS 16 Leases

From the beginning of 2019, Metso has adopted IFRS 16 Leases, replacing the previously used IAS 17 Leases and the related interpretations. The adoption was done using the modified retrospective approach whereby the comparative figures for 2018 were not restated. The adjustments resulting from the adoption were recognized on the opening balance sheet on January 1, 2019.

Impact

IFRS 16 introduced a single measurement and recognition approach for all leases, whereas under IAS 17 they were classified into operating or finance leases. Until December 31, 2018, Metso reported its operating leases as an off-balance sheet liability. The amount of Metso's finance leases was not material. IFRS 16 sets out new accounting treatment requirements for lessee accounting, whereas lessor accounting was substantially unchanged from IAS 17.

According to IFRS 16, from January 1, 2019, Metso as a lessee has recognized assets representing its right to use the leased assets during the lease term (the right-of-use asset) and liabilities to make the lease payments (the lease liability). Accordingly, a depreciation of the right-of-use assets and an interest expense on the lease liability are recognized, replacing the lease expenses recognized under IAS 17. The lessee's accounting treatment for short-term leases and leases of low-value assets has not changed under IFRS 16.

At the date of initial application Metso applied IFRS 16 to the existing contracts that were previously classified as leases. Metso applied the recognition exemptions permitted by the standard for short-term leases with a remaining lease term of 12 months or less and for leases of low-value assets. As other practical expedients, Metso has also applied a single discount rate to leases with reasonably similar characteristics, relied on its previous assessment on whether leases are onerous, and excluded initial direct costs when measuring the right-of-use asset at initial application. Metso has not separated the non-lease components, because of their immaterial impact.

The impact from the adoption of IFRS 16 on the consolidated balance sheet

EUR million	January 1, 2019
Right-of-use assets	
Land and water areas	0
Buildings and structures	107
Machinery and equipment	19
Total	126
Lease liabilities	
Lease liabilities, non-current	96
Lease liabilities, current	30
Total	126

On the balance sheet, the right-of use assets were measured at the amount equal to the lease liability, adjusted by possible prepaid or accrued payments in 2018. Right-of-use assets are depreciated over the respective lease period. The lease liability was measured at the present value of the remaining lease payments, discounted using the incremental borrowing rate as of January 1, 2019. The incremental borrowing rate has been defined separately for each group company and with consideration to company-specific, geographical and currency risks as well as duration of the lease liability. For Metso Group, the weighted average incremental borrowing rate on January 1, 2019 was approximately four percent.

The impact from the adoption of IFRS 16 on the consolidated income statement relates to the replacement of the lease expense included in operating profit under IAS 17 with the depreciation of right-of-use asset included in operating profit and with the interest expense of lease liability included in financial expenses under IFRS 16. Lease payments related to short-term leases and low-value leases are continued to be recognized as expenses in operating profit, as they were under IAS 17.

The impact from the adoption of IFRS 16 on the consolidated cash flow statement relates to the classification of the lease payments into principal payments of lease liability presented within cash flow from financing activities and interest payments presented within cash flow from operating activities. Lease payments related to short-term leases and low-value leases are presented within cash flow from operating activities, like all the lease payments previously under IAS 17.

The amounts recognized for leases in the income statement and balance sheet in the reporting period are presented in notes 3.4 and 4.5.

Reconciliation

The lease liabilities recognized on the opening balance sheet in the adoption of IFRS 16 as at January 1, 2019 can be reconciled to the operating lease commitments reported under IAS 17 as at December 31, 2018 as follows:

EUR million	
IAS 17 off-balance sheet operating lease commitments as at December 31, 2018	122
Add: finance lease liabilities as at December 31, 2018	0
Add: net increase in lease liability resulting from different treatment of extension and termination options, leases of low-value assets and short-term leases	19
Less: Impact from discounting the future lease payments for leases recognized on the balance sheet	–15
IFRS 16 lease liability in the opening balance sheet as at January 1, 2019	126

Metso's accounting principles for lease contracts are presented in note 3.4.

IFRIC 23 Uncertainty over Income Tax Treatment

Metso has applied IFRIC 23 Uncertainty over Income Tax Treatment from the beginning of year 2019. The interpretation addresses the accounting for income taxes, when tax treatments involve uncertainty in the application of IAS 12. An entity must determine whether to consider each uncertain tax treatment separately or together with one or more other uncertain tax treatments. The approach that better predicts the resolution of the uncertainty needs to be followed.

Metso Group is operating in a complex multinational environment; thus, management applies significant judgment in identifying uncertain tax positions. Based on the analysis made by the Group, Metso has recognized EUR 3 million tax liability for uncertain tax positions in the retained earnings as at January 1, 2019.

Amendments and annual improvements to IFRS standards

Metso has applied amendments and annual improvements to IFRS standards effective from the beginning of January 2019. The amended standards are IFRS 9 Financial Instruments, IAS 28 Investments in Associates and Joint Ventures, and IAS 19 Employee Benefits. Annual improvements effective from the beginning of January 2019 include following standards: IAS 12 Income Taxes, IAS 23 Borrowing Costs, IFRS 3 Business Combinations, and IFRS 11 Joint Arrangements. Amendments and annual improvements have not had a major impact on the financial statements.

New and amended standards to be applied

At the date of authorisation of these financial statements, Metso has not applied the following new and revised IFRS Standards that have been issued but are not yet effective.

- IFRS 17 Insurance Contracts
- IFRS 10 Consolidated Financial Statements and IAS 28 (amendments): Sale or Contribution of Assets between an Investor and its Associate or Joint Venture
- Amendments to IFRS 3 Definition of a business
- Amendments to IAS 1 and IAS 8 Definition of material
- Amendments to IFRS 9, IAS 39 and IFRS 7 Interest Rate Benchmark Reform
- Amendments to IAS 1 Classification of Liabilities as Current or Non-Current

5.6 Exchange rates used

		Average rates		Year-end rates	
		2019	2018	2019	2018
USD	(US dollar)	1.1214	1.1809	1.1234	1.1450
SEK	(Swedish crown)	10.5572	10.2591	10.4468	10.2548
GBP	(Pound sterling)	0.8773	0.8861	0.8508	0.8945
CAD	(Canadian dollar)	1.4882	1.5307	1.4598	1.5605
BRL	(Brazilian real)	4.4195	4.3020	4.5157	4.4440
CNY	(Chinese yuan)	7.7353	7.8148	7.8205	7.8751
AUD	(Australian dollar)	1.6090	1.5795	1.5995	1.6220

6 Other notes

6.1 Audit fees

	2019			2018		
EUR million	Continuing operations	Discontinued operations	Metso total	Continuing operations	Discontinued operations	Metso total
Audit services	–0.3	–1.9	–2.2	–0.3	–1.7	–1.9
Tax services	0.0	–0.1	–0.1	0.0	0.0	0.0
Other services	–0.2	–0.7	–0.9	0.0	0.0	–0.1
Total	–0.5	–2.7	–3.1	–0.3	–1.7	–2.0

6.2 Lawsuits and claims

Several lawsuits, legal claims and disputes based on various grounds are pending against Metso in various countries related, among other things, to Metso's products, projects, other operations and customer receivables. Metso's management assesses, however, to the best of its present understanding that the outcome of these lawsuits, claims and legal disputes would not have a material adverse effect on Metso in view of the grounds presented for them, provisions made, insurance coverage in force and the extent of Metso's total business activities. It should be noted, however, that outcomes of pending lawsuits, legal claims and disputes are beyond the direct influence of Metso's management and may, therefore, materially deviate from management's current assessment.

Pending asbestos litigation

On December 31, 2019 there were 142 pending litigation cases filed in the United States in relation to asbestos injuries in which a Metso entity is one of the named defendants. Metso management's present belief is that the risk caused by the pending asbestos litigation cases in the United States is not material in the context of Metso's total business activities.

Financial Statements of the Parent Company, FAS

Statement of Income of the Parent Company

EUR	Note	2019	2018
Sales		19,375,713.81	16,167,979.53
Other operating income	2	27,493.44	441,332.83
Personnel expenses	3	–15,265,917.65	–15,450,359.09
Depreciation and amortization	4	–547,410.58	–494,172.83
Other operating expenses		–38,421,895.27	–17,489,042.51
Operating profit/loss		–34,832,016.25	–16,824,262.07
Financial income and expenses, net	6	85,990,089.12	122,871,549.35
Profit before appropriations and taxes		51,158,072.87	106,047,287.28
Appropriations	7	61,385,000.00	60,660,000.00
Profit before taxes		112,543,072.87	166,707,287.28
Income taxes	8		
Current tax expense		–4,700,718.83	–8,796,769.73
Change in deferred taxes		2,637.93	–3,005.24
Profit for the year		107,844,991.97	157,907,512.31

Balance Sheet of the Parent Company

Assets

EUR	Note	2019	2018
Non-current assets			
Intangible assets	9	659,035.74	933,137.92
Tangible assets	9	616,489.66	634,536.89
Investments			
Shares in Group companies	10	1,042,185,582.00	749,680,242.87
Other investments	10	409,766,298.06	318,812,453.42
Total non-current assets		1,453,227,405.46	1,070,060,371.10
Current assets			
Long-term receivables	12	2,499,058.29	3,146,298.36
Short-term receivables	12	488,072,970.66	546,244,891.43
Securities		0.00	11,999,655.61
Bank and cash		87,585,611.84	219,915,254.40
Total current assets		578,157,640.79	781,306,099.80
Total assets		2,031,385,046.25	1,851,366,470.90

Shareholders' equity and liabilities

EUR	Note	2019	2018
Shareholders' equity	13		
Share capital		140,982,843.80	140,982,843.80
Invested non-restricted equity fund		368,263,034.11	367,775,887.99
Retained earnings		420,858,625.66	441,153,617.64
Profit for the year		107,844,991.97	157,907,512.31
Total shareholders' equity		1,037,949,495.54	1,107,819,861.74
Liabilities			
Long-term liabilities	14	853,127,370.00	401,887,550.00
Current liabilities	15	140,308,180.71	341,659,059.16
Total liabilities		993,435,550.71	743,546,609.16
Total shareholders' equity and liabilities		2,031,385,046.25	1,851,366,470.90

Cash Flow Statement of the Parent Company

EUR thousand	2019	2018
Cash flows from operating activities		
Profit for the year	107,845	157,908
Adjustments to operating profit (loss)		
Depreciation and amortization	547	494
Financial income and expenses, net	–85,990	–122,872
Gains / losses on sale, net	–	81
Group contributions	–61,385	–60,660
Taxes	4,698	8,800
Other non-cash items	–2,903	1,450
Total adjustments to operating profit (loss)	–145,033	–172,707
Increase / decrease in short-term non-interest bearing trade receivables	–1,360	–11,121
Increase / decrease in short-term non-interest bearing debt	19,360	–30,779
Change in working capital	18,000	–41,900
Interest and other financial expenses paid	–32,431	–12,624
Dividends received	89,640	125,370
Interest received	632	1,831
Income taxes paid	–15,014	–3,289
Net cash provided by operating activities	23,639	54,589
Cash flows from investing activities		
Investments in tangible and intangible assets	–256	–290
Investments in subsidiary shares	–292,505	–120,000
Long-term loans granted	–542,917	–341,064
Repayments of long-term loans	420,338	498,252
Short-term loans granted	–15,343	–
Repayments of short-term loans	–	3,675
Purchase of other investments	106,457	305,106
Proceeds from sale of investments	–	–243
Interest received from investments	25,752	26,094
Dividends received from investments	0	0
Net cash used in investing activities	–298,475	371,531

EUR thousand	2019	2018
Cash flows from financing activities		
Investments in unrestricted equity	1,889	–
Withdrawals and instalments of short-term loans, net	8,327	–
Withdrawal of long-term loans	450,000	–
Repayments of long-term loans	–175,000	–285,546
Dividends paid	–180,091	–157,988
Change in Group pool accounts	–23,278	–101,694
Group contributions	60,660	29,885
Net cash provided by / used in financing activities	142,506	–515,343
Net increase / decrease in bank and cash	–132,330	–89,223
Bank and cash at beginning of year	219,915	309,138
Bank and cash at end of year	87,586	219,915

Notes to the Financial Statements of the Parent Company

1 Accounting principles

The parent company financial statements have been prepared in accordance with the Finnish Generally Accepted Accounting Principles for the period 1.1.–31.12.2019. The financial statements are presented in euros.

Foreign currency translations
Transactions in foreign currencies are recorded at the rates of exchange prevailing at the date of the transaction. At the end of accounting period, monetary items are valued at the rate of exchange prevailing at the end of period.

Tangible and intangible assets
Tangible and intangible assets are valued at historical cost, less accumulated depreciation according to plan. Land and water areas are not depreciated.

Depreciation and amortization is calculated on a straight-line basis over the expected useful lives of the assets as follows:

Computer software	3–5 years
Other intangibles	10 years
Buildings and structures	20–25 years
Machinery and equipment	3–5 years
Other tangible assets	20 years

Financial Instruments
Metso's financial risk management is carried out by a central treasury department (Group Treasury) under the policies approved by the Board of Directors. Group Treasury functions in co-operation with the operating units to minimize financial risks in both the Parent Company and the Group.

Long-term debt is initially recognized at fair value, net of transaction costs incurred. In subsequent periods, they are valued at amortized cost using the effective interest rate method. Debts, which are hedged with a fair value hedge are recognized at fair value through the profit and loss, unrealized adjustment is presented in hedge reserve. Transaction costs arising from issuance of bonds are recognized over the life of the bond using the effective yield method. The unrecognized portion as of the balance sheet date is presented as a decrease in liabilities. Derivatives outside hedge accounting are valued at fair value through profit and loss.

Forward exchange contracts are measured at fair value. The change in fair value is recognized as income or expense in the income statement. The fair value of forward exchange contracts is determined using forward exchange market rates at the balance sheet date.

Bank and cash as well as securities consist of cash in the bank accounts and investments of liquid funds in interest bearing instruments. Financial assets are measured at historical cost, less possible impairment loss.

Provisions
Provisions are unrealized costs, for which the company is committed, and which will not provide any income in the future and which are likely to occur. Change in the provision are included in the profit and loss.

Income taxes
Income tax expense includes taxes calculated for the financial year, adjustments to prior year taxes and change in the deferred taxes. A deferred tax liability or asset has been determined for all temporary differences between the tax bases of assets and liabilities and their amounts in financial reporting, using the enacted tax rates effective for the future years. The deferred tax liabilities are recognized in the balance sheet in full, and the deferred tax assets are recognized when it is probable that there will be sufficient taxable profit against which the asset can be utilized.

2 Other operating income

EUR thousand	2019	2018
Gain on disposal of shares	–	–
Gain on sale of fixed assets	–	17
Other	27	424
Total	27	441

3 Personnel expenses

EUR thousand	2019	2018
Salaries and wages	–13,730	–11,572
Pension costs	–1,161	–2,126
Other indirect employee costs	–375	–1,752
Total	–15,266	–15,450

EUR thousand	2019	2018
Fringe benefits	1,194	490

Remuneration paid to Executive Team

EUR thousand	2019	2018
Chief Executive Officer	–753	–808
Board members [1]	–631	–661
Total	–1,384	–1,469

[1] Board remuneration is presented in note 1.5 for Consolidated Financial Statements

Number of personnel

	2019	2018
Personnel at end of year	119	119
Average number of personnel during the year	125	114

4 Depreciation and amortization

Depreciation and amortization expenses consist of the following:

EUR thousand	2019	2018
Buildings and structures	–30	–30
Machinery and equipment	–139	–122
Intangible assets	–379	–342
Total	–547	–494

5 Audit fees

EUR thousand	2019	2018
Audit	–527	–523
Tax consulting	0	–10
Other services	–1,155	–1
Total	–1,682	–534

6 Financial income and expenses

EUR thousand	2019	2018
Dividends received from		
Group companies	89,640	125,370
Others	0	0
Total	89,640	125,370
Interest income from investments from		
Group companies	28,165	27,109
Others	26	232
Total	28,191	27,341
Other interest and financial income from		
Others	327	373
Exchange rate differences	129	437
Interest and financial income, total	118,286	153,521
Interest expenses to		
Group companies	–390	–347
Others	–32,187	–29,016
Other financial expenses		
Fair value change in derivatives	281	–1,287
Interest and other financial expenses, total	–32,296	–30,650
Financial income and expenses, net	85,990	122,872

7 Appropriations

EUR thousand	2019	2018
Group contributions received	61,385	60,660

8 Income taxes

EUR thousand	2019	2018
Income taxes on operating activities	–4,682	–8,829
Income taxes for prior years	–18	33
Change in deferred taxes	3	–3
Total	–4,698	–8,800

9 Fixed assets

EUR thousand	Intangible assets	Land areas	Buildings and structures	Machinery and equipment	Other tangible assets	Tangible assets total	Total
2019							
Acquisition cost Jan 1	4,398	156	747	776	103	1,782	6,180
Additions	104	–	–	151	–	151	255
Decreases	–	–	–	–	–	–	–
Acquisition cost Dec 31	4,502	156	747	927	103	1,932	6,435
Accumulated depreciation Jan 1	–3,465	–	–717	–430	0	–1,147	–4,612
Accumulated depreciation of decreases	–	–	–	–	–	–	–
Depreciation for the period	–379	–	–30	–139	0	–169	–547
Accumulated depreciation Dec 31	–3,843	–	–747	–569	0	–1,316	–5,159
Net carrying value Dec 31	659	156	0	358	103	616	1,276

EUR thousand	Intangible assets	Land areas	Buildings and structures	Machinery and equipment	Other tangible assets	Tangible assets total	Total
2018							
Acquisition cost Jan 1	4,174	156	747	841	105	1,849	6,023
Additions	263	–	–	26	–	26	289
Decreases	–39	–	–	–91	–2	–93	–132
Acquisition cost Dec 31	4,398	156	747	776	103	1,782	6,180
Accumulated depreciation Jan 1	–3,162	–	–687	–402	0	–1,089	–4,251
Accumulated depreciation of decreases	39	–	–	91	–	91	130
Depreciation for the period	–342	–	–30	–119	0	–149	–491
Accumulated depreciation Dec 31	–3,465	–	–717	–430	0	–1,147	–4,612
Net carrying value Dec 31	933	156	30	346	103	635	1,568

10 Investments

EUR thousand	Shares in Group companies	Other shares	Receivables from Group companies	Receivables from other companies	Other investments total
2019					
Acquisition cost at Jan 1	749,680	2,673	315,140	1,000	318,813
Additions	292,505	0	543,917	–	543,917
Decreases	0	0	–451,963	–1,000	–452,963
Acquisition cost at Dec 31	1,042,186	2,673	407,093	–	409,766
2018					
Acquisition cost at Jan 1	629,680	2,915	405,055	1,000	408,970
Additions	120,000	0	341,064	0	341,064
Decreases	0	–242	–430,979	0	–431,221
Acquisition cost at Dec 31	749,680	2,673	315,140	1,000	318,813

11 Shareholdings

Subsidiaries December 31, 2019

Subsidiary	Domicile	Ownership, %
Metso Flow Control Canada Ltd	Canada, St. Laurent	100.0
Metso Shared Services Ltd	Canada, Lachine	100.0
Metso Captive Insurance Limited	United Kingdom, Guernsey	100.0
Metso (China) Investment Co. Ltd	China, Shanghai	100.0
Metso Flow Control Oy	Finland, Helsinki	100.0
Metso Minerals Oy	Finland, Helsinki	100.0
Metso Minerals Canada Inc.	Canada, Lachine	100.0
Metso France SAS	France, Macon	100.0
Metso USA Inc.	USA, Waukesha	100.0
Rauma Oy	Finland, Helsinki	100.0

12 Specification of receivables

Long-term receivables

EUR thousand	2019	2018
Deferred tax asset	71	68
Derivatives	2,428	3,078
Long-term receivables from others	–	–
Long-term receivables total	2,499	3,146

Short-term receivables

EUR thousand	2019	2018
Trade receivables from		
Group companies	29,947	23,981
Others	23	–
Total	29,970	23,981
Loan receivables from		
Group companies	344,794	314,551
Others	–	–
Total	344,794	314,551
Prepaid expenses and accrued income from		
Group companies	67,249	85,642
Others	37,772	26,059
Total	105,020	111,701
Other receivables		
Investments	0	94,457
VAT receivable	2,487	1,058
Other receivables	5,801	496
Total	8,288	96,012
Short-term receivables total	488,073	546,245

Specification of prepaid expenses and accrued income

EUR thousand	2019	2018
Prepaid expenses and accrued income from Group companies		
Group contribution receivables	61,385	60,660
Accrued interest income	5,298	3,150
Other accrued items	566	21,832
Total	67,249	85,642
Prepaid expenses and accrued income from others		
Accrued interest income	75	89
Accrued derivatives	13,136	8,924
Other accrued items	24,560	17,045
Total	37,772	26,059

13 Statement of changes in shareholders' equity

EUR thousand	2019	2018
Share capital at Jan 1	140,983	140,983
Share capital at Dec 31	140,983	140,983
Hedge reserve Jan 1	0	–219
Change	0	219
Hedge reserve at Dec 31	0	0
Invested non-restricted equity fund at Jan 1	367,776	367,776
Change	487	0
Invested non-restricted equity fund at Dec 31	368,263	367,776
Retained earnings at Jan 1	599,061	599,142
Dividend distribution	–180,091	–157,497
Other change	1,888	–491
Retained earnings at Dec 31	420,859	441,154
Profit for the year	107,845	157,908
Total shareholders' equity at Dec 31	1,037,949	1,107,820

Statement of distributable funds at December 31

EUR	2019	2018
Invested non-restricted equity fund	368,263,034.11	367,775,887.99
Retained earnings	420,858,625.66	441,153,617.64
Profit	107,844,991.97	157,907,512.31
Total distributable funds	896,966,651.74	966,837,017.94

At the end of the year, Metso Oyj held 272,088 treasury shares, the acquisition price of which, EUR 6,197,235.34 has been deducted from retained earnings.

14 Long-term liabilities

EUR thousand	2019	2018
Bonds from [1]		
Others	401,609	399,724
Loans from financial institutions	449,053	–
Interest derivatives	2,466	2,164
Total	853,127	401,888

[1] Specification of bonds and fair values in note 4.5 for Consolidated Financial Statements.

Debt maturing later than in five years

EUR thousand	2019	2018
Bonds	0	300,000

15 Short-term liabilities

EUR thousand	2019	2018
Short-term interest bearing debt		
Bonds	0	173,843
Loans from financial institutions	9,999	0
Group companies	33,917	29,025
Group pool accounts	38,656	89,398
Total	82,573	292,266
Trade payables to		
Group companies	26,569	20,660
Others	5,502	1,937
Total	32,071	22,598
Accrued expenses and deferred income to		
Group companies	404	416
Others	20,814	26,023
Total	21,217	26,439
Other short-term non-interest bearing debt to		
Others	4,447	356
Total	4,447	356
Short-term liabilities total	140,308	341,659
Short-term liabilities to Group companies total	99,546	139,499

Specification of accrued expenses and deferred income

EUR thousand	2019	2018
Accrued expenses and deferred income to Group companies		
Accrued interest expenses	87	123
Other accrued items	317	293
Total	404	416
Accrued expenses and deferred income to others		
Accrued interest expenses	3,971	4,071
Accrued derivatives	11,917	13,061
Accrued salaries, wages and social costs	3,844	5,077
Other accrued items	1,082	3,814
Total	20,814	26,023

16 Other contingencies

Guarantees and mortagages

EUR thousand	2019	2018
Guarantees on behalf of subsidiaries	248,191	302,720

Lease commitments

EUR thousand	2019	2018
Payments in the following year	1,080	1,115
Payments later	2,904	3,956
Total	3,984	5,071

Signatures of the Board of Directors' Report and Financial Statements 2019

Helsinki, February 5, 2020

Mikael Lilius Chair of the Board	Christer Gardell Vice Chair of the Board	
Peter Carlsson Member of the Board	Lars Josefsson Member of the Board	Antti Mäkinen Member of the Board
Kari Stadigh Member of the Board	Arja Talma Member of the Board	
Pekka Vauramo President and CEO		

The auditor's note

Our auditor's report has been issued today.

Helsinki, February 5, 2020

Ernst & Young Oy
Authorized Public Accountant Firm

Mikko Järventausta
APA

Auditor's Report
(Translation of the Finnish original)

To the Annual General Meeting of Metso Corporation

Report on the Audit of Financial Statements

Opinion
We have audited the financial statements of Metso Corporation (business identity code 1538032-5) for the year ended 31 December, 2019. 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 summaries of significant accounting policies, as well as the parent company's balance sheet, income statement, statement of cash flows and notes.

In our opinion
- the consolidated financial statements give a true and fair view of the group's financial position as well as its financial performance and its 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 financial statements in Finland and comply with statutory requirements.

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

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

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

In our best knowledge and understanding, the non-audit services that we have provided to the parent company and group companies are in compliance with laws and regulations applicable in Finland regarding these services, and we have not provided any prohibited non-audit services referred to in Article 5(1) of regulation (EU) 537/2014. The non-audit services that we have provided have been disclosed in note 6.1 to the consolidated financial statements.

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

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

We have fulfilled the responsibilities described in the Auditor's responsibilities for the audit of the financial statements section of our report, including in relation to these matters. Accordingly, our audit included the performance of procedures designed to respond to our assessment of the risks of material misstatement of the financial statements. The results of our audit procedures, including the procedures performed to address the matters below, provide the basis for our audit opinion on the accompanying financial statements.

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

Key Audit Matter	How our audit addressed the Key Audit Matter
Revenue recognition of customized engineered system contracts *The accounting principles and disclosures about revenue recognition of customized engineered system contracts are included in Note 1.2.* Metso's Minerals segment delivers customized engineered systems to its customers, where the moment of signing a delivery contract and the final acceptance of a delivery by the customer may take place in different financial periods. In accordance with Metso's accounting principles, revenue from such contracts is recognized over time. In year 2019 in total 491 million euros of Metso Minerals segment's sales from customized engineered system contracts and long-term fixed price service contracts were recognized over time. The recognition of revenue and the estimation of the outcome of delivery contract require significant management's judgment, in particular with respect to estimating the stage of completion, cost to complete and the expected time to completion. Significant judgment is required to assess the expected loss when it is expected that the total costs will exceed the revenues from the delivery contract. In addition, the areas with significant judgment are considered to be more prone to the risk that the assumptions may be deliberately misappropriated. Based on above revenue recognition of customized engineered system contracts was a key audit matter. This matter was also a significant risk of material misstatement referred to in EU Regulation No 537/2014, point (c) of Article 10(2).	Our audit procedures to address the risk of material misstatement in respect of the revenue recognition of customized engineered system contracts included: • Assessing of the Group's accounting policies over revenue recognition of customized engineered system contracts. • Examination of the delivery documentation such as contracts, legal opinions and other written communication. • Analytical procedures throughout the audit period. • Review of financial KPI's, development and current status of delivery contracts by – comparing the contract to our prior experience with similar contracts, – reviewing the changes in estimated revenues, costs and reserves, and – discussions with the different levels of organization including project responsible, business management and group management. • Analyzing key elements in management's estimates such as the estimated future costs to complete and the estimated time necessary to complete the delivery. • Evaluating the appropriateness of the Group's disclosures in respect of revenue recognition.
Valuation of goodwill *The accounting principles and disclosures about goodwill are included in Note 3.1.* The valuation of goodwill was a key audit matter because the annual impairment testing includes judgment and it is based on assumptions relating to market or economic conditions extending to the future, and because of the significance of the goodwill to the financial statements. As of balance sheet date December 31, 2019, the value of goodwill amounted to 618 million euros representing 16% of the total assets and 41% of the total equity. In 2019, the goodwill increased by 93 million euros, of which 77 million euros was recognized from the acquisition of McCloskey. The valuation of goodwill is based on the management's estimate about the value-in-use calculations of the cash generating units. Based on management judgment the cash generating units of Metso are Minerals segment and Flow Control segment. There are a number of assumptions used to determine the value-in-use, including the revenue growth, the EBITDA and the discount rate applied on net cash-flows. Estimated values-in-use may vary significantly when the underlying assumptions are changed and the changes in above-mentioned individual assumptions may result in an impairment of goodwill.	Our audit procedures included involving our valuation specialists to assist us in evaluating the assumptions and methodologies by comparing the management's assumptions to externally derived data and to our independently calculated industry averages. In particular those relating to • the forecasted revenue growth, • the EBITDA and • the weighted average cost of capital used to discount the net cash-flows. We tested the accuracy of the impairment calculations prepared by the management and compared the sum of discounted cash flows to Metso's market capitalization. In addition, we assessed the sufficiency of the disclosures as well as whether the disclosures about the sensitivity of the impairment assessment are appropriate.

Key Audit Matter	How our audit addressed the Key Audit Matter
Income taxes *The accounting principles and disclosures about income taxes are included in Note 1.8.* Income taxes was a key audit matter because of the judgments and estimates involved and the amount of income taxes is material to the financial statements as a whole. Metso's business is international and in the normal course of business the management makes judgments and estimates in connection with tax issues and tax exposures resulting in the recognition of deferred tax assets and liabilities as well as tax provisions.	We performed audit procedures on the calculation and valuation of current taxes and deferred taxes. Procedures included assessment of correspondence with tax authorities and evaluation of tax exposures. In addition, we evaluated the appropriateness of the recognition principles and the sufficiency of the given disclosures. Our audit procedures on income taxes included involving our tax specialists, who assisted us both on group level and in significant components in evaluating the assumptions and methodologies applied by the management.

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 going concern, disclosing, as applicable, matters relating to going concern and using the going concern basis of accounting. The financial statements are prepared using the going concern basis of accounting unless there is an intention to liquidate the parent company or the group or cease operations, or there is no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of Financial Statements

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

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

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the parent company's or the group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of the Board of Directors' and the 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 communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

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

Other Reporting Requirements

Information on our audit engagement

We were first appointed as auditors by the Annual General Meeting on 29 March 2012, and our appointment represents a total period of uninterrupted engagement of eight years.

Other information

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

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

In connection with our audit of the financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. With respect to 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 and 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.

Opinions based on assignment of the Audit Committee

We support that the financial statements and the consolidated financial statements should be adopted. The proposal by the Board of Directors regarding the distribution of dividends is in compliance with the Limited Liability Companies Act. We support that the Members of the Board of Directors and the President and CEO of the parent company should be discharged from liability for the financial period audited by us.

Helsinki, February 5, 2020

Ernst & Young Oy
Authorized Public Accountant Firm

Mikko Järventausta
Authorized Public Accountant

Investor information

Investor Relations function and policies

The main task of Investor Relations is to support the correct valuation of Metso's share by providing up-to-date information on matters concerning our operations, operating environment, strategy, objectives, financial performance and market outlook. Our goal is to provide correct, adequate and current information regularly and impartially to all market participants. In our work, we aim for promptness, transparency, agility and excellent service.

Investor Relations is responsible for all investor communications, including contacts with representatives of the capital markets. All investor meeting requests are processed by Investor Relations. In addition to financial reports, actively updated webpages and a quarterly newsletter, our investor communications include investor meetings and seminars in which corporate executives actively participate. We also arrange Capital Markets Day events. In addition, we regularly gather and analyze market information and investor feedback for use by top management and the Board of Directors.

During the 21-day period prior to publication of the annual, half-year or interim financial results, we are not in contact with capital market representatives. At other times, we are happy to answer inquiries of analysts and investors by phone, email or at arranged investor meetings. Contact details are available on the following page.

Market estimates and analyst reports

We actively monitor market expectations and will review, if requested so by an analyst, their model against publicly available information. However, we do not comment on or take any responsibility for estimates or forecasts published by capital market representatives and we do not comment on the company's valuation or share price development, give preference to one particular analyst, or distribute analyst reports to the investment community.

We maintain a list of the analysts following Metso on a regular basis on our website at www.metso.com/analysts.

Market outlook

Metso's market outlook describes the expected sequential development of market activity during the following six-month period using three categories: improve, remain at the current level, or decline.

Current market outlook
Market activity in both segments, Flow Control and Minerals, is expected to remain at the current level in both the equipment and services business.

Guidance on our financial communications

The principle of equality in our investor communications means giving all market participants simultaneous and timely access to the information they need to be able to determine the value of the Metso share in an informed manner. We follow the rules and recommendations of:

- Finnish Corporate Governance Code 2020
- Finnish Companies Act
- Accounting Act
- Finnish Securities Markets Act
- Market Abuse Regulation ((EU) N:o 596/2014 ("MAR"))
- Rules, regulations and guidelines of Nasdaq Helsinki and the Finnish Financial Supervisory Authority

Our disclosure policy has been approved by the Board of Directors and it describes the main principles and practices of our stock exchange communications as well as other important disclosure practices we follow. The purpose of the policy is to promote reliable and consistent disclosure of information and to describe the decision-making procedures relevant to disclosing market-relevant information. More information and our Disclosure Policy are available at www.metso.com/disclosure-policy.

Our releases are divided into three categories: stock exchange releases, corporate press releases and trade press releases. The category of a release is based on MAR demands, on the materiality and relevance of the information as well as on internal guidelines.

Stock exchange releases are used for releasing inside information according to the MAR and other matters required by the rules of the stock exchange. Corporate press releases are used for communicating about business events that do not include inside information but are estimated to be newsworthy or of general interest to stakeholders. Trade press releases are used for discussing our products and technology and other topics that are of interest to our customer industries and the trade media.

Our financial reviews and our releases, as well as their email subscription, are available in Finnish and English on our website at www.metso.com/news. We disclose information about our financial performance according to a schedule announced in advance. Financial information and key figures are disclosed on the Metso Group and segment level.

Financial reporting schedule 2020

Financial statements review for 2019	February 6, 2020
Annual Report 2019	Week commencing February 24, 2020, at the latest
Interim review for January–March 2020	May 7, 2020
Half year financial review 2020	August 5, 2020

The Extraordinary General Meeting of Metso approved on October 29, 2019, a plan to combine Metso's Minerals Business and Outotec to create Metso Outotec. As a result, Metso's Flow Control business will become the continuing business of the currently listed Metso, which will be subsequently renamed Neles, an independent listed company supplying flow control products and services. The completion of the demerger is currently expected to be registered on June 30, 2020, subject to the receipt of all required regulatory and other approvals.

The financial information schedule for Metso Outotec and the future Neles for the latter part of 2020 will be published separately at a later date.

Shareholder's change of address

Shareholders are kindly asked to notify of changes in their address to the bank, brokerage firm or other account operator with which they have a book-entry account.

Annual General Meeting 2020

Metso's Annual General Meeting 2020 will be held at 2:00 p.m. on Friday, March 20, 2020, at Finlandia Hall in Helsinki, Finland.

Notice of the meeting including all meeting proposals has been published as a stock exchange release on February 6, 2020, and is also available at www.metso.com/agm.

Important dates related to AGM 2020

Record date of AGM	March 10, 2020
Registration period ends	March 17, 2020 at 10:00 am.
Annual General Meeting	March 20, 2020
Dividend ex-date	March 21, 2020
Record date of dividend payment	March 24, 2020
Date of dividend payment	March 31, 2020
Minutes of the meeting available	April 3, 2020, at the latest

Registration and proxies

Registration is available at www.metso.com/agm or by telephone on +358 10 808 300. Shareholders are required to provide their name, personal or company identification number, address and telephone number with their registration.

Originals of the possible proxy documents must be delivered before registration period ends to the address Metso Corporation/ AGM, P.O. Box 1220, FI-00101 Helsinki, Finland.

Nominee registered shares

Holders of nominee registered shares have the right to participate in the AGM by virtue of the shares, which would entitle them to be registered in Metso's shareholder register on the record date of the AGM. In addition, participation requires that these shareholders are temporarily registered in Metso's shareholder register before the registration period ends. More detailed instructions are available in the meeting notice.

Resolutions of the AGM

Resolutions of the AGM will be published as a stock exchange release without delay after the meeting has finished. More information about the Annual General Meeting and the meeting proposals are available on our website at www.metso.com/agm.

IR contacts

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About this report
Concept, design and production:
KREAB